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# **THE EU-CENTRED COMMODITY CHAIN IN CANNED TUNA AND UPGRADING IN SEYCHELLES**

by

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Thesis submitted for the degree of PhD in Development Studies

2012

Department of Development Studies  
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*For Ma and Pa*

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## **Abstract**

Global commodity chain (GCC) and related frameworks have generated a rich empirical literature on production-consumption linkages in the world economy. To date, there are few comprehensive studies on GCCs in fisheries products. This thesis investigates the EU-centred commodity chain in canned tuna, and interrogates three major themes in the literature: chain governance by ‘lead’ firms, regulatory mechanisms, and ‘upgrading’. Part I traces historical and contemporary ‘economic’ dynamics, namely horizontal and vertical competitive relations among firms in the fishing (Chapter 2) and manufacturing, branding and retail (Chapter 3) nodes. It shows how the environmental conditions of extraction shape the commodity chain; that highly capital intensive fishing firms are not chain ‘drivers’; and that chain governance emanates primarily from supermarkets and canned tuna branded-firms. Part II examines the ‘political’ dimensions of the chain through the mechanisms regulating resource access by EU fishing firms (Chapter 4) and the EU-centred canned tuna trade, especially with the African, Caribbean and Pacific (ACP) states (Chapter 5). It argues that inter-state and state-firm relations shape the cost structure and economic geography of the EU-centred chain both historically and today. Part III combines the ‘economic’ and the ‘political’ through a case study of upgrading in Seychelles, one of the most important tuna transshipment/ landing hubs and sites of canned tuna production. It investigates the strategies of Seychelles governments to upgrade in the fishing and canning nodes of the chain and their developmental effects. Upgrading is explored as a combination of structural, environmental and conjunctural dynamics, including those of domestic Seychelles politics. The thesis concludes that environmental conditions of production, the historical formation of chains, and unequal relations between and within states and firms are important lacunae in GCC and related frameworks.

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## Acronyms and Abbreviations

AAMS	Associated African States and Madagascar
ACF	Armement Coopératif Finistérien
ACP	African, Caribbean and Pacific group of countries
AfDB	African Development Bank
ANABAC	Asociación Nacional de Buques Atuneros Congeladores y la Organización de Productores de Túnidos Congelados
ANFACO	Asociación Nacional de Fabricants de Conservas de Pescados y Mariscos
ANZ	Australia and New Zealand
ASCM	Agreement on Subsidies and Countervailing Measures
ASEAN	Association of Southeast Asian Nations
ATPA	Andean Trade Preference Act
BIOT	British Indian Ocean Territory (UK overseas territory)
BOGOF	Buy one get one free
CBS	Central Bank of Seychelles
CEO	Chief executive officer
CFP	Common Fisheries Policy
CMB	Chevannes-Merceron-Ballery
Cobrecaf	Compagnie Bretonne de Cargos Frigorifiques
COI	Conserveries de l'Océan Indien
COMESA	Common Market for Eastern and Southern Africa
COSI	Chicken of the Sea International
CPA	Cotonou Partnership Agreement
CPUE	Catch per unit effort
CTH	Chapter Tariff Heading
DG DEV	Directorate-General for Development (EC)
DG Fish	Directorate-General for Fisheries (EC)
DG MARE	Directorate-General for Maritime Affairs and Fisheries (EC)
DG Taxud	Directorate-General for Taxation and Customs Union (EC)
DG Trade	Directorate-General for Trade (EC)
DWF	Distant water fleet
DWFN	Distant Water Fishing Nation
EBA	Everything But Arms initiative
EC	European Commission
ECU	European Currency Unit
EDF	European Development Fund
EEC	European Economic Community
EEZ	Exclusive Economic Zone
EPA	Economic Partnership Agreement
EPO	Eastern Pacific Ocean
ESA	East and Southern Africa EPA Grouping
ETA	Eastern Tropical Atlantic Ocean
EU	European Union
EU15	European Union members prior to accession of 10 countries on 1 May 2004
EU DWF	European distant water tuna purse seine fleet
FAD	Fish aggregating device
FAO	Food and Agriculture Organisation of the United Nations
FDI	Foreign Direct Investment
FFA	Pacific Islands Forum Fisheries Agency
FOC	Flag of convenience
FPA	Fisheries Partnership Agreement
FSM	Federated States of Micronesia
FTA	Free Trade Agreement
FVO	Food and Veterinary Office (European Commission)

GATT	General Agreement on Tariffs and Trade
GCC	Global commodity chain
GDP	Gross domestic product
GIE	Groupement d'intérêt économique
GNP	Gross national product
GPN	Global production network
GRT	Gross registered tonnage
GSP	Generalised System of Preferences
GSP+	Generalised System of Preferences Plus
GT	Gross tonnage
HACCP	Hazard Analysis and Critical Control Point
HS	Harmonised System of Tariff Classification
HSL	Heinz Seychelles Ltd
IATTC	Inter-American Tropical Tuna Commission
ICCAT	International Commission for the Conservation of Atlantic Tunas
IEPA	Economic Partnership Agreement
ILO	International Labour Organisation
IMF	International Monetary Fund
IOT	Indian Ocean Tuna Ltd
IOTC	Indian Ocean Tuna Commission
IRD	L'Institut de recherche pour le développement
ISO	International Organisation for Standardization
IUU	Illegal, unregulated and unreported fishing
JICA	Japan International Co-operation Agency
LDC	Least Developed Country
MAFF	Ministry of Agriculture, Fisheries and Forestry (Government of Japan)
MFA	Multilateral Fisheries Partnership Agreement
MFN	Most-Favoured Nation
MWBSL	MW Brands Seychelles Ltd
NAMA	Non-Agricultural Market Access
NGO	Non-governmental organisation
NIC	Newly industrialised country
NIEO	New International Economic Order
NSB	National Statistics Bureau (Seychelles)
NTB	Non-tariff Barrier
ODA	Official development assistance
OECD	Organisation for Economic Cooperation and Development
OFCF	Overseas Fisheries Co-operation Foundation
OPAGAC	Organización de Productores Asociados de Grandes Atuneros Congeladores
OPEC	Organisation of Petroleum Exporting Countries
ORSTOM	Office de la Recherche Scientifique et Technique d'Outre-Mer
ORTHONGEL	Organisation des Producteurs de Thon Congelé
PACP	Pacific ACP states
PFC	Pioneer Food Cannery (Ghana)
PIC	Pacific Island Country
PNG	Papua New Guinea
PS	Purse seine tuna fishing vessel
PTA	Preferential Trade Agreement
PTM	Princes Tuna Mauritius
PUC	Public Utilities Corporation (Seychelles)
RDTC	RD Tuna Cannery
RFMO	Regional fisheries management organisation
RoO	Rules of origin
Rs.	Seychelles rupees
S&DT	Special and Differential Treatment

SADC	Southern African Development Community
SBS	Seychelles Bureau of Standards
SDF	Seychelles Defence Force
SEPEC	Seychelles Petroleum Company
SEYCFM	Seychelles Electronic Maritime Co. Ltd
SFA	Seychelles Fishing Authority
SIBA	Seychelles International Business Authority
SIDS	Small Island Developing State
SITZ	Seychelles International Trade Zone
SKJ	Skipjack tuna
SLA	Seychelles Licencing Authority
SPA	Seychelles Port Authority
SPC	Secretariat of the Pacific Community
SOCOMEF	Société de Contrôle d'Expertise Maritime et Pêche
Sovetco	Société de Vente de Thon Congelé
SPPF	Seychelles People's Progressive Front
SPS	Sanitary and phytosanitary
SPUP	Seychelles Peoples United Party
SSTC	South Seas Tuna Corporation (PNG)
SVEs	Small Vulnerable Economies
TBT	Technical Barriers to Trade
TDM	Thon des Mascareignes
TOG	Thunnus Overseas Group
UK	United Kingdom of Great Britain and Northern Island
ULT	Ultra-low Temperature
ULC	Union Lighterage Company Ltd
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNCTAD	United Nations Conference on Trade and Development
US	United States of America
USITC	United States International Trade Commission
USSR	Union of the Soviet Socialist Republics
VMS	Vessel Monitoring System
WCPFC	Western and Central Pacific Fisheries Commission
WCPO	West and Central Pacific Ocean
WIO	Western Indian Ocean
WIOTO	Western Indian Ocean Tuna Organisation
WTPO	World Tuna Purse Seine Organisation
WTO	World Trade Organisation
WWF	World Wildlife Fund
YFT	Yellowfin tuna

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# Chapter One

## Introduction and Overview

### 1.1 Global Commodity Chain Analysis

The study of commodities from production through to consumption – including perhaps less obvious aspects such as transportation networks and public and private standards – has been a veritable growth industry in the academy since the mid-1990s. However, a casual dip into this expansive (and expanding) lake of literature may well result in the reader sinking in the choppy waters of political-ideological contestation and disciplinary ‘ring-fencing’. Conceptual approaches to the study of a diverse range of commodities, from coffee to cars and from tourism to cinema, are variably (self-)labelled: *‘filières’* (Raikes et al. 2000, Bernstein 1996), ‘commodity systems’ (Friedland 1984, 2001, 2005), ‘commodity chains’ (Hopkins and Wallerstein 1986), ‘value chains’ (Porter 1990; Kaplinsky 2000), ‘supply chain management’ (Cox 1999), ‘food complexes’ and ‘food regimes’ (Friedmann and McMichael 1989; Friedmann 1994), ‘global commodity chains’ (Gereffi and Korzeniewicz 1994; Gereffi 1994), ‘systems of provision’ (Fine and Leopold 1993; Fine 2002), ‘global value chains’ (2001), ‘global production networks’ (Henderson et al. 2002), ‘global modular production networks’ (Sturgeon 2002), ‘networks of value’ (Smith et al. 2002), and ‘external firms’ as ‘systems integrators’ (Nolan et al. 2002; Nolan et al. 2008), among others. For simplicity I refer to this diverse set of approaches as the political economy variant of ‘commodity studies’. This is not to suggest any coherent relationship between these approaches beyond a common concern with studying ‘chains’, ‘networks’ or ‘systems’ that connect production and consumption in contemporary capitalism. In fact, quite the opposite, as noted by Bernstein and Campling, the political economy variant of commodity studies ‘has no common purpose, object of analysis, theoretical framework or methodological approach’ (2006a: 240).

In agreement with Gibbon et al. (2008), it is argued here that the study of commodity ‘chains’ or ‘networks’ is a methodological tool *not* a theoretical framework, which goes some way in explaining why the ‘chain’ framework has been picked-up by such a diversity of intellectual traditions, including materialist political economy, institutionalist economics, international

business, and post-modernism.<sup>1</sup> Nonetheless, regardless of substantial diversity in theoretical orientation and analytical focus, most approaches to commodity studies hold in common both a rejection of the static analytical grouping of commodities by ‘sector’ or ‘sub-sector’ (one of the many long-term problems of the ‘realism’ of mainstream economics) and the objective of examining empirical aspects of production-consumption linkages in contemporary and, for some, historical capitalism.

I have undertaken in-depth reviews of the commodity studies literature elsewhere (Campling 2004a; Bernstein and Campling 2006a, 2006b), the confined space of this thesis does not allow a systematic review of the various similarities and differences, controversies and contradictions, or emphases and silences within this literature. Instead, the thesis applies (and interrogates) one framework – global commodity chain (GCC) analysis – through a detailed empirical account of an under-researched ‘chain’: the canned tuna industry, in particular that which connects raw material production and processing in the Seychelles to retail in the EU, especially the UK. There are three reasons for selecting the GCC approach above other approaches to commodity studies: first, it was the approach that I had identified at the very outset of the research process and which most closely informed the field research design (Campling 2004b); second, it offers a clear set of guiding conceptual tools for the operationalisation of applied research (see section 1.1.2); and third, from its initial development, the GCC approach has tended to focus on questions to do with the political sociology of development and the international political economy (and the relationship between the two), which most clearly ‘fits’ with the lines of enquiry asked of the empirical research. I do not, however, accept the GCC approach uncritically and insights from other approaches both to multinational firms and to commodity studies informed my own conceptualisation of a ‘global commodity chain’ and my field research design (see below). In order to critically appraise and extend the GCC approach, the rest of this section takes the following three steps:

- 1) The first sub-section summarises five political economy approaches to ‘commodity studies’. As we shall see, these approaches have informed each other in a broad chronological sequence, from the ‘commodity chain’ of world-systems theory sequence to the ‘global production network’ of economic geography. Each draws upon specific sets of theoretical and disciplinary concerns, albeit with the common

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<sup>1</sup> This diversity also helps to explain why a single literature review cannot adequately reflect the breadth and depth of the commodity studies literature.

objective of illuminating production-consumption linkages under global(ising) capitalism.

- 2) Section 1.1.2 engages in more detail with three selected concepts first outlined by Gereffi (1994): chain governance, institutional context and upgrading. These conceptual elements were selected because of their resonance to mapping and unpacking the empirical case of the canned tuna industry and its interactions with Seychelles. The section engages with different interpretations and criticisms of these concepts and, in so doing, lays-out my operationalisation of GCC analysis. The three concepts are used to structure the three parts of the thesis; the first two consist of two chapters and the last part one. Each concept is applied as a device to structure the complex political economy of the tuna industry, but each is also interrogated analytically through the empirical study that makes up the main body of this thesis.
- 3) The final sub-section highlights three lacunae in GCC analysis that are of particular importance to an understanding of the EU-centred commodity chain in canned tuna. These are: a) environmental conditions of production, which are addressed in a dual sense both as constraints of the ‘natural’ world and as institutional conditions of resource access; b) the historical formation of commodity chains and its implications for contemporary relationships, processes and institutional dynamics; and, c) unequal political power among states and firms in the world system, including how this affects policy formulation and its enforcement (regulation), and the possibilities of ‘upgrading’. It is argued that without sensitivity to these three dimensions, a full understanding of the commodity chain in canned tuna would be impossible.

### **1.1.1 From commodity chain to global production network**

The following provides broad overviews of five frameworks in commodity studies: commodity chain, global commodity chain, value chain, global value chain and global production network approaches. These five are selected because each was developed sequentially in response to the prior approach (in the order listed above) and each lays great emphasis on the production-consumption linkages connecting the ‘global South’ to the

advanced capitalist world.<sup>2</sup> The following section sketches each in turn and teases out broad similarities and differences between them.

The first commodity studies framework is Hopkins and Wallerstein's 'commodity chain', which they define as 'a network of labor and production processes whose end result is a finished commodity' (1986: 15). They conceptualise 'networks of ... commodity chains' as being the fabric of the capitalist world-economy's 'system of social production'. The commodity chain approach allows the researcher to trace 'the ongoing division and integration of labor processes and thus monitor the constant development and transformation of the world-economy's production system' (Hopkins and Wallenstein 1994a: 17). This is all situated in world-systems theory's categorisation of the capitalist world-economy as being socially and geographically divided into zones of core and periphery – economically and politically mediated by a semi-periphery (e.g. Arrighi and Drangel 1986; Arrighi 1990) – with the principal flow of commodity chains moving in 'the direction periphery-to-core' (Hopkins and Wallenstein 1994a: 17). The emphasis on *hierarchical flows* in their conceptualisation of a commodity chain might have been a response by world-systems theorists to accusations of the structural immutability of their tri-zonal division of the world (Bernstein and Campbell 1985: 7-8; Hobden and Jones 2001: 209; Bair 2005: 156).<sup>3</sup> Regardless, it was certainly devised to show the historical dynamism of flows between these 'zones':

The greatest virtue of a commodity chain approach is its emphasis on *process*. Not only do commodities move extensively through chains, but the *chains are scarcely static for a moment*. The capitalist world-economy reveals itself via this kind of radiography as a fast-moving *network* of relations that nonetheless constantly reproduces a basic order that permits the endless accumulation of capital. (Hopkins and Wallenstein 1994b: 50. Emphases added)

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<sup>2</sup> This is not the case for other approaches. Value chain (Porter 1985) and supply chain management (e.g. Cox 1999) approaches were designed as generic strategic tools from the perspective of firm managers with little or no regard for the specificities of political economic context or historical change, and with absolutely no concern for 'development' outcomes in the global South. The commodity systems approach (Friedland 1984, 2000) is rooted in political-economy, but the emphasis is on the sociology of agriculture *within* national economies, especially the United States (e.g. Friedland 1994) – although Goss et al. (2000) apply the commodity systems approach to shrimp production in Thailand.

<sup>3</sup> Note that world-systems theorists often work with varying degrees of this typology in order to introduce greater levels of finesse, e.g. 'strong', 'weak' and 'weakest' periphery (Smith and Mahutga 2009).

In short, in the hands of world-systems theory, commodity chain analysis is a component part of a meta-theory that permits the study of *process* in global capital accumulation. The emphasis on process is an insight shared by all other approaches to commodity studies addressed here. However, the early empirical output of commodity chains research tended to focus on very long-term historical trends<sup>4</sup> and researchers working outside of world-systems theory have seldom *directly* taken-up Hopkins and Wallerstein's agenda.

The second political economy variant of commodity studies appeared in Gereffi and Korzeniewicz's (1994) landmark co-edited volume *Commodity Chains and Global Capitalism*. This collection set the research agenda for the *global* commodity chain (GCC) approach, which they defined as:

sets of interorganizational networks clustered around *one* commodity or product, linking households, enterprises, and states to one another within the world economy. These networks are situationally specific, socially constructed, and locally integrated, underscoring the social embeddedness of economic organization. (Gereffi et al. 1994: 2. Emphasis added)

For Korzeniewicz and Martin, the GCC approach 'was introduced to address a fundamental problem in world-system studies: How do we depict and investigate the relationships that *sustain and reproduce* core-periphery relations *over time and space*?' (1994: 68. Emphases added). Rather than investigating the *longue durée* of historical capitalism, analysts working within the GCC framework have tended to focus on the political sociology of the contemporary (changing) international division of labour, its implications for capitalist development in the global South, and the role of lead firms (mainly multinationals) in contributing to these changes. To this extent, the GCC framework was directly influenced by debates in the late-1970s and 1980s around the 'new international division of labour' (see Gereffi et al. 1994: 1); debates that centred on the reasons for (and the effects of) developing countries moving from being 'raw-material suppliers' for the global North to 'increasingly

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<sup>4</sup> In terms of its initial application, the historical period of commodity chains studied under this research programme was between 1590 and 1790, or, 'the early period of historical capitalism' (Hopkins and Wallenstein 1994a: 20). This choice may well have been an implicit response to criticisms that world-systems theory started its periodisation of capitalism too early which was a result of its emphasis on relations of exchange over relations of production (Brenner 1977).



becoming the location sites of manufacturing industries for competitive production in the world market' (Fröbel et al. 1978: 125).<sup>5</sup>

One of the main attempts to operationalise GCC analysis was developed in Gereffi (1994). Initially, he outlined three components of GCCs:

- 1) an *input-output structure* (i.e. a set of products and services linked together in a sequence of value-adding economic activities);
- 2) a *territoriality* (i.e., spatial dispersion or concentration of production and distribution networks, comprised of enterprises of different sizes and types); and
- 3) a *governance structure* (i.e., authority and power relationships that determine how financial, material, and human resources are allocated and flow *within* a chain). (Gereffi 1994: 96-7. Emphases added.)

To these three, Gereffi later added a fourth dimension: the *institutional context*. This 'specifies the local, national and international conditions that shape each activity within the chain' (Ponte 2002: 1100-1101; following Gereffi 1995). The emphasis of this fourth component is to take account of institutions that are not specific to the chain but that have discrete (and significant) effects upon it. The first two of these operational concepts – input-output structure and territoriality – constitute largely 'descriptive' dimensions of GCC analysis. The third component – chain governance – developed two ideal-types based around a continuum with 'producer-driven' and 'buyer-driven' governance at either end of the pole. (These are each discussed in more detail below in Section 1.1.2.)

Even though some of the early authors developing and applying the GCC framework were directly influenced by world-systems or dependency theory (e.g. Gereffi et al. 1994; Korzeniewicz and Martin 1994), the GCC approach has generally not been situated within an explicit *theorisation* of capitalism. As pointed out by Raikes et al. (2000: 409), the GCC approach is 'some way from constituting a solid theoretical paradigm'.<sup>6</sup> In this sense the approach has primarily been applied as a meso-level framework, focussing on the phenomenal forms of the capitalist world-economy, in particular hierarchical relations

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<sup>5</sup> For discussion and critique of the new international division of labour thesis from the perspective of the 'internationalisation of capital', see Jenkins 1984.

<sup>6</sup> As we shall see, some authors working within the global *value* chain framework attempted to redress this weakness in the 2000s.

between firms (i.e. chain governance) and how their activities are affected by international trade regulation (i.e. institutional context) (Smith et al. 2002).<sup>7</sup>

Gereffi's GCC approach has been widely applied and problematised (see below) in a variety of detailed empirical studies of contemporary chains, especially in terms of shifts in chain *governance*. Much of the initial empirical focus of GCC studies was on industrial chains in the new international division of labour (Raikes et al. 2000: 410), generating a rich literature on basic manufactures such as apparel and footwear and complex manufactures such as automobiles, with a predominant geographical emphasis on East and Southeast Asia and Latin America (e.g. Appelbaum et al. 1994; Chen 1994; Gereffi 1994; Kim and Lee 1994; Korzeniewicz 1994; Lee and Carson 1994; Schoenberger 1994; Taplin 1994).<sup>8</sup> It is important to distinguish *within* the GCC approach between this 'US-school' and that associated with a subsequent research programme at the Danish Institute for International Studies.<sup>9</sup> This 'European' school of GCC research has focused more on *agricultural* commodity chains, normally based on sites of production in sub-Saharan Africa (e.g. Daviron and Gibbon 2002a; Daviron and Ponte 2005; Fold and Pritchard 2005a; Gibbon and Ponte 2005; Ponte 2002a). Given that the commodity under investigation in this thesis combines elements of industrial and 'agricultural' analytical concerns, it draws directly on both of these GCC traditions.

Gereffi and others working within the GCC approach referred fairly extensively to Michael Porter's 'value chain' analysis, work which Porter undertook in parallel to Hopkins and Wallerstein's commodity chain. Porter (1990: 33-51; 1985) described the discrete activities that constitute value chains *within* the firm. He situated this internal value chain within a (generic) firm's external 'vertical linkages' upstream and downstream with suppliers and 'channels' (e.g. retail) within a 'value system'. But Porter's firm-centric and prescriptive approach (Dicken et al. 2001: 97; Ponte and Gibbon 2005: 23, fnt 5) to a generic 'value chain' is not the focus here. Instead, for our third variant of commodity studies we are concerned with the 'value chain' analysis developed in Kaplinsky (2000a) and Kaplinsky and Morris (2001) and associated with the UK Institute of Development Studies (IDS), which, like GCC analysis, focuses on the network of activities connecting firms in the international

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<sup>7</sup> Other questions around the state's interaction with commodity chains – such as labour regimes, social policy or the use of force – have been ignored completely by GCC analysts.

<sup>8</sup> Some exceptions are work on US-centred GCCs in agro-exports from Latin America (Goldfrank 1994; Reynolds 1994) and on GCCs in service industries (Rabach and Kim 1994).

<sup>9</sup> Formerly the Centre for Development Research (CDR).

division of labour. Sharp differentiation between the GCC approach and the ‘IDS’ variant of value chain analysis is difficult because the latter openly acknowledges the importance of the former to its formation. The major difference in emphases of value chain analysis is reflected in the ‘twin concerns’ of Kaplinsky and Morris (2001: 25) for a focus on income distribution along and across chains, and the identification of ‘effective policy levers’ for developing country governments to improve (or ‘upgrade’) their economies’ interactions with value chains in the context of global trends of ‘unequalisation’ (see also Kaplinsky 2000a, 2000b; Wood 2001; and for an application, Kaplinsky and Morris 2008). As such, the analytical tendency in this approach was directed more towards economics and development policy and management,<sup>10</sup> compared to the GCC emphasis on power relations, industrial restructuring and corporate strategy.<sup>11</sup> On ethical and strategic levels, the concerns of value chain analysis with income distribution and ‘upgrading’ (see Section 1.1.2) focuses on the ability of developing countries to ‘make the best of globalisation’, because ‘it is less a matter of globalisation being intrinsically good or bad, than *how* producers and countries insert themselves in the global economy’ (Kaplinsky and Morris 2001: 15).

The ‘merger’ of the GCC approach and value chain analysis into the ‘global value chain’ (GVC) approach is our fourth variant of commodity studies, and has been the subject of a detailed ‘genealogy’ by Bair (2005, 2009). In short, this merger – announced in a special issue of *IDS Bulletin* on ‘The Value of Value Chains’ in 2001 – was an explicit attempt by several prominent ‘chain’ researchers to set the research agenda and agree upon a ‘common framework’ (Gereffi *et al* 2001: 1). This was partly an attempt to reduce disparities between ‘approaches’ which – on the surface alone (Bair 2005) – were merely competing over nomenclature. But it was primarily meant to contribute to the ‘operationalisation of concepts’ and theory building (Gereffi *et al* 2001: 2).<sup>12</sup> Notably, one of the major gaps identified by researchers working with the GCC approach was the lack of quantitative ‘chain’ research with which, for example, to examine empirically whether or not ‘value added’<sup>13</sup> is actually higher downstream a given chain (e.g. at the branding and marketing ‘node’ or link in the chain) than upstream (Raikes, Jensen and Ponte 2000: 403). The greater focus of value chain analysis on ‘economics’ (e.g. income distribution) meant that it was readily absorbed within

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<sup>10</sup> Areas where GCC analysis was seen as lacking by some commentators (e.g. Cramer 1999).

<sup>11</sup> Although Gereffi (1999) also introduces the concept of ‘upgrading’.

<sup>12</sup> Some researchers that had previously used the term ‘GCC’ (e.g. Daviron and Gibbon 2002b, Ponte 2002a) subsequently adopted ‘GVC’ (e.g. Gibbon and Ponte 2005, Daviron and Ponte 2005).

<sup>13</sup> Hopkins and Wallerstein argue that we should not refer to ‘value-added’ but rates of profit, as the former is misleading (in a Marxist sense) (1994a: 18).

the ‘new’ GVC approach. Another principal concern of GVC analysis is with ‘upgrading’ (e.g. Gereffi et al. 2001: 4-5). This is indicative of a major point of departure between the GCC and GVC approaches: while GCC research output could be of *implicit* policy relevance (i.e. firms, governments or activists could, and the latter certainly did, make use of GCC research), much of the GVC literature is *explicitly* orientated to policy-making and development ‘management’, particularly regarding factors and variables affecting the upgrading potential of developing country firms or the implementation of government policies to attract foreign investment.<sup>14</sup> In light of this, Bair (2005) has argued that the GVC approach is a less radical, micro-level approach that is increasingly reliant on the mainstream literature on economics, international business and economic sociology, and has consequently lost sight of the original *systems-level* dimensions of chains as developed by Hopkins and Wallerstein. In addition, as discussed below in Section 1.1.2, different emphasises on chain ‘governance’ can be discerned both between and *within* GCC and GVC approaches.

The fifth and final variant is the global production network (GPN) approach. Economic geography has been at the forefront of the analysis of transformations (or ‘global shifts’) in the world economy since the 1970s (e.g. Dicken 1986, 2007). As a result it might seem surprising that researchers situating themselves in this discipline only began to work collectively to engage with the GCC framework in the early 2000s. Dicken et al. offers an initial appraisal of the GCC approach, praising especially its decentring ‘of the nation-state as a locus of economic analysis’ (2001: 100). But, they argue, it is a ‘partial, albeit extremely useful analytical framework’, which does not fulfil its ‘impressive and ambitious agenda’ (2001: 98-9), partly because most GCC researchers have focussed primarily on chain governance rather than its other components (see 1.1.2). Two new approaches were proposed that drew on the tools of economic geography in an attempt to extend the GCC approach: one, on ‘networks of value’, is explicitly Marxist (Smith et al. 2002) and the other – the GPN framework – blends elements of Marxian insights with aspects of economic sociology, including actor-network theory (Henderson et al. 2002; Dicken et al. 2001; Hess and Yeung 2006). Of the two, the GPN framework has been most clearly adapted in the literature and,

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<sup>14</sup> For explicit GVC approaches to upgrading see Dolan and Tewari (2001), Fleury and Fleury (2001), Giuliani et al. (2005) and Quadros (2002).

like GCC/GVC, has been applied to numerous detailed empirical investigations of economic activities.<sup>15</sup>

The GPN framework rejects the ‘chain’ metaphor ‘as being essentially vertical and linear’ in favour of a ‘relational, network-focussed approach’ that can incorporate horizontal, diagonal *and* vertical links in production systems (Henderson et al. 2002: 442). Authors working with the GVC framework agree that it focuses overly on vertical relationships between firms so that ‘processes of co-ordination and competition among actors operating in the same function or segment of a particular market are given less attention’ (Ponte and Gibbon 2005: 4). ‘Horizontal’ (or intra-nodal) competition among firms is a central component of capitalist competition and competition within a node would surely affect vertical relationships between that node and another (and vice versa). Similarly, horizontal ‘competition’ between locations of production (whether at the sub-national, national or macro-regional scale) to attract direct foreign investment is a central feature of the international political economy and a major strategy of governments around the world, from tax holidays for greenfield investment through to full export-processing zones.

The GPN use of ‘production’ (as opposed to ‘commodity’) emphasises the simultaneously relational and structural aspects of networks, including the allowance of ‘due attention to the issues of the reproduction of labour power’ (Henderson et al. 2002: 444). The GPN framework also problematise the GCC/GVC tendency to see lead firms as having a monopoly on corporate power because this can be challenged by ‘lesser firms’. Moreover, firms are ‘territorially embedded’ in the ‘sense that they absorb, and in some cases become constrained by, the economic activities and social dynamics’ that exist in the places where they locate (Henderson et al. 2002: 450 and 452). Finally, the GPN emphasis on a multi-scalar perspective (Henderson et al. 2002: 447) stems, in part, from the developing concern of materialist geographers since the early 1980s with spatially uneven development both *within* countries as well as between them. For example, the GPN framework has placed a specific emphasis on ‘(subnational) regional development’ (Hess and Yeung 2006: 1196; see also, Coe et al. 2008: 268). More detail on selected contributions of the GPN framework and their implications for enhancing the GCC approach are addressed in the next section.

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<sup>15</sup> The uptake of the less theoretically coherent GPN approach over ‘networks of value’ is itself instructive of moments of intellectual reproduction and disciplinary ring-fencing in the academy.

### 1.1.2 Selected concepts and interpretations

Of the political economy approaches to ‘commodity studies’ discussed above, all share the fundamental assumption that only through understanding the complex (sometimes intertwined, sometimes discrete) pressures and processes in and across an *entire* commodity ‘chain’ or ‘network’ can we generate convincing empirical assessments of distributional outcomes, power relations and institutional dynamics, and explore *change* in the interactions of producers, countries, firms and consumers within global capitalism, including dynamics of industrial ‘upgrading’ or ‘downgrading’ (a long-term concern of development studies and industrial organization). Such an analytical orientation allows us to move ‘beyond state-centric approaches to economic development’ and, importantly, to understand the ‘structural limitations within which [countries and] firms, even multi-national corporations, operate’ (Gibbon and Ponte 2005: xi). The question follows: what prisms and concepts should be used to frame and engage with an analysis of a particular commodity chain? The first step in framing an answer is that ‘the suitability of a particular method’ should be determined by the demands of specific research questions (Bryman 1988: 106; see also, Devine 1995: 141). The following discussion suggests ways in which insights from GCC and related approaches can be engaged in the study of the ‘global’ commodity chain in canned tuna. In other words, it sets out a framework of analysis for my particular case. At points, it supplements the chain literature with insights from the International Business literature on multinational firms, especially that by Stephen Hymer.<sup>16</sup>

#### *a) Input-output structure and territoriality*

Two key components of Gereffi’s original operationalisation of GCC analysis are uncontroversial and widely accepted by competing approaches to commodity studies: input-output structure and territoriality. The careful study of input-output structure is the first step to understanding how the various economic activities in a chain function as a coherent whole or ‘sequence’. It does however, imply difficult analytical choices. For example, where should

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<sup>16</sup> There have been several surveys and appraisals of his work and these will not be rehearsed here. See, for example, Pearce and Pananastassiou 2006; Pitelis 2002; Strange and Newton 2006. As pointed out by Levitt-Polanyi (1982: 253-4) in the context of Hymer’s early death at the age of 39, his ‘legacy is best understood as a sort of intellectual sketchbook, a prelude to a more complete and coherent statement of his ... insights’.

research on the vertical flows of a ‘chain’ start and stop? In the case of the canned tuna chain, important ‘inputs’ include ship-building and tinplate manufacture, and significant ‘outputs’ are bycatch of fishing vessels (‘waste’ fish), by-products from processing (e.g. fish meal and fish oil, effluent, smell pollution, etc), and used metal cans post-consumption which can be re-inserted into other commodity chains through recycling. Although some of these feature in the thesis, they are either not central to the core dynamics of accumulation in the commodity chain in *canned tuna* or they would require additional research that is beyond the scope of a single thesis. Similarly, given the linearity of the chain metaphor and the reality that the flow of any given commodity interacts with and through multiple networks (as pointed out by the GPN approach), where should research on horizontal and diagonal linkages start and stop?

This is a far more challenging question because the possibilities are literally endless (perhaps indicating a weakness in the GPN framework?). The following discussion of three concepts and four lacunae in GCC analysis goes some way to delineating the boundaries – empirical inclusions/exclusions – of this thesis, but one point worth emphasising here is a useful distinction made by Daviron and Ponte (2005: note 1, Xxiv; Bernstein and Campling 2006b: 415) between a ‘*global value chain for x*’ and ‘*x value chains*’. For example: “‘*global value chain for coffee*’ . . . is used to analyse general features in relation to the movement of coffee from production to consumption’ while “‘*coffee value chains*’ . . . (is) used when a specific strand of the global value chain for coffee is examined (either at the production or consumption ends, or both) . . . such as the Uganda-to-Italy chain for Robusta coffee, of the Tanzania-to-US chain for mild specialty Arabica coffee’. In this thesis the focus is on the EU-centred commodity chain in canned skipjack and yellowfin tuna, particularly that of one firm (controlled by the multinational firm H. J. Heinz) and interacting with one location of production (Seychelles). This is sometimes set in the context of interactions with the *global* commodity chain (which, in practice, simply adds the US-centred chain as all other markets are secondary to these two), and very occasionally makes reference to the mainly Japan-centred commodity chain in sashimi grade tuna.

Although ‘territoriality’ is a contested term in economic and political geography, Gereffi’s (1994) use is adequate shorthand for his concern with the geography of production *and* relative degrees of concentration of economic activities in different locations. The investigation of a commodity chain connecting raw material production and manufacturing in the global South to retail in the ‘North’ allows us to examine how dynamics of (uneven)

development combine with specific moments in specific places and times. A ‘chain’ framework, while centred on firms as the loci of capital accumulation, does not necessitate a firm-centric perspective. Because a chain framework also requires consideration of ‘institutional contexts’ (see below) we are *also* able to look at capital accumulation from the perspective of different states and their relevant relationships (as this thesis does) and from the perspective of labour (excluded from this thesis).

### ***b) Chain governance***

Chain governance in GCC analysis is ‘a firm-centred conceptualization’ (Gibbon et al. 2008: 315). Wider dynamics shaping chain activities and relationships, such as the state and international forms of regulation, are considered under the rubric ‘institutional context’ (see below).<sup>17</sup> As already noted, governance has been the dominant analytical focus in most applied GCC studies. The governance of a chain by a lead firm requires a relationship of *control*, not necessarily direct relations of ownership. The major contribution of Gereffi (1994) on chain governance was the distinction between ‘producer-driven’ and ‘buyer-driven’ commodity chains, where production tends to be, respectively, more capital- or labour-intensive. The latter refers:

to those industries in which large retailers, brand-named merchandisers, and trading companies play the pivotal role in setting up decentralized production networks in a variety of exporting countries. ... The main job of the core company in buyer-driven commodity chains is to manage ... production and trade networks and make sure all the pieces of the business come together in an integrated whole. (Gereffi 1994: 97-9)

‘Buyer-drivenness’ then, signifies ‘a relation of power’ (Daviron and Gibbon 2002b: 140); or perhaps more accurately, and through the prism of Hymer’s work, a relation of *market* power through mechanisms of *control* – as opposed to necessitating direct ownership. Control is exercised by lead firms located in nodes of a chain that are typified by concentration and centralisation and associated high barriers to entry (Hymer 1979a: 145; Gereffi et al. 2001: 4; Raikes et al. 2000: 397). In typifying buyer-driven chains, Daviron and Gibbon point to the emergence of new sets of lead firms which transformed ‘old trade linkages into decentralized

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<sup>17</sup> *Chain* governance is not to be confused with the broader conceptualisation of governance common to political science or international political economy, such as in the literature on global governance.



but privately controlled production networks’ and have the ‘ability to redraw continuously both the geography and the functional division of labour of the resulting networks’ (2002b: 138).

It is rarely acknowledged that the basic premise of a buyer-driven chain was first theorised by Stephen Hymer. Rather than sub-contracting leading to “control over ... resources [being] relinquished” (Dunning as cited by Strange and Newton 2006: 181), multinationals could use it to *extend* their control without ownership.<sup>18</sup> On this, Hymer (1979b) pre-empts the distinction in the GCC approach between ‘producer-driven’ and ‘buyer-driven’ chain governance by lead firms. It is worth quoting him at length on this:

*[W]hen production is the crucial element, ownership of plant and equipment may be essential for control [i.e. ‘producer-driven’ commodity chains]. But where product design becomes the dominant element, investment in development and marketing is more important. The larger corporations might then prefer to allow small businesses to own the plant and equipment (along with the associated risks) while it concentrates on intangibles. ... A corporation that concentrates [in strategic nodes of a commodity chain] ... is not surrendering control, but is extending it more widely. Similarly, when there are only a few sources for a raw material, it may be necessary for a larger user to integrate backward to control that raw material. But if there are many sources of supply the corporation might welcome local participation in order to save its capital for other steps. (Hymer 1979b: 248-9. Emphases added)<sup>19</sup>*

Two important points stem from this: the first analytical and the second methodological. Hymer had clearly identified analytically the possibility of ‘lead’ (e.g. Gereffi et al. 2001) or ‘external’ (Nolan 2002) firms divesting ownership of production secure in the knowledge that they could continue to *control* vertical relationships with other firms – through oligopsonistic (few buyers and many sellers) and/or oligopolistic (few sellers and many buyers) market power. It also demonstrates the methodological adaptability of Hymer’s framework as it allowed him to assess different dynamics, processes and relationships of multinational firms

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<sup>18</sup> The identification of this rarely-cited essay by Hymer as pre-empting the concerns of global commodity chain analysis stems from Strange and Newton (2006), see also Bair (2009: 5).

<sup>19</sup> Hymer used the concrete example of Japanese firms engaging overseas through mechanisms such as ‘production sharing, guaranteed demand contracts’, ‘joint ventures, subcontracting, etc., rather than wholly owned subsidiaries’, which had the potential of drawing supplier countries ‘into a system of continued dependency’ (Hymer 1979b: 244 and 247).

at different times and in different places. Hymer's approach was able to account for firm *strategy* and, moreover, historical *change* based upon a combination of economic and political processes, institutions and relationships.

Through their control over chain governance lead firms occupy strategic positions in the chain that allow oligopolistic rent-seeking, such as the rise of supermarket control of retail channels and the strategy of multinationals shedding segments of their business to concentrate financing on their core business where they have less competition (Gibbon and Ponte 2005: Ch. 1). For Hymer, this market power is based on market 'imperfections'. These are not *primarily* to do with 'natural' transaction costs, but are formed as a *structural* outcome of the historical development of capitalist concentration and centralisation ('the Law of Increasing Firm Size') (Hymer 1970: 37; following Marx 1976). Hymer argued that multinationals generate and perpetuate oligopolistic relations because scope for competition is limited by the size of markets. Ever bigger firms, owning and/or controlling ever greater shares of production heightens the barriers to entry for competing firms (Hymer 1970; Nolan et al. 2002; Pearce and Pananastassiou 2006; Pitelis 2002). Hymer saw the tendency to the concentration and centralisation of *control* of production and capital as 'so persistent' in the historical development of capitalism, 'that it might almost be formulated as a general law of capital accumulation' (Hymer 1979a: 145). While these conditions are competitive, Hymer argued that lead firms often compete in 'an oligopolistic rather than in a cutthroat way' (Hymer 1972: 98)

A concern with chain governance thus incorporates an emphasis on highly differentiated *real markets*. Rather than an abstracted notion of the firm or 'the market' as efficiency maximising institutional forms, 'real markets' constitute complex 'sets of social relations structured by classes and institutions' (Mackintosh 1990: 50). In other words, 'the dictates of the capitalist market—its imperatives of competition, accumulation, profit maximisation, and increasing labour productivity—regulate not only all economic transactions but social relations in general' (Wood 1999: 6-7). For the purpose of this thesis Wood's formulation of capitalist 'imperatives' is encapsulated in the term *competitive accumulation*. The GCC approach extends an understanding of real markets through its focus on social relations along 'vertical' production-consumption linkages in the (changing) international division of labour.

In the agri-food industries, buyers source products across the planet from a range of decentralised and sharply competing suppliers whose outputs are often coordinated by well established food safety, quality and process standards (Daviron and Gibbon 2002b: 141).<sup>20</sup> Importantly, control need not be a direct relationship, as private standards (the regulation of firms by firms) are often audited by a third party so that a lead firm maintains the ‘control of control’ (Ponte and Gibbon 2005: 12). As anticipated by Hymer (1979b), this allows ‘lead firms’ in buyer-driven chains to remove the risks associated with the ownership of the processing links (or ‘nodes’) of a commodity chain; instead, these risks are passed on to first- or second-tier suppliers (Gibbon and Ponte 2005). This entails a process of *strategic* ‘externalisation’ of international production by lead firms rather than a narrow focus on the relative merits of a multinational firm internalising transaction-costs.

Any attempt to understand chain governance through the prism of buyer- or producer-drivenness must ask: how does one identify which firms ‘lead’ any given commodity chain and what mechanisms do they use to do so? The first step to an answer requires empirical investigation of firm activities (‘the input-output structure’) across the chain, which in turn necessitates an understanding of the geography and relative concentration of these activities (‘territoriality’). Applied GCC research on certain agri-food chains – especially fresh fruit and vegetables – has concluded that supermarkets play a lead firm role (Dolan and Humphrey 2000; Gibbon 2003; Lang 2003; Fold and Pritchard 2005a). The ‘supermarket revolution’ of the 1980s constituted a shift in market power from branded-manufacturing firms to large retailers, initially in the UK and USA before moving to Western Europe and Japan, and eventually to much of the global South from the late 1990s (Appelbaum 2008; Aoyama 2007; Brunn 2006; Coe and Wrigley 2007; Myers and Alexander 2007; Reardon and Hopkins 2006; Wrigley 2001; Wrigley et al. 2005). Yet while there has been increasing global concentration of ownership in the retail sector since the 1990s (Dawson 2007; Deloitte 2008: 26, 2010: 19), the failed internationalisation strategies of several major supermarkets – including Wal-Mart in Germany and Japan – makes it clear that this process is not inevitable (Aoyama and Schwarz 2006; Christopherson 2006; Fernie et al. 2006; Humphrey 2007).

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<sup>20</sup> Demanding food safety standards, particularly those applied by the EU and individually by its member states, can be seen as either barriers to developing country producers or as catalysts for their functional upgrading (Henson and Jaffee 2006). Either way, public and private standards have expanded substantially in importance over the last 20 years. Public standards are a central regulatory mechanism in agri-food chains, and private standards are a key tool of chain governance by lead firms.

Research on supermarkets in the UK – one of the key ‘actors’ examined in this thesis – has attributed them with a growing degree of market power since the 1980s (Burt and Sparks 2001; Dawson 2001). This rise can be characterised by a ‘spiral of growth’, where a supermarket’s increased market share and sales density generates enhanced economies of scale and buying power and reduced unit costs relative to competitors, resulting in an oligopolistic structure with high barriers to entry (Burt and Sparks 2003). General assessments of ‘winners and losers’ in the UK and US supermarket revolutions argue that supplying firms (and their workers) are among the most notable sets of ‘losers’ in the distribution of value across the chain, especially those based in developing countries (Actionaid 2007; Appelbaum, and Lichtenstein 2006; Seth and Randall 1999; Tilly 2006; Thrupp 1995; UK Competition Commission 2000, 2007; Vorley 2003a, 2003b; Young 2004). From its outset, GCC analysis has placed considerable emphasis on chain governance by powerful retailers in the global North over suppliers of primary commodities and basic manufactures in the global South. Perhaps the central rationale for much GCC analysis to focus primarily on personal consumption goods is that they have significant ‘developmental’ implications (e.g. primary commodities, apparel) and ‘fit’ within the initial research agenda of GCC analysis as proposed by Gereffi (1994), especially in relation to buyer-drivenness (Bernstein and Campling 2006a).

Despite general agreement that supermarkets play a ‘driving’ role in agri-food chains it is far from apparent that they are the only or even the most important ‘lead firms’. As pointed out in Gereffi’s (1994) formulation of buyer-driven chains, ‘brand-named merchandisers and trading companies’ can also act as ‘core’ companies. Gibbon (2001a) established the dominance of international trading companies in governing certain agri-food chains such as cotton; a finding that was paralleled in research on the canned tuna industry where the ‘big three’ tuna trading companies were shown to play a ‘governing’ role both in coordinating industrial tuna fisheries in the Western and Central Pacific Ocean and in supplying raw material to tuna processors (Campling et al. 2007: Ch. 15; see also Gellert 2003 on Japanese trading firms in the Indonesia-Japan timber chain). Similarly, Gibbon and Ponte (2005: 27, see also p. 100) highlight the importance of ‘the leading food multinational corporations’ to the globalisation of food manufacturing, and go on to argue that degrees of ‘drivenness’ depend upon the specificities of the industry in question (Ibid: 80; see also Raikes et al. 2000: 397). In different ways, Appelbaum (2008) and Sturgeon (2002) point out that the rise of global giant contract manufacturers may act as a (unintended) counter-balance to the

dominance of traditional ‘lead’ firms in buyer-driven chains. Niels Fold provides important critical insights into GCC governance through his identification of a ‘bi-polar chain’ in the cocoa-chocolate industry where two highly concentrated groups of lead firms exist at different nodes in the chain. Consequently he argues that ‘the crude dichotomy between producer- and buyer-driven chains ... fails to acknowledge the more complicated patterns of power relations between lead firms in global chains’ (Fold 2002: 230). In light of these findings, we concur with Raikes et al. (2000: 410) that the producer-/buyer-driven dichotomy ‘may be useful as a general guide at the beginning of a research project, but appears too rigid and uncontextualized time-wise to be used uncritically thereafter’.<sup>21</sup> Nonetheless, ‘buyer-drivenness’ is a useful *descriptive* concept to signify change in the world economy since the late 1970s; change that has incorporated ‘a sharp increase in supply and a secular trend toward a “buyer’s market”’ (Daviron and Gibbon 2002b: 152). Despite its flaws then, the notion of a ‘buyer-driven’ chain serves to capture these important trends in the global political economy over the last 30 years.

One of the major weaknesses of the producer-/buyer-driven categorisation of chain governance is that it was established based upon empirically-driven opposite poles of a continuum of ideal-types. Without placing them in the concrete and complex contexts of particular chains in particular times and places, these categories can generate superficial analyses. ‘Operationalising’ governance has emerged as a key source of disagreement in the more recent GVC literature. Debates over governance and the extent (and ‘level’ of analysis) of its theorisation reveals significant theoretical divergence within the camp of – self-professedly – ‘GVC’ analysts. For example, Gereffi et al. (2005) draws heavily on transaction-cost economics to build a rigid typology of types of governance.<sup>22</sup> This has been widely criticised by chain researchers with an interest in questions to do with *political-economy*. Gibbon et al. (2008: 333) dismisses the privileging of ‘formal model-building’ and Palpacuer (2008: 399) points out that, while Gereffi et al. (2005) signifies a ‘growing conceptual sophistication of GVC analysis’, it focuses on the ‘technical and economic aspects of governance, overlooking changes of a more political nature in value allocation within the

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<sup>21</sup> Similarly, Kaplinsky and Morris stress that there may not be a single lead firm that dominates chain governance, instead ‘there may be a multiplicity of nodal points of governance and coordination functions’ that ‘may change over time’ (2001: 29).

<sup>22</sup> In their article on chain governance, Humphrey and Schmitz (2001: 19) also move directly into the terrain of transaction-cost economics through Williamson’s (1981) notion of ‘bounded rationality’.

chain'.<sup>23</sup> Quite simply, the thesis does not ask the same sorts of narrow economic questions as Gereffi et al. (2005), so this discussion will be pursued no further. Conversely, Hymer's (1979b) early indication of a similar but less rigid understanding of control by lead firms (see the extended quote above) than Gereffi's earlier producer-/buyer-driven dichotomy is situated in a theorisation of the dynamics of competitive accumulation. This allows the recognition of specificity and diversity in forms of chain governance, but also maintains the importance of *market power*. Therefore, chain governance can be re-interpreted away from ideal-types to a conceptualisation of firm behaviour, but *not* as a firm-centric approach (e.g. as in transaction-cost economics); instead one that incorporates the wider dynamics of, for example, uneven development, the hierarchical state system and class relations. Hymer's insights on the multinational firm thus allow a re-interpretation of the meso-level GCC approach within the wider context of competitive accumulation where multinational firms are the most recent and sophisticated institutional *form* in the long historical 'development of business enterprise' (Hymer 1975: 49).<sup>24</sup>

In the context of this discussion, I use chain analysis as an investigative tool – or 'methodological approach' (Gibbon et al. 2008) – in the analysis of firm activities under conditions of competitive accumulation. This entails a focus on the firm as an institutional form peculiar to capitalism. As a result, in this thesis chain governance is understood as the concrete processes and relationships that allow 'lead' firms to shape the activities of and distributional outcomes for other firms in a vertical division of labour. This is achieved by lead firms through a combination of their relative market power, creation and enforcement of rules and conditions of chain participation, and their positioning in nodes of the chain that enjoy enhanced shares of surplus value generation or extraction (whether through profits and/or rents).<sup>25</sup> This conceptualisation of chain governance does not presuppose the existence of ideal-typical 'driveness' or formal model-building. Instead it focuses attention on mechanisms of market power by lead firms in their shaping of chain activities ('input-output

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<sup>23</sup> See also, Ponte and Gibbon (2005) and Gibbon and Ponte (2005). For criticism of the dominance of the new economic sociology in GVC analysis, see Bair (2008) and Bernstein and Campling (2006a).

<sup>24</sup> Importantly and contrary to politically populist analyses, even though Hymer thought that multinational firms dominated the capitalist world-economy after World War Two, he did not think that they controlled it (Cohen et al. 1979: 20).

<sup>25</sup> 'Rules and conditions of chain participation' draws directly from Ponte and Gibbon (2005: 3). A lead firm's enhanced profitability or rent extraction/generation is normally achieved by maintaining a position of oligopoly or oligopsony in a strategic node of the chain that is characterised by high barriers to entry for other firms (e.g. Gereffi 1999: 43-44, 2001: 1620-21). See Starosta (2010) for a theoretical discussion of this issue.

structure’) and the geography and relative concentration or dispersal of production (‘territoriality’), but necessarily situated in a wider ‘institutional context’.

### ***c) Institutional context(s)***

In his 1994 chapter, Gereffi places emphasis on the role of the state and of trade policy in particular in shaping the geography of production in the US-centred GCC in apparel.<sup>26</sup> But he did not incorporate the role of the state or the system of states in his three components of applied GCC analysis. He formalised the inclusion of a fourth component – ‘institutional context’ – in a subsequent contribution. This can be summarised as the context ‘that shapes the inter-firm networks that connect the various links in the chain and mediate the outcomes associated with the operation of the chain in different environments’ (Bair and Gereffi 2003: 145, following Gereffi 1995).<sup>27</sup> While state regulation and geopolitics were thus identified as important dynamics of chain analysis from the outset, social and institutional context has tended to be downplayed, underdeveloped or even ignored completely in most chain analyses; as pointed out by critics of the GCC approach (Gellert 2003: 59; Palpacuer and Parisotto 2003: 103; Patel-Campillo 2010: 77-84).

In her influential survey of the chain literature, Bair (2005: 168) calls for a ‘second generation’ of GCC analysis that examines the ‘external’ *regulatory mechanisms* that are constitutive of chains and ‘are critical for understanding their social and developmental consequences’.<sup>28</sup> Importantly, Bair explicitly attempts to overcome a false ‘internal-external’ dichotomy by referring to these mechanisms as *constitutive* of chains. Trade policy in particular directly and indirectly influences the geography of international production and, in turn, the way that a wide range of commodity chains are configured. It is important to that trade policy itself can be directly influenced by the configuration of chains and the representation of the interests of powerful firms by their ‘home’ states in trade negotiations (Chapter 5). As we shall also see in Chapter 5, EU trade preferences are of particular

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<sup>26</sup> For example: ‘The economic agents of supply and demand do not operate in a political vacuum. ... They ... respond to political pressures from the state’. On which he goes on to analyse the importance of state policies of import-substitution/export-orientated industrialisation in shaping in apparel GCC over time. (Gereffi 1994: 99-100, see also p. 101, 114 and 116 on US import quotas.)

<sup>27</sup> Summarised by Raikes et al. (2000: 393, following Gereffi 1995) as the ‘national and international conditions and policies [that] shape the globalization process at each stage in the chain’.

<sup>28</sup> The GPN approach introduces a similar point on the role of the state and inter-state/international agencies through the category of ‘institutional power’ (Henderson et al. 2002: 450).

importance to the geography and politics of canned tuna production in the global South.<sup>29</sup> Bair's category of 'regulatory mechanisms' is adopted in this thesis as an alternative operational concept to Gereffi's 'institutional framework' and is used to frame Chapters 4 and 5 of this thesis – on fisheries regulation and trade policy, respectively.

Bair (2005: 170) also highlights the importance of the '*structural properties* of contemporary capitalism' to her call for a second generation of chain research. As pointed out by Palpacuer (2008: 406) in her work on financialisation and corporate strategy, 'if lead firms are acknowledged to play a central role in the governance process of GVCs, then the ways in which these firms are themselves governed cannot but exercise an influence on the whole chain'. Similarly, Gibbon and Ponte (2005: 11-15) identify the role of corporate financialisation and the 'doctrine of shareholder value' as key dynamics 'driving' the organisation and behaviour of 'lead' firms, which, in turn, have implications for first- and second-tier suppliers. These wider political-economic dimensions are clearly of central importance to an understanding of the context of any commodity chain, but they also raise questions around where the 'structural' dimensions of a chain analysis stop. If the analytical logic of Bair's intervention is followed to its conclusion, the study of any commodity chain would simultaneously entail the study of its relation within the totality of the world economy and the 'laws of motion' of the capitalist mode of production (Starosta 2010). While the 'dull compulsion' of competitive accumulation and the tendency to concentration and centralisation of *control* of commodity chains serves as a major set of assumptions informing this thesis, the 'level' of abstraction inherent within the study of how the '*structural properties* of contemporary capitalism' affect chains does not immediately lend itself to operationalisation in relation to a far more modest ('meso-level') description and analysis of a 'slice' of contemporary capitalism – production-consumption linkages in a commodity chain in canned tuna. Nonetheless, as we shall see in Chapter 3, *different types of ownership* of lead firms in the branded and retail nodes of the EU-centred commodity chain in canned tuna have important implications for their business strategies and shape the chain as a whole.

Our discussion of the 'institutional contexts' of chain analysis so far is open to criticism of a 'structuralist' or 'systems bias', which could lead to the obfuscation of 'national variations in production and consumption' (Leslie and Reimer 1999: 404; Cramer 1999: 1248). The

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<sup>29</sup> On the role of preferences in the international trade regime and their relationship to upgrading/downgrading in commodity chains, see Dolan and Tewari (2001), Gibbon (2002) and Gibbon and Ponte (2005: ch. 2).



‘governance’ of any chain cannot be limited solely to inter-firm relationships or the dynamics of international trade regulation because firm activities ‘are embedded in a much wider spectrum of social institutions and relationships’ (Taylor 2008: 23), including local power relations around class, gender and ethnicity (e.g. Ramamurthy 2000).<sup>30</sup> Drawing from the GPN approach, the specificity of *national* (and sub-national) institutional and social contexts within which firms are embedded must be incorporated into chain analysis (Henderson et al. 2002: 441).<sup>31</sup> Consequently, the GPN framework

accords a degree of relative autonomy to domestic firms, governments and other economics actors ... whose actions potentially have significant implications for the economic and social outcomes of the networks [or chains] in the locations they incorporate. ... All GPNs have to be regarded as multi-scalar, ranging from the local and regional to the national and global and back again. Such multi-scalar networks are built-up and transformed over time by a multiplicity of agents with asymmetrical influence and power. (Henderson et al. 2002: 446)

This entails a sensitivity to different ‘models’ or ‘varieties’ of capitalism (Coates 2000; Hall and Soskice 2009[2001]), and rejects the notion that all states are fully converging on a common set of (neoliberal) policies. To address this lacuna, GPN analysis offers the conceptual category (among others) of ‘territorial embeddedness’, which refers to the degree of ‘anchoring’ of a firm in different places and scales. This anchoring can work in several ways. The incoming firm may be attracted by national government policies, it can affect the developmental prospects of a location and change social relations there, and, in turn, it ‘may become embedded’ through absorbing (and responding to the constraints of) ‘the economic activities and social dynamics that already exist’ there (Henderson et al. 2002: 452). For example, in a study connecting timber production in Indonesia with Japanese firms and markets, Gellert (2003: 53) demonstrates the importance of ‘an oligopoly of timber-producing firms’ which came to dominate and shape the ‘national’ interface with the timber chain through alliances with the state and powerful external players in the chain. In short, Gellert’s study identifies the importance of a tiny domestic elite to the institutional context of the chain. As we shall see in Chapter 6, Seychelles domestic political economy shaped (and

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<sup>30</sup> As already noted, the thesis excludes serious discussion of labour, gender and race, despite their importance to the global commodity chain in canned tuna (e.g. cannery managers are normally white men, while workers are mainly non-white women).

<sup>31</sup> To be fair, and as noted above, the original definitional work on GCCs saw these ‘networks [as] situationally specific, socially constructed, and locally integrated, underscoring the social embeddedness of economic organization’ (Gereffi et al. 1994: 2).

shapes) significantly the strategies employed by firms in the canned tuna chain. This part of the thesis also highlights the important strategic role that individual firm managers can play in these interactions. As pointed out by Taylor (2008: 21), ‘retaining a focus on the *international* (rather than global) division of labour helps to emphasise the foundational element of state influence over the production, reproduction and utilisation of labour’. In other words, social embeddedness as an ‘institutional context’ for chain activities and linkages *matters*; firms behave differently in different spaces and places and adjust their business strategies and day-to-day operations in relation to national (and in larger countries, local) governments, labour and other ‘non-state actors’, such as NGOs. As with all of the elements of ‘institutional frameworks’ discussed here, one of the main areas where chain analysts have addressed the issue of social embeddedness is in relation to ‘upgrading’, to which we now turn.

#### ***d) Upgrading/Downgrading***

Chris Cramer criticised the GCC approach for being ‘extremely short on policy recommendation’ and went on to outline the potential of industrial policy, including infant industry protection, to industrialisation in the global South (1999: 1248 and 1252).<sup>32</sup> This criticism was rejected by Gibbon as being based on a flawed understanding of GCC analysis, which, contrary to Cramer’s description, demands ‘case-specific account[s] of conditions for economic upgrading’ by focusing on ‘the opportunities and constraints presented by the forms of global integration of production and trade in specific commodities’ (2001a: 345). Moreover, subsequent to Cramer’s criticism a body of chain literature emerged that focussed explicitly on development policy (and its ‘management’), including a concern with ‘upgrading’ in value chain and GVC approaches, as outlined above. For example, Gereffi (1999: 52) introduced the concept of ‘industrial upgrading’ to GCC analysis and outlines several types of upgrading that operate ‘at different levels of analysis’, including within factories (e.g. from simple, lower value-added products to complex, higher value-added ones). However, these ‘levels’ relate primarily to complex manufactures and are of little relevance to the commodity chain in canned tuna. A more generic understanding of

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<sup>32</sup> In relation to his work on the processing of cashew nuts in Mozambique, Cramer recognised the role of structural constraints (including world market dynamics and international financial institution policy conditionalities), but pointed out that this is only useful analytically ‘if structure is understood in terms of process, and as subject to change, including political change, rather than as static and immutable’ (1999: 1262).

upgrading is offered by Kaplinsky and Morris (2001). They identify four types of upgrading: 1) improving the production process within a firm or through linkages between firms; 2) improving the product within or between firms, such as through product quality, design or marketing; 3) ‘changing functional positions’ through the adjustment ‘of activities undertaken within a particular link, or moving to activities taking place in other links’; and, 4) moving away from one chain to a completely new one (Kaplinsky and Morris 2001: 76; see also, Gereffi et al. 2001: 5). Kaplinsky and Morris go on to detail a set of analytical tools on how upgrading (or downgrading) can be researched from an explicitly *functional* perspective (e.g. how to decide whether or not a link has upgraded) and an implicitly *strategic* perspective (e.g. those policy mechanisms that can be employed in a developing country/firm ‘link’ to facilitate upgrading). Most of this chain research is based on the assumption that ‘development’ in the global South ‘requires linking up with the most significant lead firms in the industry’ (Gereffi 2001b: 1622; see also, Kaplinsky and Morris 2001: 15).

Much chain research on upgrading tends to prescribe a set of *technical* policies for firms and governments in the (mainly) developing world in their interactions with commodity chains and ‘lead firms’. As per my definition of chain governance (above), a lead firm can, in part, be characterised by its creation and enforcement of rules and conditions of chain participation. In other words, upgrading can function as a relation of power. Ponte and Gibbon usefully connect this aspect of chain governance to ‘upgrading’: ‘Marginalization/exclusion and upgrading/participation are the axes along which (re)distributional processes take place’ (2005: 3). Of course, distributional struggles also take place *within* firms (e.g. between employers and employees<sup>33</sup>) and horizontally *across* nodes (e.g. competition between functionally-equivalent firms or between states as locations of production, see below) as well as vertically *between* nodes. Nonetheless, Ponte and Gibbon’s formulation forces a conceptualisation of upgrading/downgrading as a *political* process. As pointed out by Gellert (2003: 55), upgrading within or across nodes in a commodity chain ‘is a socio-political process rather than a purely geographical one’ that is based on distributional

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<sup>33</sup> For example, while upgrading may improve a particular firm’s profitability and may also enhance government revenue generation, it does not necessarily ‘upgrade’ workers through, for example, raising wages because these are normally determined by the wider labour markets of a country (Wood 2001: 44) and the country’s relative positioning in the international division of labour.

struggles over the capture of value (see also, Palpacuer 2008: 407).<sup>34</sup> In short, the role of politics has been largely unexplored in chain research on ‘upgrading’, especially in relation to raw material production where access to natural resources very often involves *contestation* as well as collaboration in relations between firms, between states and firms, and *within* ‘host’ societies (Levy 2008; see also the edited collection by Sikor and Lund 2009). Similarly, and as discussed just above, *local* institutional context has often been ignored in chain research on upgrading,<sup>35</sup> but this ignores evidence that shows how firms and governments combine to *create* competitive advantage (Porter 1990) and use institutional comparative advantages that are specific to different countries (Hall and Soskice 2009[2001]). Moreover, the threat of *downgrading* is often used by firms (and their ‘home’ states) to extract gains or reduce costs (see below). Finally, mainstream chain analysts of upgrading fetishise so-called ‘value added’ for local and foreign firms, but never ask the question – who benefits? Chapter 6 does not fully answer this question, but it does show *how* Seychelles government policies attempted to integrate with the commodity chain (sometimes successfully, sometimes not), identifies the conjunctural role of a small local elite (connecting back to social embeddedness), and extends the ‘scale’ of the concern with upgrading away from the level of the firm to examine employment and government revenue generation.

### 1.1.3 Lacunae

Despite various attempts to make commodity studies more ‘comprehensive’ in its ability to capture analytically the complex reality and diversity of commodity chains, several lacunae remain. Three gaps in particular are important to framing an analysis of the EU-centred commodity chain in canned tuna. These are the environmental conditions of production; the historical formation of chains; and unequal political power in terms of state-to-state and multinational firm-to-state relations.

#### *a) Environmental conditions of production*

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<sup>34</sup> Of course, given relative shifts in economic power in the uneven world-system, just because a location of production industrialises it does not mean that it significantly ‘upgrades’, instead it may simply be producing standardised, low-profit commodities (e.g. Arrighi et al.’s (2003) critical extension of Vernon’s (1966, 1979) product life cycle; also Arrighi 1990).

<sup>35</sup> Notable exceptions are Bair and Gereffi 2003; Selywn 2008.

The focus of this thesis is on the relatively simple, single-stage<sup>36</sup> manufacture (fish canning) of a primary commodity based on an *extractive* industry (industrial tuna fisheries). As such, it combines elements of the insights from both the ‘US’ and ‘European’ GCC research agendas sketched above, with the former focussed more on manufacturing and the latter on agriculture. However, the extractive sector has largely been ignored by GCC research. Notable exceptions are Gellert (2003) who uses the GCC framework and Bridge (2008) who uses GPN.<sup>37</sup> Given that most chain studies are of a particular commodity, it is perhaps surprising that very few take seriously the particular characteristics of the commodity in question and the implications of these for chain activities and governance. For example, the particular characteristics of any natural resource are constituted through biological/geophysical specificities in concert with the social priorities of any mode of production and commodity sector (e.g. Gellert 2003; Bridge 2008). Similarly, extractive industries ‘face some clear limitations to spatial flexibility’, even if that resource moves, as fish do, it does so within its biologically specific geographical range (e.g. depth and temperature ranges). This, in turn, ‘exerts a powerful influence on the location of competition in the production network, the form that competition takes and on relations of dependency between holders and seekers of resources’ (Bridge 2008: 401, 412; Ciccantell and Smith 2009: 362). Environmental conditions of production are addressed in the thesis in a dual sense, both as natural constraints of tuna biology and population movements and the institutional conditions of resource access. I bridge these two ‘environmental conditions’ through Chapters 2 and 4 (see below).

The thesis also draws on Jason Moore’s notion of the ‘commodity frontier’. This is framed explicitly as different to more commonly deployed notions such as a ‘resource’ frontier. A commodity frontier is a historically-defined term that is specific to capitalism. It is not based on the simple plunder of resources, but the *production of commodities* for exchange (Moore 2010a: 35, 54; Marx 1976). Through this prism, capitalism is an ecological regime that reproduces itself *through* new commodity frontiers rather than simply ‘impacting’ *on* resources, which firms adopt to through new forms of organisation and techniques of production. This process is ‘fundamentally globalizing’ (Moore 2010b: 191) because of the ‘dialectic between the ever-mounting material-throughput demands of an ever-growing mass

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<sup>36</sup> In some cases this has been split into two stages: labour-intensive butchering of tuna (or ‘loining’) in relatively low-cost locations of production, and capital-intensive canning in relatively high cost ones using imported frozen loins (see Chapter 3).

<sup>37</sup> See also Smith and Mahutga 2009; Ciccantell and Smith 2009; Knutsen 2000.

of capital *and* the ever-mounting biophysical degradation that ensues through the endless accumulation of this capital' (Moore 2010a: 38). In other words, once 'labouring bodies, mineral resources and ecosystems in any single region' (Moore 2010b: 189) were exhausted to the extent that they became less profitable, new, more profitable frontiers were sought through a '*commodity-widening* strategy' (Moore 2010b: 219). When profitable extraction begins to decline this *extensive* development is often also followed by *intensive* development (see also, Fine 1994), or a 'commodity-deepening' strategy based on socio-technological innovation. As we shall see in Chapter 2, Moore's approach is a useful prism with which to view industrial tuna fisheries.

### ***b) Historical formation of chains***

Tracing the search for and appropriation of new commodity frontiers requires a historical approach. Jennifer Bair criticises 'chain' analysts for moving 'research on commodity chains away from the type of long-range historical and holistic analysis characteristic of the world-systems school' (2005: 10). While it is unclear why 'long-range' holistic and historical study of commodities must necessarily be associated with world-systems theory,<sup>38</sup> most chain research lacks sensitivity to historical contextualisation and path-dependency. In their critique of the GCC framework, Henderson et al. point out that

much of the work from within the GCC tradition has been concerned with currently existing chains. Hardly any of it seeks to re-construct the history of the nature and implications of the chains. This is an important omission because the social relations embodied in chains at one point in time impose a path-dependency and constrain the future trajectories of chain development (2002: 441).

However, economic geographers adopting the GPN approach very rarely took this call seriously and contrary to these criticisms, the original formulation of GCC analysis called explicitly for longitudinal study in order to assess *change* in the organisation and governance of chains (Gereffi et al. 1994: 10; see also, Gereffi 1994: 104). Gereffi (2001a: 30) also makes clear that chain governance must be understood in historical perspective, because 'in any particular time period or within a given industry, new governance structures co-exist and

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<sup>38</sup> See, especially, Mintz (1986) on sugar and, also, the collections on coffee and on bananas edited by Clarence-Smith and Topik (2003) and Striffler and Moberg (2003) respectively

interact with earlier forms of governance'. In other words, 'lead' firms change over time and their modes of control may overlap. A similar point was also made by Wilkinson in a generic analysis of the 'fish' GCC:

in the case of long-established food chains, such as fish, where multiple actors both public and private have cumulatively defined and redefined policies and strategies, clear patterns of governance are less easy to establish than in the ideal-typical case of the fresh fruit and vegetables sector (2006: 139).

While Wilkinson's actual analysis does little to illuminate this claim in relation to the so-called 'fish' chain,<sup>39</sup> his point is an important one. As we shall see in Chapters 2 and 3 on the EU-centred commodity chain, market power has been dispersed among different actors at different times, and firms collaborate and compete within and across 'nodes' in distinct moments and places, using different strategies depending upon chain-specific and world-market dynamics. It has only been possible to identify this complexity and change through a *historical* analysis of the formation and development of the EU-centred commodity chain in canned tuna and, in Chapter 6, of Seychelles interactions with and upgrading in this chain. This complexity may also contribute to explaining the difficulties in identifying distinct 'lead' firms in the case of this chain.

### ***c) Unequal political power: state-to-state and multinational firm-to-state***

Due in part to the peculiarities of the global commodity chain in tuna, the role of interstate relations is of particular significance to this industry, especially in terms of resource access and trade rules. In reference to US trade preferences made available to Colombian cut-flower exporters, Patel-Campillo (2010) argues that GCC analysis should incorporate the *geopolitical* dimensions of regulatory mechanisms. While chain analysis has been very effective in illuminating uneven *economic* power between firms in the global 'North' and producers in the 'South', and, separately, in demonstrating the importance of the international trade regime in shaping commodity chains (including the rise and impacts of neoliberalism), it has been silent on the role of unequal *political* power between states in *negotiating* conditions of

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<sup>39</sup> This is because, as with agricultural products, 'fish' contains a very wide range of distinct 'chains' shaped by multiple processes and dynamics, from different environmental conditions of production and techniques of extraction to different markets and cultures of consumption.

commodity production and exchange.<sup>40</sup> For example, Gibbon and Ponte (2005: Ch. 2) provide an exceptionally insightful overview of the relationship between commodity chains starting in Africa and changes in the international trade regime (see also Gibbon 2002; Ponte 2002a, 2002b), but they do not however, examine or explain how this regime was negotiated and in the context of what relations of power. One of the reasons for the state being excluded from most GCC analyses (except for trade regulation) is that research tends to look at the end-product rather than raw material production and the state often plays a more direct role in the latter (Gellert 2003: 59). Similarly, through its multifaceted conception of a network, the GPN approach downplays hierarchy, but in extractive industries the state structures relationships and there is a ‘persistence of core-periphery structures’ (Bridge 2008: 413-14).

The business strategies of lead firms are highly contingent. This necessitates the avoidance of an excessively functionalist conception of, for example, ‘North-South’ relations, and recognition of politics as making a difference. As noted by Niels Fold and Bill Pritchard in their introduction to *Cross-continental Food Chains*, commodity chains ‘are not an inevitable market outcome but are politically constructed economic and social formations’ (2005b: 20). This thesis examines how unequal inter-state power affects policy formulation and its enforcement (regulation). It does so through the examples of the resource access strategies of the EU tuna fleet which are negotiated with developing coastal states by the European Commission (Chapters 4 and 6) and EU-ACP negotiations around trade policy (Chapter 5).

Similarly, perhaps because most chain analyses do not engage in historical accounts of chain formation, they also fail to capture how conditions of production are *negotiated* (and renegotiated) by multinational firms with ‘host’ states. Stephen Hymer’s insights are again worth noting here. In the context of the uneven world system, governments in the global South (especially in smaller countries such as Seychelles) are in a far weaker position to negotiate gains with multinational firms. For example, developing country governments are more likely to encounter transfer pricing than more powerful states because of the relative room for manoeuvre of multinational firms and the far more limited threat of government sanctions (Hymer 1975: 54; Hymer 1970: 447; Pitelis 2002: 18). Hymer argued that ‘a regime of multinational corporations would offer underdeveloped countries neither national independence nor equality’ (1975: 55). Similarly, in other literature on international business,

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<sup>40</sup> For Hymer: ‘In the last analysis, markets come out of the barrel of a gun, and to establish an integrated world economy on capitalist lines requires the international mobilisation of political power’ (1972: 92).



Peoples and Sugden (2000) and Ietto-Gillies (2005, 2007) argue that multinational firms are in a strong negotiating position relative to less mobile labour and territorially fixed nation-states, and this allows them to engage in tactics of ‘divide and rule’ to extract additional gains or avoid new costs such as taxation and regulation. As we shall see with the case of Seychelles interactions with the EU tuna fleet and with Heinz investment in tuna processing in Chapter 6, such strategies were used to significant effect in negotiations with the Seychelles state.

## 1.2 Overview of the Case

### 1.2.1 Why canned tuna?

Even from the self-consciously ‘grand theoretical’ perspective of world-systems theory, generalisations drawn from even a comparative set of GCC studies cannot be applied to capitalism as a whole (Korzeniewicz and Martin 1994: 70). So why bother undertaking yet another empirical case study of a commodity chain? The following offers eight sets of explanation for the selection of the EU-centred commodity chain in canned tuna chain as an object of study.

First, methodologically, canned fish is *a relatively ‘short’ chain* with only a few stages (or ‘nodes’): fishing, raw material transshipment (in some cases), single- or two-stage manufacturing,<sup>41</sup> and distribution and retail. This makes the global commodity chain in canned tuna a manageable case study for a ‘full’ GCC analysis – from raw material production to supermarket retail.

Second, as we have seen, raw material production and its environmental conditions have received only minor empirical attention in commodity studies and, more specifically, *marine capture fisheries have been excluded almost entirely*. As pointed out by Campling et al. (2012) this lacuna is not unique to the narrow field of commodity studies. The prevailing treatment of fisheries in the social sciences as a whole is biologically and economically reductionist. Even within disciplines such as sociology and anthropology, researchers have

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<sup>41</sup> Tuna is either butchered (loined) and canned in a single factory, or loins are processed in relatively low-wage site of production and exported for insertion in capital-intensive canneries in relatively high-wage locations.

often relied on rational choice theory or models which ‘depict the individual producer as an autonomous isolate engaged in the technical act of catching fish’ (Pálsson 1991: 21). Fisheries have consequently been regarded as a ‘taxonomic misfit’ (Pálsson 1991: 21) or ‘special case’ (Jentoft 2007: 426), with fisheries literature remaining self-referential, pigeonholed, and marginal to social science. It is worth quoting Eric Meuriot at length on these issues:

A review of the evolution of the fishing sector must go beyond the mere analysis of technical and market forecast or of bio-economic model results. It requires a study of the relationships between the different economic agents and institutions involved in the fishing sector, of their organization and methods of intervention, of their projects and strategies. It requires also an analysis of the impact that the economic system and political doctrines may have on the fishing sector. This involves a multidisciplinary research effort. (1986: 309)

Almost thirty years later, Meuriot’s call has remained largely unheeded, even though over three-fourths of the world’s fisheries now are at or beyond full exploitation, that fish is one of the most important sources of animal protein and essential nutrients in the developing world, and around 120 million people are ‘directly dependent on commercial capture fisheries for their livelihoods as fulltime or part time workers, including employment in the post-harvest sector’ (World Bank 2010, 4; FAO 2010). Conventional social science work on fisheries all too often avoids, if not out-rightly obscures, how capitalist relations of production (in their diverse and varying forms) interact with and shape the environmental and social conditions of fisheries systems. Notable exceptions include Mansfield (2004a; 2004b), Clausen and Clark (2005), Skladany et al. (2005) on how ecological change in fisheries systems is a *consequence* of capitalism. But, extending Jason Moore’s insights (2010a; 2010b) to commodity chain analysis, there is room for assessing whether the nature-society relations that drive ecological change, degradation or conservation are *constitutive* of capitalism in fisheries production-consumption systems.

Third, because of its durability *canned fish* is extensively traded internationally and is important to export-orientated development in the ‘global South’ (Ponte et al. 2007; Bene et al. 2010; Campling and Havice 2007; Campling 2008a). In the 2000s, fish exports from developing countries generate a higher export value than coffee, bananas, cocoa, tea, sugar and tobacco *combined* (FAO 2010). Canned fish production was a capitalist enterprise from

its outset and was immediately geared to international trade. For example, canned sardines were exported from France to supply miners in the mid-nineteenth century gold-rushes in California and Australia, and canned salmon was supplied from Canada to feed the growing working class in Britain (Dias and Guillotreau 2005: 65-6; Muszynski 1996: 13). The dual demands of commodity production drove the development of the canned fish industry – with factory owners seeking the realisation of profit through production for exchange and a growing proletariat seeking a durable source of protein as means of subsistence. This core dynamic remains in the global commodity chain in canned tuna over 150 years later.

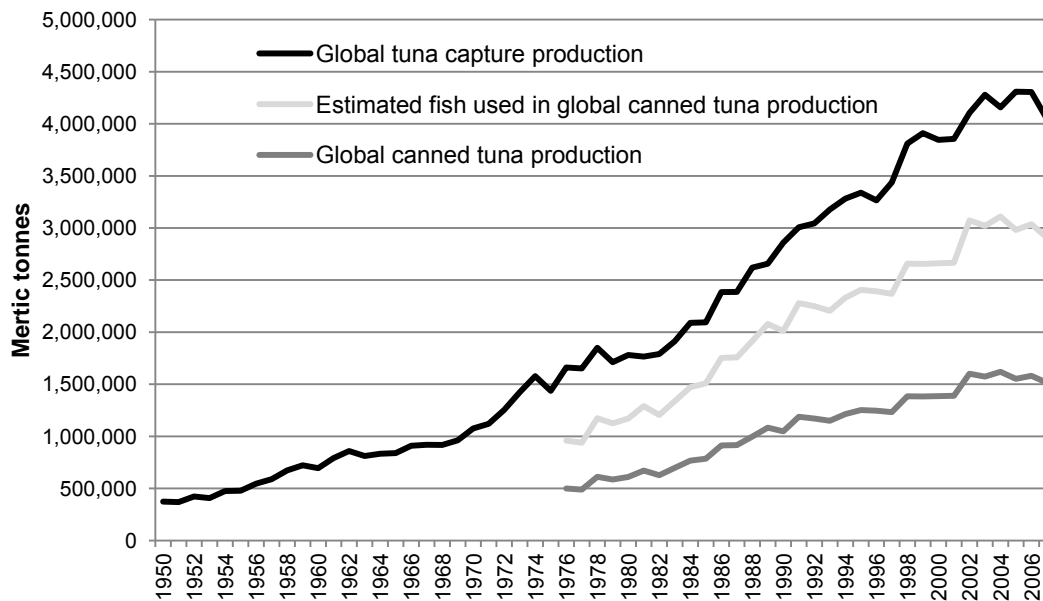
Fourth, the *international trade in tuna* is the second most valuable of all seafood products after prawns/shrimp. As the US Secretary of the Interior stated in 1947: “Tuna is a magic word in any community or country which looks to the sea for food and profits” (cited by Felando 1987: 96). In 1985 the global canned tuna import market *alone* was worth US\$ 419.8 million, and by 2004 it had become a multi-billion dollar market, valued at US\$3,170.3 million (Globefish 2006: 64-6). The focus of this thesis is solely on the commodity production of canned tuna, excluding all other uses of this fish. Figure 1.1 compares total global catch data for the main canning-grade tuna species – skipjack, yellowfin, albacore and bigeye – with the global volume of canned tuna production. However, only around 40 percent of the butchered fish is actually used in the can so the actual volume of tuna raw material required for canned tuna production is considerably higher than the volume used in the finished product.<sup>42</sup> The trend is clear: these species are caught primarily to supply raw material to canned tuna production. The global capture of these species of tuna increased from 370,000 tonnes in 1950 to a peak of 4.31 million tonnes in 2005.<sup>43</sup> This rapid increase was facilitated by the industrialisation of tuna fishing in the 1950s and 1960s – the ‘blue revolution’.

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<sup>42</sup> To account for this a basic conversion coefficient is used to estimate the actual volumes of tuna required to produce a given weight of finished canned product. This coefficient is problematic because of its fixed assumptions on drain weights (i.e. volume of packing media used, such as brine or vegetable oil) and the size and relative weight of cans (i.e. larger cans use less steel relative to tuna, and vice versa).

<sup>43</sup> Production is also geared to use values other than canned tuna, these include long-line caught sashimi grade yellowfin and bigeye, and pole-and-line caught skipjack for katsuobushi.

**Figure 1.1: Global tuna catch and production of canned tuna, 1950-2007**



Notes: Capture production includes *all* gear types. It only includes declared catch of the three main canning-grade species – albacore, skipjack and yellowfin tuna – and of bigeye, which is included in the series because they are caught as ‘bycatch’ in purse seine sets, especially on fish aggregating devices (FADs) which attract juvenile bigeye. However, the majority of bigeye catch is not utilised in canned production and may also be recorded as skipjack or yellowfin in catch statistics. Catch volume of bigeye is considerably smaller than the other three species, thus their inclusion does not overinflate the time series too severely. The series on canned production excludes both tuna loins (as an intermediate good this would constitute double counting) and bonito and all fish of the genus *euthynnus* except for skipjack (as they are rarely used for canning for principal markets). The estimated volume of fish used in global canned tuna production is based on an FAO conversion coefficient of 1.92 (Oceanic Développement et al. 2005: 311).

Source: FAO Fish Stat+ (accessed 2 November 2009)

Fifth, the *canned tuna industry is highly politicised*. The geography of canned tuna production is shaped to a large extent by the import regimes of the two main principal markets – the European Union and the United States. The survival of canned tuna processing in the EU, particularly Spain, raises interesting questions about the role of tariff and other forms of state protection in the contemporary international division of labour.

Sixth, industrial *tuna fisheries* are highly capitalised. As a result they are characterised by complex relations of resource access between boat-owning firms from the global North and resource ‘owning’ states in the global South. This raises several issues, including on the relationship between the environmental and institutional conditions of production, and the role of states in the global South in mediating access to the resource.

Seventh, linked to the last three points, export-orientated canned tuna production is an *actually-existing case of industrial 'upgrading'* in the African, Caribbean and Pacific Group of States (ACP). It is one of the very few (if not the only) success stories of industrial upgrading within the 'developmental' framework of the ACP-EU Lomé Conventions (Davenport et al.: 1995). Despite important questions regarding propriety and local economic benefits, canned tuna is in stark contrast to the vast majority of EU-centred primary commodity production in the ACP countries where manufacturing – so-called 'value added' – is normally undertaken externally (e.g. tea, coffee, cocoa, rubber, sugar, etc).<sup>44</sup> Combined with the EU market being the main source of the growth in the *global* commodity chain from the 1980s onwards, this is why the thesis focuses on the *EU*-centred chain in canned tuna. Seychelles was selected as a country case study of ACP upgrading because its waters are rich in tuna, it became one of the largest locations of canning-grade tuna transshipment in the 1980s, and was host to the second largest canned tuna factory in the world by the late 1990s. This successful upgrading was in spite of Seychelles suffering from geographical isolation and high cost structures common to most small island developing states (Campling 2006; Campling and Rosalie 2006). Having lived and worked there for three years before starting the PhD, it also meant that I had contextual knowledge and improved access to key players.

Finally, tuna is an interesting analytical case in and of itself because it naturally migrates across the jurisdiction of multiple states and also inhabits the high seas where no single state has sovereignty. In other words, it is a *transboundary resource* and, as with the issue of resource access, this requires consideration of (unequal) inter-state relations in tuna management. This is important because there is excess fishing capacity in the global tuna fleet (Reid et al. 2005; Bayliff and Majkowski 2007)<sup>45</sup> and by the 1990s there were no new commodity frontiers for canning-grade tuna fisheries. In short, there are too many boats chasing too few fish. As a result of this and insufficient regulation of tuna fisheries, by the 2000s, '[w]ith the exception of skipjack in some oceans, almost all of the principal market species of tunas are either fully exploited or overexploited' (Joseph et al. 2009: 155).

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<sup>44</sup> For a succinct recent overview of this long-term trend, see Green 2004.

<sup>45</sup> Similar findings were apparent for the global longline fleet (Miyake 2005b).

### 1.2.2 Research questions

This thesis interrogates the core tenets of GCC analysis in relation to the commodity chain connecting tuna fisheries in the Western Indian Ocean, processing in Seychelles and other ACP states, and retail in the EU. We have identified five concepts in GCC analysis (input-output structure, territoriality, chain governance, institutional contexts and upgrading) and three lacunae (the environmental conditions of production, historical formation of chains, and unequal political power among states and firms). To examine these, the thesis asks eight sets of research questions:<sup>46</sup>

1. Given that the chain is based directly on an extractive industry, what are the environmental conditions of production? How do these affect business strategies?
2. What is the input-output structure of the canned tuna commodity chain (i.e. what are the functions or activities necessary to canned tuna production)?
3. Who owns or controls these activities? What is the spatial dispersal or concentration of production? Is there a tendency to concentration in ownership? If so (or if not), what factors help to explain this process? In sum, what is the role of ‘territoriality’ in the commodity chain?
4. How does a historical approach to GCC analysis (i.e. chain formation) contribute to an understanding of contemporary dynamics, processes and relationships?
5. Which firms, if any, ‘drive’ the canned tuna commodity chain? If there are ‘lead firms’ in this commodity chain, what mechanisms produce and reproduce their relative control over chain ‘governance’? If lead firms play a role in governing the commodity chain, to what extent do the ways in which these firms are themselves governed influence the whole chain?
6. How have the regulatory mechanisms of international trade and resource access and management shaped (and in turn been shaped by) the commodity chain?
7. Have interactions with the fishing and processing nodes of the chain resulted in ‘upgrading’ in Seychelles? Has territorial and social ‘embeddedness’ configured interactions and relationships between firms and Seychelles in the commodity chain?

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<sup>46</sup> Aside from the political economy ‘commodity studies’ literature detailed above, these questions drew inspiration in their formulation from Bernstein’s four ‘classic questions of political economy’ (Bernstein 2007: 1-2; Bernstein 2010a: 22-24).

8. What is the role, if any, of unequal political power in mediating dynamics among states and firms in the commodity chain?

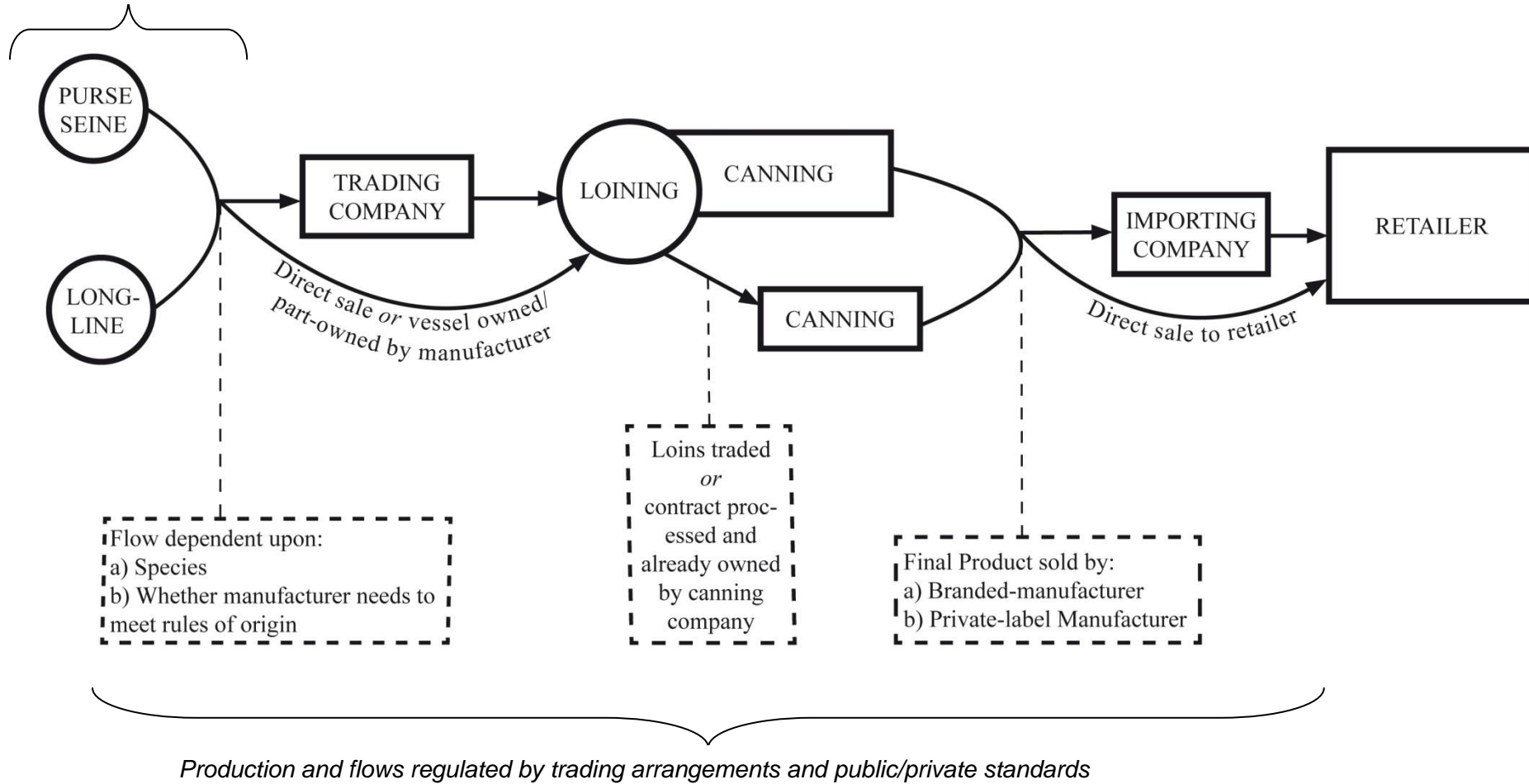
Each of these questions is addressed in various sections of the thesis. To order the empirical investigation the thesis is divided into three parts. Each corresponds to a selected concept from the prior discussion of GCC analysis. The first part looks at *chain activities and governance*, the second at *regulatory mechanisms*, and the third at *upgrading*.<sup>47</sup> In other words, Part I traces the ‘economic’ aspects of the chain (firm activities and business strategies) while Part II focuses on ‘the political’ (chain regulation and associated government policies). Part III brings the political and the economic together through the case of upgrading in Seychelles. In this way I use the GCC approach as an investigative tool and method of presentation. Each chapter looks at an aspect of the chain from the vantage point of a different actor(s) and are tied together in the introductory and concluding sections of chapters and in the concluding chapter of the thesis as a whole. Figure 1.2 sketches a generic commodity chain in canned tuna so as to help the reader better situate the various ‘nodes’ and regulatory mechanisms discussed in the following more detailed structure of the thesis.

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<sup>47</sup> In addition to Gereffi (1994, 1995) and others, this draws some inspiration from Bair (2006) who uses three similar dimensions to set-up a comparative research framework of the clothing and textile ‘chains’: ‘production model’, ‘institutional context’ and ‘development outcomes’.

**Figure 1.2: Stylised schematic of commodity chain in canned tuna and selected regulatory mechanisms**

*Raw material production regulated by Law of the Sea, RFMOs and various national authorities*





### 1.2.3 Structure of the thesis

#### *Part I: Chain activities and governance*

Chapters 2 and 3 present the results of detailed empirical investigation into the input-output structure and territoriality of the EU-centred commodity chain in canned tuna. We tie this together in Chapter 3 in a discussion of lead firms and chain governance. In this sense then, Part I engages with the ‘economic’ dynamics of the chain. Chapter 2 starts with analysis of the biological and population dynamics of tuna and their implications for raw material production. It then moves to a periodisation of the development of the fishing node of the global commodity chain from the 1860s to the early 1980s and shows how the search for new commodity frontiers is a key feature of this history. This is followed by a more focussed discussion of the business strategies of the French and Spanish tuna fishing fleet in the Western Indian Ocean (where Seychelles is located) between the 1980s and 2000s. It shows how these strategies are conditioned by environmental conditions of production and how, in turn, the intensification of industrial extraction threatens the profitable maintenance of those conditions. Finally, we offer an account of differential levels of corporate concentration and industrial organisation in the European distant water tuna purse seine fleet (EU DWF) in the late 2000s. This sets-up important connections between the fishing fleet and canned tuna processors, especially around raw material supply. It also shows how analysis of firms helps to illuminate fisheries production dynamics as opposed to standard accounts of fisheries based on vessel flag.

Chapter 3 turns to the manufacturing of canned tuna and its distribution and retail. The emphasis here is exclusively on the EU-centred commodity chain. After offering a typology of tuna processing firms and a description of different EU markets for canned tuna, it situates the EU-centred chain in the international division of labour in the 1990s and 2000s. This discussion shows how the dispersion of export-orientated canned tuna production has benefitted buyers. The next section focuses on questions of concentration, business strategy and competition among the main firms engaged in the EU-centred commodity chain. It illuminates this in more detail through a case study of the historical emergence and industrial organisation of Heinz European Seafood/ MW Brands (the firm that owns the cannery in Seychelles), and its main competitor on the UK market Princes/ Mitsubishi. The penultimate section turns to retail in the six principal EU markets for canned tuna. It shows how

supermarket concentration affects the canned tuna chain, but not in identical ways as there are important differences between the six markets. Part I concludes by bringing together these various nodes of the EU-centred commodity chain to discuss conditions of competition and chain governance.

### ***Part II: Regulatory mechanisms***

Chapters 4 and 5 address two sets of regulatory mechanisms, the ‘political’ institutional dynamics of the chain. Chapter 4 engages with resource regulation through the international Law of the Sea and regional fisheries management organisations. Together these constitute the institutional conditions of production of tuna raw material: resource access and environmental regulation. We then move to consider the various government supports to the EU DWF under the EU’s Common Fisheries Policy, including resource access arrangements. Chapter 5 engages with trade regulation, especially the EU ‘tuna trade regime’, which includes tariffs, tariff preferences and rules of origin for the ACP.<sup>48</sup> This is situated in the wider context of the World Trade Organisation, which demanded broad reform of non-reciprocal ACP–EU preferential trade relations as well as *specific* rulings on the tuna trade regime. As we shall see, the EU tuna trade regime shaped the geography of production of canned tuna and is a major competitive advantage for certain states in the ACP.

### ***Part III: Upgrading***

Seychelles interactions with the commodity chain in canned tuna offer a fruitful case in the study of upgrading because the very small size of the ‘national’ economy (with a population of just over 80,000 people) reduces complexity and enhances the possibility of better isolating the contributions of these interactions to national ‘development’. Chapter 6 explicitly address questions of upgrading and strategic policy making by the Seychelles government. The thesis is not concerned with what policy measures *might* improve the

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<sup>48</sup> Public standards such as EU sanitary and phyto-sanitary measures and private ones such as eco-labelling and the ethical requirements of UK supermarkets are excluded from the thesis due to the confine of space. For detailed accounts of their role in the EU-centred commodity chain in canned tuna, see Campling et al. (2007), Campling and Doherty (2007) and Doherty and Campling (2007).

Seychelles relative position in the commodity chain,<sup>49</sup> but instead with the *actual* government policies (and their politics) deployed to ‘upgrade’ domestic interactions with the chain (successfully or otherwise). In doing so, Part III brings the ‘economic’ and the ‘political’ back together in an assessment of upgrading in Seychelles and the complex set of relationships that this entails. It does not investigate upgrading as a technical issue but instead as a political one that is shaped by the unequal power relations between the Seychelles and the EU and fishing and processing firms. It shows how the Seychelles government’s objective of upgrading and maintaining its developmental effects were used by powerful players to extract additional gains. Following Bair and Gereffi (2003), the thesis takes a historical approach to ‘actually-existing’ upgrading in Seychelles’ interactions with the EU-centred commodity chain and its consequences for development. This chapter is, in turn, situated in an understanding of chain activities and chain governance by lead firms (Chapters 2 and 3) and of the wider regulatory mechanisms that allow (and limit) Seychelles upgrading in the chain (Chapters 4 and 5).

The thesis also contains several appendices. Far more material was collected and analysed than can be presented in a thesis. Given that the political economy of the tuna industry is not well studied, appendices establish points not published elsewhere and their function is to supplement evidence presented in the main body of the thesis. Where appendices are used, they are briefly explained in each chapter, outlining what they cover and the bases that they provide for what is covered in the chapter.

## **1.3 Research Design**

### **1.3.1 ‘Objects’ of analysis**

The research design for the thesis was premised on the objective of looking at interactions from the vantage point of different ‘actors’ engaged directly in the commodity chain at different scales and with differential resources of power and control. The primary ‘objects’ of analysis are the *vertical* interactions among the EU DWF, canned tuna processing firms

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<sup>49</sup> Work on this issue was undertaken in a confidential study commissioned by the government of the Seychelles in 2008/9 to identify ways for the government and locally-owned firms to enhance net benefits from interactions with different segments of the tuna industry (Campling et al. 2009).

investing in Seychelles (primarily Heinz), EU supermarkets, the Seychelles state (conceived of as different government departments, parastatals and the political elite), ‘local’ or domestic firms in the Seychelles, and the relevant institutions of the European Union (those dealing with external trade and fisheries). Secondary objects of analysis are the *horizontal* interactions of these primary actors, especially: competition and collaboration within the EU DWF, competition among EU-centred branded canned tuna firms, competition among EU supermarkets, and competition and cooperation between locations of canned tuna production, including Seychelles and other states in the Western Indian Ocean region.

In terms of the *context* of these actors’ interactions, the thesis situates the EU-centred commodity chain in several ‘moments’ in and changing dynamics of the global political economy, including the ‘Third Worldism’ of the 1970s, various aspects of oceanic governance (especially the Law of the Sea and regional institutions of tuna fisheries ‘management’), and the institutionalisation of the World Trade Organisation. In terms of the *effects* of these interactions the principal object of analysis is the ‘economy’ of the Seychelles, broadly defined to incorporate government revenue (including the leveraging of loans), direct and indirect employment, and domestic firms.

From the above it is clear that the research design is focussed on a set of relationships among states and firms, set in the context of a number of relevant defining ‘moments’ in the wider global political economy. The main ‘actor’ missing from this design is labour (e.g. crew on fishing boats and workers in processing facilities). This is regrettable for theoretical and political reasons, but the ambitious nature of the project demanded some limitations and labour was selected because, based on preliminary research (including living in the Seychelles for three years), capital-labour relations were not perceived as central to dynamics of *change* in the industry.

Finally, it is important to note a major change from the initial research design. The original empirical emphasis of the research was a comparative analysis of two major canning-grade tuna fisheries (the Western Indian and the Western and Central Pacific oceans) and upgrading in two locations of canned tuna production, Fiji and Seychelles, which are both small island developing states with one major tuna factory, part of the ACP group, and (initially) focussed on the EU market. This was intended to develop two contributions to the commodity studies literature. First, GCC research very rarely offers comparative analysis of two chains in a

single industry (the major exception is Gibbon and Ponte 2005) and I had intended to assess similarities and differences between them in terms of the conditions, relations and effects of the activities of these two factories. Second, the cases provide an example of how countries can both upgrade *and* downgrade in their interactions with commodity chains, with Fiji switching from being a full tuna cannery to a specialised loining plant as a result of competitive dynamics in the UK market (see Section 3.5.3). This comparative analysis was dropped because I was able to gather considerably more original material on the wider dimensions of the commodity chain than initially planned for and the industry is far more complex and dynamic than expected. So rather than primarily being a study of the developmental effects of the EU-centred industry, the emphasis of the thesis has been reversed to become primarily a study of the EU-centred industry and its dynamics of change over time (Parts I and II) with a single country case study of the conditions, relations and effects of upgrading (Part III).

### **1.3.2 A note on interviewing and interview data**

This thesis draws on transcripts of semi-structured interviews with 512 people in 19 countries over six years (November 2005 to September 2010). The vast majority of interviewees had a direct relationship with the global commodity chain in canned tuna, and were selected for this reason. They were mainly either representatives of different firms in various nodes of the global commodity chain or officials involved in regulation at the national, regional or international scales. Several key informants were consulted on multiple occasions. Interviewees were selected using a number of techniques: knowledge of players in Seychelles was developed over a period of three years living and working there, including several pilot interviews in 2003 and 2004; key players in the global tuna industry were identified through extensive research of historical and contemporary industry and grey literature, including lists of participants at industry conferences; and the snowballing technique was used at the end of each interview to generate additional possible informants. Interviewees in the Pacific islands were selected as part of the original research design (above), but given several similarities between African and Pacific island states this interview data proved supplementary to the Seychelles case study, and it also provided detailed insights into the *global* dimensions of the industry.

Access to interviewees was often expedited by undertaking parallel consultancy projects, several of which are referenced in the bibliography. The most important of these was a major study for the Pacific Islands Forum Fisheries Agency during the principal fieldwork period 2005-6 (Campling et al. 2007), and in 2006 the Seychelles Fishing Authority provided office space and helped to arrange appointments. A full list of interviewees is detailed in Appendix 1A. Unless otherwise stated, they were formal semi-structured interviews normally lasting for between one and one-and-a-half hours. Specific interview sheets were developed for each category of interviewee (e.g. representatives of fishing, processing and retail firms, and government officials in fisheries and trade agencies). The formulation of questions mirrored the analytical concerns of the GCC approach outlined above (e.g. mapping the input-output structure, identifying points of chain governance, conditions and effects of upgrading, etc.), followed best practice in their wording (e.g. non-leading, single questions in non-technical language, Bryman 2004), and included several identical questions for comparative purposes and triangulation across transcripts. I initially digitally recorded interviews but found that some people refused this or asked for the recorder to be turned off to say more interesting things or often looked at it uneasily. I quickly switched to hand-written notes only. I saw this as a trade-off between quality of form (detailed transcripts) and quality of content (controversial information flowed more freely). Interviews were supplemented by several other means where I was able to gather information (such as specialist conferences and trade negotiations), which are also listed in Appendix 1A.

Because of the relatively small size of the industry and the very small size of several of the countries where interviews took place, the identity of interviewees has been protected through full anonymisation. The following table details the categorisation and coding used for interview data. The specification of the type of interviewee is followed by a unique number (e.g. EUInd#3). Many interviews were held with two or more people at the same time. Where this is the case each individual is referenced with a unique number but the entire group is referenced as a source (e.g. EUInd#4-#6). This is done for group interviews because individuals almost always were in agreement (at least in front of me), often fed into each other's statements, and I was often unable to specify in my interview notes which of the different people were speaking. Where multiple separate interviewees confirmed a point, this is also indicated through a range (e.g. EUInd#4-#6; #14; USInd#12). I have triangulated interview data in this way wherever possible.

**Table 1.1: Categorisation and coding of interviewees<sup>50</sup>**

Key	Notes
ANZ	Australia and New Zealand government officials are collapsed into ANZ to increase anonymity and also because differences between the two governments are of limited relevance to the final thesis.
AGvt	China, South Korea and Taiwan government officials are collapsed into 'East Asia' to increase anonymity. Japan officials have their own category.
AInd	Industry representatives from China, South Korea, Taiwan and one each from Malaysia, Maldives and Sri Lanka are collapsed into 'Asia industry representative' to increase anonymity. Japan and Thailand industry have their own categories.
Int	International agency (i.e. non-fisheries agencies such as ACP Secretariat, Indian Ocean Commission, World Bank, Asian Development Bank, Pacific Islands Forum Secretariat, non-fisheries staff at the FAO)
IntFS	International fisheries specialist (includes officials at FAO, regional fisheries management organisations (RFMOs), Pacific Islands Forum Fisheries Agency (FFA), consultants)
NGO	NGO (environmental NGOs, trade union, advocacy organisations)
PICInd	Pacific Island country (PIC) industry representatives have been subsumed under generic 'PIC' to protect anonymity. These are usually locally-based foreign-owned firms.
PICGvt	Subsumes officials from the following six countries because the specificity of each is not of relevance to the thesis: Fiji, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga.
xGvt	x government official (i.e. EUGvt, JGvt, SGvt, USGvt, where J = Japan and S = Seychelles)
xInd	x industry representative (i.e. EUInd, JInd, TInd, USInd, where T = Thailand.)
xVS	x 'Vessel services' (i.e. provision of stevedores, fish testing, net and vessel maintenance/repairs, distant water fleet local agent). Interviewees were solely from Seychelles (SVS) and the Pacific island countries (PICVS).

<sup>50</sup> By category, the 512 interviewees were: 21 ANZ government officials; 12 'Asia' industry representatives; 4 East Asia government officials; 16 EU government officials; 63 EU industry representatives; 23 representatives of international agencies; 41 international fisheries specialists; 25 Japan government officials; 34 Japan industry representatives; 13 NGO representatives; 47 PIC industry representatives; 7 Pacific Island country (PIC) vessel services representatives; 46 Seychelles government officials; 9 Seychelles industry representatives; 16 Seychelles vessel services representatives; 9 Thailand industry representatives; 12 US government officials; 22 US industry representatives; 94 PIC government officials (Fiji 14; Niue 11; PNG 25; Samoa 23; Solomon Islands 4; Tonga 17).

**PART I**  
**FIRM ACTIVITIES AND CHAIN GOVERNANCE**



## Chapter Two

### **Raw Material Production: Industrial Tuna Fisheries with a focus on the Western Indian Ocean Purse Seine Fishery, 1950s-2000s**

#### **2.1 Introduction**

Despite Meuriot's (1986) call for research on fisheries to incorporate the interests of and relationships between economic agents and institutions, and to set these in the context of wider political-economic systems, the vast majority of research on the business of fishing continues to rely on abstract economic theorising and narrow institutionalist accounts. By investigating the fishing node of the EU-centred commodity chain in canned tuna this chapter adopts a multidisciplinary approach in order to draw out connections and interactions between tuna ecology and the industrial organization and business strategies of the fishing industry. In short, this chapter focuses on the 'economic' dimensions of the fishing node of the commodity chain, while relevant regulatory frameworks ('the political') and their interactions with raw material production are addressed in Chapters 4 and 5. It is argued here that the political economy and ecology of the fishing node of the EU-centred commodity chain in canned tuna can only be understood through examining a complex set of dimensions in their *combination*.

To do this the chapter proceeds in five sections. The first presents the biological particularities of tuna and the implications of this for its exploitation as raw material. Section 2.3 presents a periodisation of 'territoriality' and organisational and technological change in the fishing node of the *global* commodity chain between the 1860s and 1980. While the focus is on French and Spanish canning-grade tuna fisheries, the account also takes in fleets from the United States and East Asia because of their significance in influencing the European industry in various ways. The main theme of this section is the expansion in geographical extent and industrial intensity of tuna fisheries through the 'blue revolution'. Section 2.4 continues this periodisation into the 1980s and 1990s but does so with an exclusive focus on the French and

Spanish distant water tuna fleet (EU DWF). This first examines the EU DWF's expansion into a new commodity frontier in the Western Indian Ocean. It then moves to identify and analyse the differential business strategies of this fleet in this region in terms of: maximising 'fishing days' and the associated strategic significance of Seychelles as a base port (an analysis that is continued from the perspective of Seychelles in Chapter 6); expanding vessel capacity; and expanding fishing effort. Section 2.5 moves away from an analysis based on vessel flag (e.g. 'French' or 'Spanish' boats) and investigates industrial organisation and relative levels of concentration and control of the EU DWF by *firm*. This is done in order to identify lead firms and relations of chain governance at this node. The approach also seeks to overcome the 'vertical bias' of GCC analysis by drawing out the similarities and differences, and moments of competition and collaboration between firms involved in the same node of the chain. This chapter provides the terrain for analysis of chain governance in Chapter 3, where the activities of and vertical and horizontal relationships among the other main sets of firms in the chain are analysed – branded canned tuna firms and supermarkets. This chapter concludes with a summary of the main findings.

In general this thesis refers to the EU (European Union) rather than specifying the European Community (which is the legally correct name for the EU in international treaties prior to the 2009 Lisbon Treaty) or the European Commission (i.e. the EU's central institutions). When these institutions are of particular significance they are named individually. It also refers to the EU15 (EU membership prior to accession of 10 countries in 2004) which remain the most import markets for canned tuna and, on occasion, to the EEC (European Economic Community) where historical specificity is of importance.

## **2.2 Biology of commercial tuna species and implications for human exploitation**

Differentiation between tuna species in terms of their biological and food commodity characteristics is central to an understanding of dynamics in the canned tuna chain. Tuna biology and its implication for human exploitation provide essential background to investigating business strategies and government regulation in industrial tuna fisheries, as well as overarching questions around resource sustainability. In other words, and as noted in Chapter 1, the analytical ‘starting point’ of the thesis is to seek ‘to understand the particular characteristics of the commodity in question’, and how it is used at particular times, ‘because they establish the social, ecological, and geopolitical parameters’ of chain activities and their governance (Gellert 2003: 60).

Despite their dispersal across all oceans and a diverse range of ecosystems, all tunas and tuna-like species (e.g. billfish such as swordfish) have a number of unique physiological and biological characteristics compared to most other marine fishes. The focus here is on the two main species used for canning for the EU market – skipjack and yellowfin.<sup>1</sup> Four core characteristics are of central importance both to these species in their evolutionary strategy and to human strategies for exploitation.<sup>2</sup>

First, tuna are top predators in the oceans that migrate across very large areas of covering millions of square miles. Historically, this placed a structural limit on human exploitation of the species. Prior to the gradual industrialisation of fishing gear (steam-, then, diesel-powered vessels) and the invention of on-vessel refrigeration, tuna fishing was limited to coastal areas. This pre-industrial limitation meant that tuna fisheries were generally more sustainable as fishers were not able to ‘follow the fish’. The wide geographical flow of tuna species led to their categorisation as a ‘highly migratory species’ in international law in 1982: ‘stocks or stocks of associated species occurring both within the exclusive economic zone and in an area beyond and adjacent to the zone’ (UNCLOS 1982, Part V, Art. 63, see also Art. 64). As tuna

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<sup>1</sup> A third species, albacore, is of huge importance to the US market for canned tuna. Combined with the fact that albacore is generally caught using longline gear rather than purse seiners in different oceanic sub-regions to skipjack and yellowfin (and outside of the Seychelles EEZ), it is beyond the scope of this thesis.

<sup>2</sup> The following draws on FAO 2001: sections 1.4 and 1.5

transcend a range of international legal boundaries the biomass cannot be unilaterally controlled by a single state in the modern international system of (legally) equal states. The gradual human enclosures of the oceans after World War II – culminating in the creation of 200 mile exclusive economic zones (EEZs) in 1982 – only served to complicate the range of social relations interacting around the extraction and governance of tuna fisheries (for detail see Chapter 4). Therefore, while there is some empirical truth in the category of ‘highly migratory’, it is more of a politico-legal distinction rather than a biological one because of the definitional centrality of the territorial boundary of EEZs.

Second, tuna are characterised by a strong schooling behaviour and repetitive patterns of migration. With the industrialisation of fishing methods, the concentration of tuna in relatively narrow and predictable migratory flows across the global oceans have enabled the intensification of human targeting because of the relative ease of locating and catching the fish. The ever-deepening technological sophistication of fishing methods combined with growing knowledge of tuna biology through fisheries science has made tuna more vulnerable to exploitation (Majkowski 1998: 437). Since the 1950s, levels of extraction have increased concurrently with the capital intensity and technological sophistication of the fishing methods used. Tuna fishing methods went through revolutionary technological change in the late 1950s with the emergence of long-range industrial purse seine vessels (see below).

Third, tuna body shapes and physiological adaptations to their habitats are highly streamlined. This allows them to sustain high-speed swimming and efficient thermoregulation (FAO 2001). Thermoregulation is a countercurrent heat exchange system which permits quick movement between surface (warmer) and deeper (colder) waters within and, for the larger species of tuna, below the epipelagic zone, which reaches to 200m from the surface. Different species of tuna thermoregulate to varying degrees (see Appendix 2A), with implications for ‘catchability’. As the fishing techniques used to target tuna usually utilise surface gear types, extraction is limited to when tuna are feeding in upper levels of the epipelagic zone. The exception is longline gear which targets larger tuna species which – because of their insulating layer of fat (e.g. bigeye) – are able to survive at deeper levels in the ocean (Joseph

2004: 5). It is also their fat (*toro*) that makes larger, deeper swimming species the favoured flesh for Japanese sashimi (raw fish) consumption.<sup>3</sup>

Finally, many tuna species have a large spawning potential and very rapid growth in their juvenile phase, both of which enable potentially high levels of reproduction of the biomass, subject, primarily, to the extent and intensity of human extraction as well as the wider human relationship to global environmental change, such as the acidification of the oceans. Rapidity of growth to spawning age is a centrally important difference between species of tuna (Table 2.1). Differential ages of sexual maturity and spawning duration make species biomass more or less vulnerable to unsustainable extraction. Depending upon the species targeted this imposes a relative limitation on the absolute extent and intensity of levels of fishing effort. For example, bigeye tuna reach maturity at 3.5 years and their spawning duration is only 3 months, whereas skipjack reach spawning age on an all-year basis at 1.5 years. Its rapid generation of biomass has made skipjack tuna an ideal species for long-term, mass commodity production (albeit within limits). Along similar lines, a slow growing, long living species such as bigeye is far less resilient to exploitation than skipjack and yellowfin (IOTC 2002: 62; Hampton and Williams 2003: 35).

The species addressed here are considered by the FAO as ‘principal market’ tuna species ‘because of their global economic importance and the international trade in them for canning and sashimi’ (Serdy 2004: 235).<sup>4</sup> The focus of this thesis is primarily on the two canning-grade principal market tuna species (skipjack and yellowfin) whose populations are globally dispersed along tropical latitudes, including in the Western Indian Ocean. As this chapter and Chapter 3 will make clear, sub-regional fisheries are intimately connected to each other in terms of the dynamics of the world market for canned tuna and the business strategies of fishing fleets and processing firms.

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<sup>3</sup> Sashimi grade commodity chains are highly distinct segment compared to canning-grade chains in terms of techniques of production, trading patterns and cultures of consumption; albeit with important biological and economic interactions, such as the catch of bigeye by both longline and purse seine gear (although for the latter it is an incidental catch of juveniles). Due to the confine of space, the tuna sashimi chain is not addressed in this thesis. For overviews, see Bergin and Howard 1995; Bestor 2004; Campling et al. 2007: 242-261; Campling and Havice 2010c; Longo and Clark 2012; Williams 1992.

<sup>4</sup> Appendix 2A provides more detail on the different characteristics of the world’s principal market tuna species used for canning.

### **2.3 Territoriality and technological change in canning-grade tuna fisheries, 1860s-1980**

Until the 1950s, the spatial extent and extractive intensity of tuna fishing were constrained by the limits of fishing technology, boat size and on-board freezing capacity. The extent and intensity of fishing form central elements in the shifting ‘territoriality’ of the commodity chain in canned tuna: i.e. the ‘spatial dispersion or concentration of production’ (Gereffi 1994: 97). This section explores these elements through the historical emergence and development of the French and Spanish canning-grade tuna fleets, which is set against the earlier development of the US and Japanese fleets.<sup>5</sup> The periodisation is based upon a combination of innovation in fishing organisation and technology and shifts in locations of tuna fishing activities. It begins in the late 1860s with the first use of tuna as raw material for fish canning in France and ends in 1980 before the emergence of the Western Indian Ocean (WIO) as the most recent ‘commodity frontier’ in the territorial expansion of the EU tuna fleet.

#### **2.3.1 The emergence of the canned tuna industry in Europe, 1860s-1930s**

The extent and intensity of tuna fishing expanded significantly in the 1950s and by the mid-1980s had industrialised across the global oceans (Hamilton et al. 2011; Miyake et al. 2004; Miyake et al. 2010; this is illustrated in Appendix 2A). This development can be traced to the demand for tuna raw material by fish canning industries in France from the late 1860s and in the United States from the early 1900s, initially as a substitute for sardines and other fish (Miyake et al. 2004: 2; Miyake 2005a: 31; Mata 2009: footnote 16; A. Odin (1894) as cited by Dias and Guillotreau 2005: 72; Le Roy 2008: 130). The demands of commodity production drove the development of the canned fish industry from its outset – with factory owners seeking the realisation of profit through production for exchange and a growing proletariat seeking a durable source of protein as means of subsistence.<sup>6</sup>

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<sup>5</sup> See Appendix 2B for a comparative analysis of purse seine fleet cost structure by flag.

<sup>6</sup> Appendix 3A offers an overview of the historical development and modern process of canned tuna production.

Substitutability between species was an important business strategy in the early period of the fish canning industry. For example, in the early twentieth-century the industry in Portugal shifted raw material processing between sardines, mackerel and tuna; as these three species were all part of the same food chain in the Mediterranean Sea, fishing operations had to take advantage of which of the three was relatively abundant (Mata 2009: 53, 50). The French fish canning industry had invested in Portugal during the ‘first sardine crisis 1880-1887’ (i.e. a shortage of the fish off the French coast). This and, especially, the ‘second sardine crisis 1902-1911’ spurred raw material substitution towards the canning of albacore tuna in France and continued investment in canned sardine production in Portugal (Dias and Guillotreau 2005: 68-9, 72). By the early-1910s a more specialised French *tuna* canning industry was being supplied by a French fleet of between 700-1,000 sailing boats targeting albacore off the Atlantic coast, mainly in the Bay of Biscay (InfFS#40; Fonteneau 2004: 1). The spread of production to additional locations – the expansion of the commodity frontier southwards down the European Atlantic coast – was a necessary response to ecological limits and the growing demands of canned tuna consumption in France and elsewhere in Europe. This expansion signalled the beginning of a central dynamic of change in the territoriality of the global commodity chain in canned tuna. For example, the southward drive of the French tuna fleet was mirrored across the Atlantic: by 1930 an estimated four-fifths of tuna caught by US fleets was in the Eastern Tropical Pacific off the coasts of Mexico and Latin America (Bonnano and Constance 1996: 120). Similarly, as early as 1910 some Japanese tuna boats shifted their offshore activities in search of new, more productive fishing grounds, and by 1922 part of its pole-and-line fleet was firmly established in Micronesia, which would become a Japanese mandate under the League of Nations in 1927 (Doulman 1987c: 36).

The Spanish fishing fleet experienced a boom period after the First World War and expanded into new commodity frontiers off the Canary Islands and Morocco, including fishing for tuna. But by the 1930s rising operating costs, falling prices, a lack of capital and, of course, the Spanish Civil War combined in a series of bankruptcies in the sector; a period ‘briefly summarised’ as one of ‘low returns and scant possibilities of capital accumulation’ (Cantorna et al. 2007: 364, and 362-3).

However, after the civil war the fascist state identified fisheries as a major source of (import-substituting) animal protein and provided low-cost, long-term credit facilities to develop the sector, although these did not bear fruit until after the Second World War. Similarly, the Great Depression and the Second World War contributed to the dramatic decline of the French sardine and tuna canning industry (Dias and Guillotreau 2005: 72-3).

The first period in the development of the EU-centred commodity chain (1860s to 1930s) was marred by the dual problem of distance and durability – the tension between the organic and the synthetic – typical of agricultural commodity production (Friedmann 1992; Freidberg 2004). Capital seeks to control organic processes so as to ensure the consistency of its accumulation and reproduction over time. This tension had been resolved in terms of the processing node of the chain as canning allows the fish to be stored for long periods of time before eventual sale and consumption (see Appendix 3A for a short history). However, the long distances involved in tuna migration flows and the organic spoilability of catch meant that it was yet to be resolved in the *fishing* node of the chain. As a result, European tuna fleets had to offload to canneries in the geographical locality of the resource (Mata 2009: 46-7) which limited the extent to which they could ‘follow the fish’.

### **2.3.2 The blue revolution and canned tuna ‘national production systems’ in the 1950s**

The industrialisation of tuna fisheries after the Second World War – the ‘blue revolution’ – was a defining historical moment. The 1950s witnessed rapid development in industrial tuna fisheries, sparked by military technology developed during the War and closely supported by ‘home’ states and scientific establishments.<sup>7</sup> Led by US and Japanese fishing fleets of pole-and-line boats (below), global tuna production doubled between 1950 and 1960. Vessels fishing under the flags of these

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<sup>7</sup> In the US in 1948, for example, a leading fisheries scientist employed by the US government stated that tuna “offer the greatest possibilities for the development of valuable commercial fisheries” and listed several sets of fisheries science research needed “to assist in the development of profitable fisheries” (Felando 1987: 103-4 fn 1, see also p. 95-6). The relationship between fisheries science and capitalist fisheries is an important sub-text of this thesis (especially in Chapter 4), but one that the confine of space disallows full engagement with.



two countries caught 72 percent of the *recorded* global catch of all principal market species of tuna in 1950, rising to 74 percent in 1960. In comparison, France and Spain combined only accounted for 8 percent of global catch in 1960 (see Table 2.1 below).

Pole-and-line is a surface gear where the boat follows and attracts a school of tuna by distributing bait fish over the side (hence also referred to as ‘baitboat’ gear, see Figure 2.1). Fishers then use a simple pole and line to catch the fish and pull it directly onboard where it is stored in refrigerated fish wells. This process makes it a highly selective gear type with limited levels of bycatch, and fish wells allow boats to stay at sea for longer periods thus expanding the spatial range of fishing potential. As it is a surface gear the primary tropical tuna species targeted is skipjack and, to a lesser extent, yellowfin and juvenile bigeye as they all swim in the upper water layer (Doulman 1987c: 38). It is also relatively labour-intensive requiring skilled fishers, typically with 12-18 crew (Findlay and Searle 1998: 98). This aspect directly contributed to pole-and-line gear being superseded by highly productive, capital-intensive purse seine gear from the late 1950s onwards (see below).

Pole-and-line tuna fishing using diesel-powered boats first emerged in southern California in 1903, where albacore was chanced upon as a substitute raw material for canning during a shortage of sardines (Rockland 1978: 5; Joseph 2000: 3). It was not until after World War Two that these boats were constructed using steel hulls rather than wood, allowing safer and longer distance fishing trips. Larger boats were also installed with mechanical refrigeration and freezing systems – overcoming the prior constraint of limited organic durability – but because the canneries did not have cold stores, fish had to be defrosted on the journey back to port for offloading (Gallick 1984: 126-7, 117). As already noted, over time this Californian fishery expanded southwards to tropical climes to target skipjack and yellowfin to supplement local supply of albacore, but San Diego remained the home port of the US tuna fleet and, when most canners were based on the US mainland, the ‘west coast tuna price ... was the major determinant of world tuna prices’ (King 1986: 13).

A new American pole-and-liner cost up to US\$500,000 in the early 1950s and was estimated to be ‘the most expensive commercial fishing craft in the world’, indicating the growing capital intensity of tuna fisheries after World War Two. Despite this, the

US fleet was wholly owned by individual vessel captains (Gallick 1984: 7, 103, 107). In parallel, the Japanese government financed the mechanisation of its pole-and-line fleet – the first engine was installed in 1903, refrigeration equipment in 1907 and radio in 1918 (Fujinami 1987: 58). While the catch of Japan’s pole-and-liners was (and is) primarily for domestic processing and consumption in non-canned tuna products, especially katsuobushi (see Doulman 1987d: 147; Campling et al. 2007: 261-64), Japan did export canning-grade frozen tuna to the US from the early 1950s onwards and canned tuna to Europe and the US by the 1960s (Gallick 1984: 115; Matsuda 1987: 81; Fujinami 1987: 58-9; Section 3.3.1). This simultaneous American and Japanese-innovation in fishing technology from 1903 was not adopted by the French (Breton) and Spanish (Basque) fleets until 1951 (Lequesne 2004: 116; Findlay and Searle 1998).

It was not until the 1950s that the French and Spanish tuna fleets and their respective canning industries were revived, but now based also on a new commodity frontier – *tropical* fishing grounds off the coasts of the French colonies of Senegal and (later) Côte d’Ivoire (EUInd#54; Le Roy 2008: 138). The home port for most of the French tuna fleet was Concarneau and the small town of Bermeo for the Spanish. As pointed out by one industry representative: ‘Basque fishers have been looking for new oceans for a long time!’ (EUInd#21). The domestic sub-national politics of these two fishing regions is of considerable importance. Both Brittany and the Basque Country are perceived as economically disadvantaged and politically-sensitive regions in national and European politics, including in fisheries (EUGvt#15; #51; #52; Findlay and Searle 1998: 103). This allows these commercial fishing interests to punch above their relative economic weight in relations with and representations by government.

In 1953 French cannery owners funded exploratory fishing by Basque and Breton pole-and-liners in the Eastern Tropical Atlantic, and by 1957 around 90 boats were active in the area (IDDRA 2004: 6-7). Given the colonial context and the lack of any international legal framework governing the extraction of fisheries resources beyond coastal waters, these two fleets were able to access the resource without the payment of ground rent (see Chapter 4). The fleet was accompanied by substantial French and Spanish investment in canning capacity in Dakar between 1955 and 1957, including by the firm Saupiquet, a major French branded-processor (see below and Chapter 3),

and a group of canning interests from the Basque Country (Le Roy n.d.: 5). Importantly, exports from Senegal entered the French market duty free. The French (and the US) canning sector had historically been protected from foreign competition by high tariffs, albeit with fluctuations in their level (Dias and Guillotreau 2005: 69-70). Canneries in Senegal and Côte d'Ivoire (see below) were locked into the France-centred commodity chain through colonial (and post-colonial) tariff preferences for canned tuna and rules of origin limiting which boats could supply raw material (see Chapter 5). The geographical shift to colonial West Africa extended and consolidated the French national production system.

'National production system' is used in this thesis as a proximate concept. Each of the early canned tuna industries – in France, Spain, Japan and the United States – was built around a *national* fishing fleet. These fleets generally trade the majority of their catch – but not all (see below) – with 'national' processors, which, because of regulatory mechanisms, include those based in colonial and post-colonial territories. Following the integrated analytical logic of the global commodity chain approach, these interlocking 'national' industries need to be assessed in their entirety, because despite the 'spatial dispersion' of their territoriality (e.g. to West Africa), they are connected by 'national' fishing-processing-market linkages and 'locked-in' by a range of regulatory conditions. For example, the general manager of Saupiquet in the early 1990s considered the canneries in francophone West Africa to be fully integrated with the French production system (Antonietti 1993).

The EU-centred commodity chain has been typified by a system of tariffs and related regulatory mechanisms from *the outset*; mechanisms that 'lock-in' processors based in colonial/post-colonial sites of production to source supply from European boats (Chapter 5). In Japan, a different set of formal and informal regulatory mechanisms mean that domestic canned tuna and katsuobushi processors rely extensively on tuna supplied by Japanese vessels (JInd#21–#28). Similarly, canneries in the US mainland and overseas territories (American Samoa and Puerto Rico) relied on the US fleet for the majority of tuna raw material needs, which is similarly 'locked-in' by a range of trade policies and legal measures (Campling and Havice 2007; Doulman 1987d: 150; Schug and Galea'i 1987: 191-2; Hudgins and Fernandez 1987: 289). These national production systems do, of course, interact directly and indirectly, were never a

completed project and, in some cases, were so eroded by foreign competition and cross-penetration of capital that it no longer useful to consider them ‘national’ even in the limited sense of the word used here (e.g. US processors in the 1980s onwards and the US fleet from the late 2000s) (Campling et al. 2007; Havice 2010).

In sum, ‘national production system’ is a proximate conceptualisation of the inextricable linkages between industrial tuna fishing and ‘national’ canned tuna processing by European, Japanese and US interests; but of course, each ‘system’ also contained several commercial tensions and competitive contradictions. National production systems in canned tuna production were in existence from as early as the 1880s in France, but they were cemented during the ‘blue revolution’ in the 1950s, with important implications both for why EU ‘tuna trade regime’ is structured as it is (Chapter 5) and for the imperative of ‘upgrading’ by preference receiving countries such as the Seychelles (Chapter 6).

### **2.3.3 The rise of the global tuna purse seine fleet in the 1960s and 1970s**

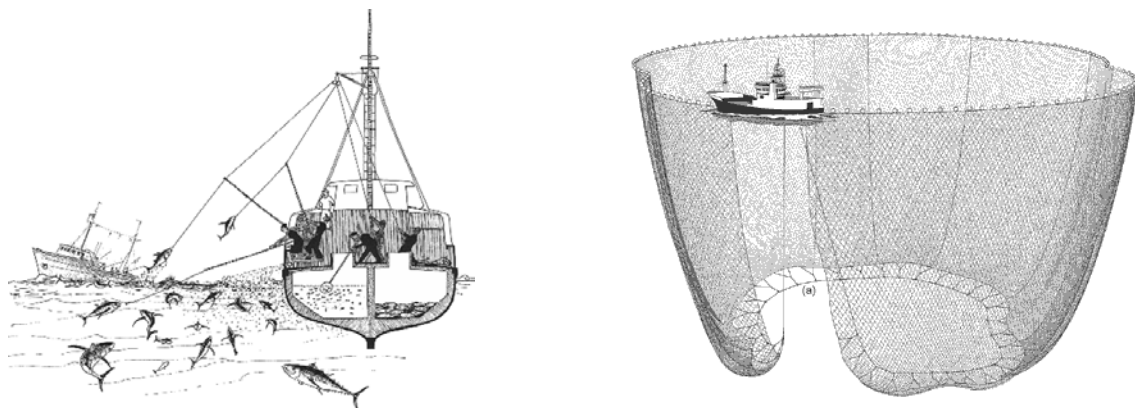
The dual problem of distance and durability was partially resolved by US boat owners through the development of industrial tuna purse seine vessels combined with onboard freezer technology in the late 1950s.<sup>8</sup> Given that tuna purse seining is a US innovation, we consider the basics of its development there and its up-take in East Asia before moving to the EU fleet. There has been very little written on the early historical development of the Spanish tropical tuna purse seine fleet, so this is partly supplemented here by literature on the French, US and East Asian (especially Japanese) equivalents. In addition, because Japan’s canned tuna production was the main supplier to import-dependent European markets until the mid-1980s and Taiwanese boats were the leading suppliers of fish to export-orientated canned tuna production in Thailand (see Chapter 3), the development of the East Asian purse seine fleet is important to a historical understanding of the competitive dynamics influencing the European-centred commodity chain. Before moving to this historical outline a short overview of purse seiner technology is necessary.

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<sup>8</sup> For a technical overview of tuna purse seine gear and associated labour processes, see SEAFDEC (2004).

Purse seiners use an ‘active’ fishing gear where the net is towed around a school of tuna by a small boat or ‘skiff’ (Figure 2.1). The gear gets its name from the mechanism of the net which acts like a purse: when the net is closed and the fish are surrounded, a ‘purse’ wire at the bottom of the net runs through loops; when pulled, the entire net is contracted (see (a) in Figure 2.1). The catch is normally too heavy to haul directly aboard, so it is either scooped aboard using pan nets or pumped onto the vessel (Jennings et al. 2001: 94 and 103). This combination of processes has two negative effects on the quality of the fish. First, it leads to severe distress and/or death by suffocation for a large proportion of the fish (like sharks, tuna gill systems mean that they cannot breathe without swimming): the flesh of tuna killed slowly under stress undergoes chemical change – known as ‘burning’ – degrading the quality of the meat (AfDB/INFOFISH 1991: 11). Second, the fish are crushed against the side of the net or against each other, especially those in the lower levels of the net, which results in bruising of the flesh.

**Figure 2.1: Illustrations of pole-and-liner and industrial purse seiner**



Source: FAO

Modern purse seiners targeting tropical tuna are extremely large (see below) and are able to catch entire schools of skipjack or yellowfin, the target species for this gear. Larger boats are able to catch a higher proportion of mature yellowfin because this species swims at deeper levels.<sup>9</sup> This is important to the economics of the commodity

<sup>9</sup> For example, the estimated catch composition of the Japanese purse seiner fleet under 499GRT (gross registered tonnage) operating in the Western and Central Pacific Ocean was roughly 70 percent

chain: larger tuna command a higher price because of improved labour productivity in processing, while smaller fish yield less edible meat and result in a lower yield of canned product per ton of fish (e.g. Rockland 1978: 6; King 1987b: 71). This simple commercial equation is of particular relevance to the US-centred commodity chain as skipjack and yellowfin are mixed as ‘lightmeat’ canned tuna. In the EU-centred commodity chain by contrast, canned yellowfin commands a higher price, especially on Italian and Spanish markets, and is thus routinely sorted from skipjack (USInd#3; #4; Chapter 3). Unlike pole-and-line, purse seines are an indiscriminate gear so incidental catch and bycatch are common occurrences (see below). Modern purse seiners are among the largest and most expensive fishing boats in the world. The cost of a 1,200 to 1,500GT (gross tonnage) purse seine vessel equipped with skiff and a helicopter was estimated at around US\$20 million in the mid-1990s (Joseph 1996: 8).

Once on deck the fish is transferred to freezers in the hull – by conveyor belts in modern vessels – and sorted by species and size along the way. The freezers use seawater mixed with a high concentration of salt (brine). This allows a temperature of around -18°C without block freezing the brine as this would result in complications and delays in storing later catch and in off-loading (IntFS#37; #38; direct observation on EU purse seiner in Port Victoria, 2009; see also Goulding 2000; SEAFDEC 2004). Storage in brine for long periods of up to several months at sea results in salt seeping into the flesh of the tuna, degrading its quality and raising the salt content of the final canned meat. The damaging effects of capture and storage in brine on the quality of the meat mean that purse seine-caught tuna is only generally ‘suitable’ for human consumption as canned product.<sup>10</sup> In other words, the design and technology of industrial purse seining means that it is structurally inserted into producing for the global commodity chain in canned tuna; its raw material production rarely contributes to other use values.<sup>11</sup>

In the late 1950s the US fleet of pole-and-line boats was converted to house mechanised purse seine gear which served to significantly increase fishing

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skipjack and 30 percent yellowfin, while larger vessels averaged 60 percent skipjack and 40 percent yellowfin and other deep-sea pelagic species (Doulman 1987c: 39).

<sup>10</sup> Or similar ‘ambient’ or ‘shelf stable’ products that preserve the product in airtight containers, such as aluminium pouches, plastic pots, etc.

<sup>11</sup> There is a minor – but profitable – exception to this with -40° and -60°C holds which allow less damaged tuna to be inserted into the ‘steak’ or katsuobishi chains.

productivity. Given this success, between 1961 and 1966 a single new *purpose-built* industrial purse seiner was rolled out each year. This subsequently grew exponentially: from 1967 to 1976 between 5 and 17 new vessels were constructed *every year* to a total of 105 new boats, trebling the catching capacity of the US tuna fleet and leading Edward Gallick to periodise this as the beginning of the ‘modern purse-seiner period’ (1984: 22-3, 128, 142; confirmed by JInd#7; #8; Felando 1987: 99; Rockland 1978: 5). The average carrying capacity of the more advanced classes of this boat – 1,000 short tons – was five times larger than that of a pole-and-liner; for some purse seiners it was as high as 2,100 short tons (Gallick 1984: 22; Rockland 1978: 5). Given the high labour productivity of purse seiners, it is no surprise that their rise was paralleled by an 80 percent decline in the US pole-and-line fleet between 1970 and 1985, and by 76 percent for the Japanese fleet between 1973 and 1981 (Doulman 1987d: 154 fn 3).

While pole-and-liner captains wholly owned their boats, because purse seiners were so expensive – around four to five times more than a pole-and-line boat<sup>12</sup> – their purchase was normally part-financed or guaranteed by US canning firms in the 1960s and 1970s. US processors typically held at least a 20 percent share, and over 55 percent for the larger vessels (Garrick 1984: 21, 25-6, 54-60, 76; Doulman 1987d: 144). Consequently, in the 1970s US canning firms owned or controlled around 80 percent of the US purse seine fleet; this integration gave these firms additional security of supply. Vertical integration was a similar path for part of the French and Spanish fleet of purse seiners (see below), but these fishing firms would also rely heavily on government subsidies for the purchase and modernisation of boats (see Section 4.3.1). The large volumes of deliveries in the ‘modern purse-seiner period’ meant that canneries had to install cold storage capacity in-plant (Garrick 1984: 85, 111, 117). This innovation completed the cold chain for the *direct* offloading of fish and also gave processors greater bargaining power over boat owners as they were able to maintain inventories of raw material during shortages (see Chapter 6). Throughout the 1960s and 1970s the US purse seine fleet was the largest in the world of this gear type, it was active mainly in the Eastern Tropical Pacific and the US was the second largest tuna fishing nation in the world, after Japan (Table 2.1).

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<sup>12</sup> Average construction costs for a purse seiner were US\$1.9 million in the early 1970s (Gallick 1984: 74).

Japan's national production system for canned tuna was closely supported by the state and, until the mid-1950s, was geographically limited by the US occupying authority. World War Two had decimated Japan's distant-water fishing fleets and a combination of post-war domestic food shortages and a government intent on export-orientated (re-)industrialisation resulted in a range of measures to support tuna fleet development (Barclay and Koh 2008: 143-150; Bergin and Haward 1996; JInd#7; #8; #16-#18; #32; #33). Rising per capita incomes spurred domestic demand for tuna sashimi and katsubushi, while US and Western European demand for canned tuna and the Japanese government's policy of generating foreign exchange had sparked the development of a large export-orientated fishing and processing capacity by the 1960s (Fujinami 1987: 58-9, 69 fn 3; Doulman 1987d: 134; Haward and Bergin 2001: 91). After initial adaptation of US design and technology in a fleet of Japanese purse seiners in the 1960s, the Japanese government went on to support the further development of a tropical purse seine fleet in the mid-1970s (Doulman 1987d: 134; 1987c: 37).<sup>13</sup>

In the 1960s and early 1970s Japan was the primary exporter of canned tuna to import-dependent Western European markets such as the UK and Germany, although by the mid-1970s Taiwan had entered the highly price-sensitive German canned tuna market with product priced below the Japanese equivalent (Fisheries Development Ltd c.1975/6: 43; see Chapter 3). The large Japanese fleet was mainly owned by individuals or fishing cooperatives, with some small fleets of three or four boats owned by corporations specialised in seafood (Doulman 1987d: 144; JInd#7; #8; #10-#14; #21-#26; NGO#10).<sup>14</sup> In the 1970s Japanese trading firms provided financing to Korean and Taiwanese tuna fishing companies (which received substantial government support), which were locked in through fixed supply contracts and/or loans repaid in fish. This practice meant that trading firms were assured of regular supply for their Japanese clients (AInd#2; #3; #7-#9; JInd#4-#8; #21-#26; Comitini 1987: 265; Haward and Bergin 2001: 96; Chang et al. 2010: 542; Li 2000). This

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<sup>13</sup> It had been spurred by the proven labour and fuel efficiency of the US purse seiner fleet compared to pole-and-line, the continued growth in demand for canned tuna in the US and Western Europe, and the problem of the availability of bait for pole-and-line fishing.

<sup>14</sup> For example, in the 2000s, Kaimaki (Japan Far Seas Purse Seine Fishing Association) had 23 members which owned 35 vessels.



practice declined in significance with the boom in global purse seine capacity (and tuna supply) by the early 1980s onwards (see the following section). Nonetheless, Taiwan and South Korea had rapidly developed to become among the leading tuna producers in the world (Table 2.1; Chang et al. 2010; Haward and Bergin 2000; Hong et al. 2000; Hamilton et al. 2011; NGO#10). In particular, the emergence of a large fleet of South Korean and Taiwanese purse seiners in the 1970s and 1980s respectively (Chou 2006; Lee 2006; Li 2000; Park 2004; Tsai 2002) became the main source of supply for export-orientated production in Thailand which, in turn, became a major player on both EU and US markets from the mid-1980s onwards (Chapter 3).

The productivity of European fishing firms based in West Africa was rapidly enhanced with the introduction of purse seiners from 1964 onwards (Allen 2010: 18; Albacora 2010). The catch of the French and Spanish tuna fleets trebled between 1960 and 1980 (see Table 2.1), perhaps aided by the departure of the Japanese DWF from West African waters which reduced competition in fishing grounds (JInd#7; #8). The 1960s also saw the rolling out across the industrial Spanish fishing fleet of ‘on-board freezing and advanced systems for fish detection and navigating at sea’, including on purse-seiners (Cantorna et al. 2007: 367). The shift in fishing grounds from the Bay of Biscay to the Eastern Tropical Atlantic was also evident in the species composition of catch. Between 1950 and the mid-1960s French tuna catch was predominantly subtropical albacore (67% albacore and 30% yellowfin in 1960), but by 1965 yellowfin had emerged as the largest share. A similar shift occurred in the composition of Spanish catch, but not until the mid-1970s because of the ongoing importance of the Atlantic albacore fishery. By 1980, the catch composition for France had shifted to 59% yellowfin, 28% skipjack and only 5% albacore; and for Spain 38% yellowfin, 26% skipjack and 24% albacore (FAO FIGIS, 22 November 2007).<sup>15</sup>

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<sup>15</sup> It was not until the mid-1990s that skipjack became the largest share of the catch composition of both fleets: 42% skipjack and 40% yellowfin for France in 1995; and 43% skipjack and 36% yellowfin for Spain, by this year albacore was only 7% of the total Spanish catch of tuna.

**Table 2.1: World tuna catch by Top 12 vessel flags, includes all principal market species and all gear types, 1950-2000 (metric tonnes)**

Vessel Flag	1950	1960	1970	1980	1990	2000
Japan	114,600	456,081	501,600	723,374	653,883	621,458
Taiwan	5,000	8,700	96,053	112,903	277,803	435,946
Indonesia	2,200	14,500	21,050	77,057	204,207	412,600
Spain	32,871	37,920	47,410	106,363	259,652	289,454
Philippines	0	0	52,000	77,505	180,807	206,398
Korea, South	200	0	25,626	110,483	232,617	218,197
Papua New Guinea	1,000	1,500	2,428	33,994	0-	68,817
Ecuador	2,900	19,100	16,010	16,450	57,875	171,499
France	17,056	29,450	48,055	92,795	155,440	151,951
Mexico	0	3,900	10,400	34,380	125,728	120,422
Maldives	9,500	10,000	30,849	27,836	66,858	91,866
USA	177,410	135,252	214,000	225,735	232,581	152,361
<b>Top 12 total</b>	<b>362,737</b>	<b>716,403</b>	<b>1,065,481</b>	<b>1,638,875</b>	<b>2,447,451</b>	<b>2,940,969</b>
<b>Top 12 fishing nations as % of World total</b>	<b>90%</b>	<b>90%</b>	<b>91%</b>	<b>89%</b>	<b>86%</b>	<b>80%</b>
USA as % of World total	44%	17%	18%	12%	8%	4%
Japan as % World total	28%	57%	43%	39%	23%	17%
<b>France and Spain as % World total</b>	<b>12%</b>	<b>8%</b>	<b>8%</b>	<b>11%</b>	<b>15%</b>	<b>12%</b>
Taiwan as % World total	1%	1%	8%	6%	10%	12%
<b>World total</b>	<b>403,893</b>	<b>799,881</b>	<b>1,166,922</b>	<b>1,842,536</b>	<b>2,832,591</b>	<b>3,694,334</b>

Source: FAO FIGIS time-series query 22 August 2007 <<http://www.fao.org/figis/>>

The French branded- manufacturer Saupiquet took-over most of the tuna canneries in Senegal and between 1962 and 1966 it concentrated 70 percent of tuna catch landed at Dakar. The other main canneries in Dakar were operated by the branded-processors Pêcheurs de France and Pêche et Froid, established in 1966. All three firms were established in West Africa solely to export canned tuna to France (Section 3.3). From 1966 fishing effort shifted south-east to the Gulf of Guinea and in 1970 landings in Abidjan, Côte d'Ivoire, were greater than those in Dakar. In 1971, Saupiquet opened an additional factory in Abidjan and by 1974 the French fleet had moved its base there; for a time, the Spanish remained predominantly in Dakar (Dias and Guillotreau 2005: 73-4; NOAA 1981a, 1981b; Le Roy 2008: 131-2; IDDRA 2004: 5; Golub and Mbaye 2002: 13-14). The general shift to Côte d'Ivoire was sealed in 1978 when Pêche et Froid also set-up a cannery in Abidjan having established its own purse seine fleet in 1973 (Pêche et Froid 2010). In short, the 'big three' branded-processors of the time – Saupiquet, Pêche et Froid and Pêcheurs de France – functioned as an oligopoly in the France-centred commodity chain (Dias and Guillotreau 2005: 74; Antonietti 1996: 89-90; AfDB/INFOFISH 1991: 26). In addition, French and Spanish activity made the port of Abidjan 'the most important transshipment center for tuna in Africa, and is among the most important in the world' (NOAA 1981b: 24).

In response to the enhanced market power of the vertically-integrated branded-manufacturers, French boat owners collaborated in 1959 to form a collective trading entity called Sovetco.<sup>16</sup> It grouped Concarneau-based boat owners in response to the earlier pooling of cannery owners in an industry association (Le Roy *et al* 2008: 4-5). By the 1990s, almost all French boat owners channelled all of their catch through Sovetco for sale to processors (see below). Similarly, when an important new French fishing firm called Cobrecap was established in 1964 it combined from the outset tuna fishing and the transportation of frozen tuna on cargo reefers (Guillotreau and Le Roy 2001: 3; Le Roy *et al.* 2008: 4).<sup>17</sup> Where a boat owner was not tied-in to a processor through financial mechanisms of control or through supply contracts, the innovation of introducing reefers opened-up the possibility of transshipping catch to wherever the price was most advantageous. In other words, the use of reefer vessels to transport

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<sup>16</sup> Société de Vente de Thon Congelé (Sovetco).

<sup>17</sup> Compagnie Bretonne de Cargos Frigorifiques (Cobrecap, Breton Company of Cargo Reefers).

fish – reportedly converting vessels previously used to transport fruit (SVS#15) – elongated the cold chain.

The transshipment of tuna on reefers transformed the EU-centred commodity chain. It provided processors based in France and Spain with a regular source of supply without boats having to make expensive trips to port for direct offloading, and also laid the basis for the emergence of specialised tuna trading companies. Firms engaging in reefer transshipment use any combination of direct ownership of reefers, chartering/leasing, and/or purchasing space on them in the spot market (AInd#12; JInd#4–#6; EUInd#53; #55–#60; TInd#8). The introduction of reefers allowed the development of transshipment hubs in the locality of capture (in port or at-sea), rather than steaming long distances to offload directly to domestic processors (as in the Japanese model into the 2000s) or offloading to a cannery in the locality of capture (as, for example, with American Samoa, Ecuador and West Africa in the 1950s and 1960s onwards). In short, reefer transshipment allowed industry to overcome all limitations on the location of production imposed by geographical distance and organic durability.<sup>18</sup> This permitted or facilitated the bypassing (in some cases) of sets of regulatory mechanisms associated with ‘national production systems’, such as rules allowing only nationally-flagged vessels to offload domestically (in the US case) or an informal ‘understanding’ between government and fishing industry to offload catch domestically (as in the Japanese case) (JInd#21–#28; Campling and Havice 2007; Doulman 1987d: 147). As a result of this organisational and technological development and the vertical disintegration of tuna fishing and processing nodes in the US-centred commodity chain in the early 1980s (see below), by the 2000s tuna trading companies emerged as major players in their own right in the WCPO, with only three firms controlling the vast majority of the distribution of canning-grade tuna in the WCPO (AInd#1–#3; #9; EUInd#53; #57–#60; JInd#4–#8; PICInd#4; PICVS#1; USInd#1; #22; TInd#2–#8; for analysis, see Campling et al. 2007: 226-234; Campling and Havice 2010b). Only one of these firms, Tri Marine International, played a significant role outside of the Pacific and is also the only one of these three firms to

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<sup>18</sup> Although it does have implications for quality as the fish is transferred a minimum of three times rather than once directly from boat to cannery. Dehydration during cold storage and drip loss on thawing for transfer reduces eventual yield, and fish often freeze together or against the side of the hull leading to damage when released – normally with a crowbar! (Goulding 2000; SVS#15; EUInd#56).

play a *direct* role in the EU-centred commodity chain.<sup>19</sup> (The trading node of the EU-centred chain is discussed further below and in Chapter 3.)

While French and Spanish firms dominated tuna fishing from the ports in Dakar and Abidjan, US interests were moving into Ghana. One of the largest US branded-manufactures, Starkist, entered into an agreement with the newly independent government of Ghana in 1958/9 to develop a locally-based tuna fishing and processing industry (Iverson 1987b 20-1; IDDRA 2004: 10). Starkist was acquired by Heinz in 1963. It quickly became the most important foreign customer of the French fishing firm Cobrecaf and in 1978 Heinz bought a 36 percent share of Cobrecaf (Le Roy et al. 2008: 6). After the restructuring of the US canned tuna market in the early 1980s (see below and Chapter 3), Heinz bifurcated its commercial presence in canned tuna to also include the EU-centred commodity chain (see Chapters 3 and 6). In addition, its eventual effective control of Cobrecaf between 1994 and 2006 would emerge as a key source of commercial tension in the EU DWF (see below).

### 2.3.4 Summary discussion

In summary, tuna fleet development proceeded in several stages, each of which progressively solved the dual problematic of distance and durability in the fishing node of the commodity chain. First, there was a shift from large fleets of wind-powered boats to steam-powered fishing vessels in the mid-nineteenth century which reduced fishers' dependence on the rhythms of the tides and the vagaries of wind, and speeded travelling times to and from fishing grounds.<sup>20</sup> Diesel-powered pole-and-liners in the early twentieth century were superseded in the 'modern purse-seiner era' from the mid-1960s. Finally, the emergence of an elongated supply chain through transshipment on reefers allowed processors to overcome geographical limits on their location of production and also transmitted crises of oversupply in one location to

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<sup>19</sup> Privately owned by four individuals (two Italian, two Taiwanese), Tri Marine used to be an Italian parastatal operating out of Singapore (EUInd#53).

<sup>20</sup> Cantorna et al. (2007: 359) provides a detailed history of the industrialisation of the Spanish fleet. See Smith (2000) for a general account of the 'industrialisation of the world ocean'.

another (see below and Appendix 2C).<sup>21</sup> The blue revolution dramatically increased productivity per fishing trip, albeit within ecological limits that became increasingly apparent in the late 2000s with the decline of CPUE in the WIO, despite on-going technological and organisational innovations (see below and Chapter 4).

## **2.4 The French and Spanish purse seine fleet: From the Atlantic to the Indian Ocean in the 1980s and 1990s**

We now turn to focus on the EU DWF, its entry into the Western Indian Ocean (WIO), environmental conditions there and the fleets' core business strategies. The first sub-section provides a historical overview of the move to this new commodity frontier, identifies the major firms involved (possible only for the French fleet), and highlights some key interactions with the *global* commodity chain (mainly the US-centred industry). In so doing it continues the periodisation of the prior section. Section 2.4.2 examines the strategic importance of Port Victoria, Seychelles to the activities of the EU DWF in the WIO, emphasising again the centrality of environmental conditions of production and explaining the notion of 'fishing days'. The third sub-section identifies productivity enhancing measures differentially employed by the EU DWF in the 1990s, especially vessel capacity and artificial fish aggregating devices (FADs).

### **2.4.1 The Western Indian Ocean in the 1980s – A new commodity frontier**

From 1976 onwards coastal states declared exclusive economic zones (EEZs) which provided sovereignty over marine resources in waters up to 200 nautical miles from their coasts. This radically transformed distant water fishing operations as boat owners now had to negotiate terms of fisheries access with coastal state resource 'owners' (see Chapter 4 on this regulatory mechanism and the EU response). Chapter

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<sup>21</sup> Previously, for example, boats selling to Portuguese tuna canneries in the first years of the twentieth century would leave late at night and return early the next morning to conserve the quality of the fish (Mata 2009: 47). Other forms of preservation such as salting, pickling and drying (all of which could be done at sea) were not suitable for raw material for canning.

6 details how interventions by the post-colonial Seychelles state after 1977 established the necessary conditions for *domestic* tuna-related development ('upgrading'), including the construction of an industrial port, the creation of parastatals to provide services to fishing vessels, and the enactment of relevant laws and regulatory institutions. But, of course, Seychelles government policy did not *determine* the rise of tuna fisheries in the region.<sup>22</sup> The driver for the industrialisation of tuna fisheries in the WIO was a result of two interconnected factors. The first was the combination of the ecological limits of and human impacts on tuna biomass in the Eastern Tropical Atlantic. Of central importance here was the decline in daily 'catch per unit effort' (CPUE) for high-value yellowfin tuna, which had fluctuated between 5-6mt in 1972-1979 but dropped to an average of 3.3mt per day in 1983 and for skipjack was only 2.8mt/day during 1980-83. In contrast, in 1984-5 the average catch per day in the WIO was 5.8mt per day for yellowfin and 5mt for skipjack (Marcille 1987: 45). Second, a *global* crisis of overcapacity of industrial purse seiners and the associated temporary oversupply of canning-grade tuna in the early to mid-1980s affected vessel profitability on a global scale (see below) because, in *existing* fisheries, more boats were chasing the same volume of tuna biomass (Joseph 2003; and Reid et al. 2003 on the WCPO).<sup>23</sup> The downward trend in profitability was probably compounded for the French and Spanish vessels in the Eastern Atlantic because of the drop in catch of valuable yellowfin.

In the early 1970s, a report by a French engineering-consultancy firm had stated that, given increasing world demand for tuna and that "since 1969 there has been a stagnation in the catches [sic]" (presumably in reference to French tuna fishing in the Eastern Atlantic), it was "of the highest interest to examine the situation in the Indian Ocean" (Societe Centrale Pour l'Equipement du Territoire (SCET) International as cited by Moal 1973: 40). Between 1977 and 1981 the Seychelles EEZ became the focus for several marine resource surveys by foreign research vessels. These included experimental fishing and stock estimates of the distribution and abundance of pelagic

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<sup>22</sup> Until the 1980s, the Indian Ocean as a whole accounted for less than eight percent of global tuna extraction, and this was mainly artisanal and small-scale fishers in, for example, Sri Lanka and the Maldives, and distant water longliners (Joseph 2000: 10).

<sup>23</sup> Two key indicators of the profit squeeze in the early 1980s were that the average US purse seiner was operating at a loss since 1979, which was probably also true for French and Spanish vessels; and, new vessels were no longer being built, 'which is a sure indicator of poor profitability' (Parker 1986: 2-3).

species, including tuna (Nageon de Lestang 1988a: 177).<sup>24</sup> These experimental fishing trips included unsuccessful trials with pole-and-liners by French and Spanish interests. The Western Indian Ocean *purse seine* fishery was pioneered in 1978 by Japan (Miyake et al. 2004: 39), followed in late 1979 by a Mauritian-flagged vessel owned by a Mitsubishi joint-venture cannery in Mauritius (Appendix 3D). There is very little information on these early experimental trips, but they ‘are believed to have extended as far east as Sumatra’ (Nageon de Lestang 1988a: 178; Lawson et al. 1986: 8).<sup>25</sup>

In the context of the CPUE decline in the Eastern Atlantic, the squeeze on profitability because of this and the decline in profitability in the purse seine industry as a whole, and early indications that the WIO fishery included a high proportion of higher value yellowfin, French and Spanish purse seiner owners began to shift the concentration of their activities to the WIO from 1980 and 1983 respectively. Importantly, the composition of the French fleet had shifted to a larger class of boats between 1974 and 1980 (AfDB/INFOFISH 1991: 91) – a period of constant renewal in vessel capacity throughout the global purse seine fleet. These larger boats were better able to steam the long distances required to follow the fish in the WIO compared to the Atlantic.

Exploratory purse seine fishing in the Seychelles EEZ began in December 1980 with a single French vessel, which was ‘told it wouldn’t work’ (EUInd#4). The results of four months fishing showed that purse seining operations from Port Victoria were commercially feasible (FAO/AfBD 1983: 11; Nageon de Lestang 1988a: 178). This was followed in 1982 with a further pilot venture by another one or two French purse seiners that ‘conclusively demonstrated’ the viability of a tuna fishery from a base in Seychelles (Nageon de Lestang 1986: 7; 1988a: 178; Harris 1988: 195).<sup>26</sup> As a consequence of these results and the continuation of poor catch rates in the Eastern Atlantic, four French purse seiners managed by the French Consortium for Fisheries Development (‘Cofrepeche’) arrived in the Seychelles in late 1982. Cofrepeche was

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<sup>24</sup> Payne and Savini (1978: 3-4) list several additional resource surveys undertaken between 1968 and 1977 by Japanese, Australian, Soviet and FAO vessels, as well as a tuna-specific survey in 1972.

<sup>25</sup> An influential tuna fisheries scientist provides the start date of the fishery as 1980, which is supported by IOTC data on purse seine catch (Marsac 1988: 14; see also FAO/AfDB 1983: 11).

<sup>26</sup> The number of vessels varies between the two authors, with Nageon de Lestang detailing the specifics of one vessel (e.g. vessel name, length, etc) and the Harris simply noting that two boats were active.



established in 1980 by a partnership of ‘professionals of the fisheries sector’ and the public research institute ‘Ifremer’ (the French Research Institute for the Exploitation of the Sea) to carry out scientific and economic assessments of fisheries potential.<sup>27</sup> In other words, the French fishing industry was directly supported by its home state in the development of the WIO fishery – another indication of the dynamics of a ‘national production system’. Cofrepeche vessels accessed the EEZ under a special six-month arrangement with the Seychelles government to immediate commercial success (FAO/AfDB 1983: 6; EIU 1983: 35; Nageon de Lestang 1988a: 178).

Canning firms quickly followed this successful fishery. In the late 1980s, two of the ‘big three’ French branded-processors consolidated their oligopolistic position through joint ventures in 1987 in Seychelles (by Pêcheurs de France) and in 1989-1991 in Madagascar (by Pêche et Froid). The latter cost ECU 14.5 million to build and was funded by the European Investment Bank and Caisse Centrale de Coopération Economique (AfDB/INFOSIH 1991: 129); again indicating the centrality of the French state to the ‘national’ production system in Africa. As Catarchi (2004: 9) put it: ‘The EU and ACP developed an integrated industry for tropical tuna’. A cannery had already been established in Mauritius in the early 1970s by Mitsubishi, but it was focused on the UK-centred commodity chain, eventually through the Princes brand (see Chapter 3). As in West Africa, the EU DWF and the canneries based in the WIO were propped-up by the EU trade regime for tuna (see Chapter 5).

Catch by the French purse seine fleet doubled over the nine year period 1980-1988. Of the 31 French boats operating in 1988, 21 were based in the WIO (all but one of which were boats between 750 and 1,250GRT) and only ten were in the Eastern Tropical Atlantic (five of which were under 750GRT in size). This distribution of vessel capacity indicates that the WIO was the more profitable fishery. Throughout the 1980s most of the French catch was traded internationally – supplying canneries in West Africa, Italy, the Indian Ocean, Thailand and the United States – and by the late 1980s only five percent was transhipped to canneries based in France

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<sup>27</sup> Information on IFREMER (Institut français de recherche pour l'exploitation de la mer) is available here: <http://www.ifremer.fr/> and on COFREPECHE (Consortium Français pour le Développement des Pêches) here: <http://www.cofrepeche.fr>

(AfDB/INFOFISH 1991: 28, 85, 95; Josupeit 1993: 19-20).<sup>28</sup> Ownership or control of 80 percent of French boats in the late 1980s was concentrated in only four firms:

- Cobrecaf had ten large purse seiners all of which were operating in the WIO. At this time Cobrecaf was part controlled by the branded-processor Pêche et Froid as well as Heinz;
- CMB (Chevannes-Merceron-Ballery) operated eight medium sized boats in both oceans;
- Saupiquet had four boats which continued to supply its processing facilities in West Africa; and,
- France Thon GIE – a new joint-venture between Concarneau-based ship-owners Mr Kuhn-Ballery and Mr Le Garrec – owned three boats that were operated by CMB.

Two other players controlled the remaining five boats, one of them, the Dutch firm Jackzon Group (see below), had complex financial and operational connections with Cobrecaf, the dominant player in the French DWF by a large margin (AfDB/INFOFISH 1991: 92-3). In 1991 Cobrecaf controlled 46.8 percent of frozen tuna production by the French fleet, Saupiquet 20.8 percent, and CMB 19.7 percent (Le Roy et al. 2008: 7). By the early 1990s Cobrecaf was operating solely in the WIO and only Saupiquet kept its entire fleet in the Atlantic so as to supply its canneries in West Africa (Josupeit 1993: 18). These three firms continued to be the main players in the French fleet in the WIO in the late 2000s (see Section 2.5).

Catch by the Spanish fleet doubled in only seven years, from 1980 to 1986, and unlike the French fleet the majority flowed to Europe – mainly Italy, Spain (40 percent in 1991) and, to a lesser extent, France – but some also went to canneries in West Africa, the WIO and the US (AfDB/INFOFISH 1991: 29, 85, 95; Josupeit 1993: 47). 75 percent of the Spanish catch in 1980 was in the Eastern Tropical Atlantic (the remainder was in the Bay of Biscay); by 1988 this was only 52 percent, with 32 percent caught in the WIO and the remaining 16 percent in the Bay of Biscay (AfDB/INFOFISH 1991: 106; see also, Josupeit 1993: 46). So while the Spanish fleet

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<sup>28</sup> In 1988 French canneries imported 77 percent of their tuna raw material from Venezuela and the United States (AfDB/INFOFISH 1991: 28).

had followed the French fleet into the WIO, the majority of its operations continued to be based in the Atlantic in the 1980s. Ownership of the Spanish fleet was highly fragmented across several family firms at this time, as it would be into the late 2000s (see below), but no details are available for the 1980s.

Expanded fishing capacity and productivity based upon new commodity frontiers in the WIO and the WCPO generated a *temporary* period of global oversupply of canning-grade tuna in the early to mid-1980s (see below). However, rapid growth in canned tuna consumption in the EEC from the mid-1980s absorbed this supply, with rising production in Italy, France and Spain and a 50 percent increase in extra-EEC imports between 1984 and 1989.<sup>29</sup> This resulted in investment in a new class of ‘super-seiner’ from 1989 onwards ‘after many years of stagnation in the international vessel construction business’ (AfDB/INFOFISH 1991: 17, 28; Josupeit 1993; Appendix Figure 2C.2). Vessel construction is a sure indicator of increased profitability in the fishing node of the chain, but the new wave of increased purse seining capacity in the 1990s eventually contributed to a second period of oversupply in 1999-2000 (Appendix 2C.2).

Figure 2.2 compares skipjack and yellowfin catch data in the Eastern Central Atlantic, the WIO and the Western and Central Pacific Ocean (WCPO) between 1950 and 2005; it includes the WCPO because it is the largest purse seine fishery in the world and has been the largest source of global growth in skipjack tuna supply since 1985 onwards. The rise in extraction of skipjack and yellowfin from the WIO was due almost exclusively to the introduction of the French and Spanish purse seine fleet from 1980 onwards. Figure 2.2(b) also makes clear that the WIO is a major global source of supply of the commercially more valuable yellowfin tuna. It is important to note that that over 50 percent of the total catch of ‘IOTC species’<sup>30</sup> is taken by artisanal fisheries. This estimate includes catch for the Western *and* Eastern Indian

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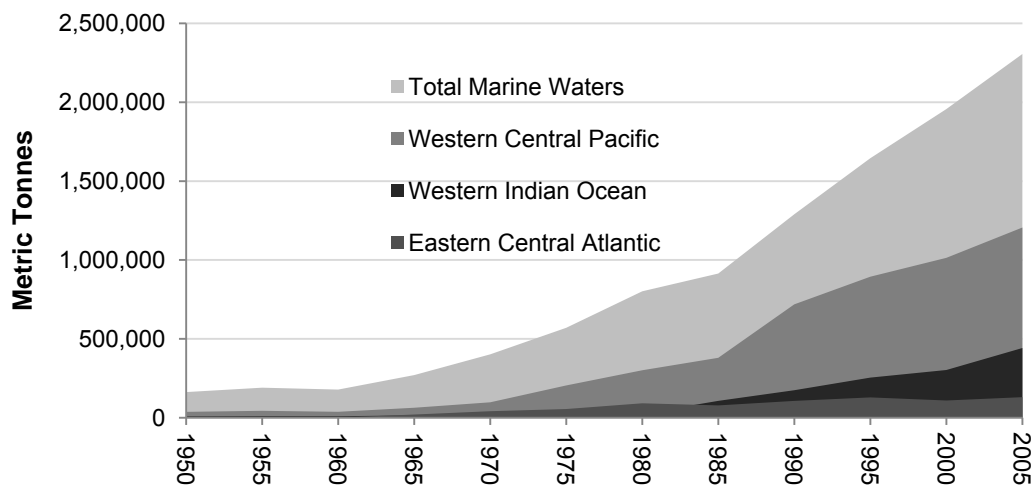
<sup>29</sup> Imports rose from 9.5 million standard cases of canned tuna in 1984 to 18.8 million in 1989. France, the UK and Germany combined imported 80 percent of this (AfDB/INFOFISH 1991: 27).

<sup>30</sup> The Indian Ocean Tuna Commission monitors tuna and tuna-like species in the Western Indian Ocean and Eastern Indian Ocean – FAO statistical areas 51 and 57 respectively, as illustrated in figure 2.3. (See section 2.5.1 on IOTC.) The ‘IOTC species’ are yellowfin tuna, skipjack tuna, bigeye tuna, albacore, Southern bluefin tuna, longtail tuna, kawakawa, frigate tuna, bullet tuna, narrow-barred Spanish mackerel, Indo-Pacific king mackerel, Indo-Pacific blue marlin, black marlin, striped marlin, Indo-Pacific sailfish, and swordfish (Marashi 1996). The most commercially important (‘principal market’) are the first four species of tuna and swordfish.

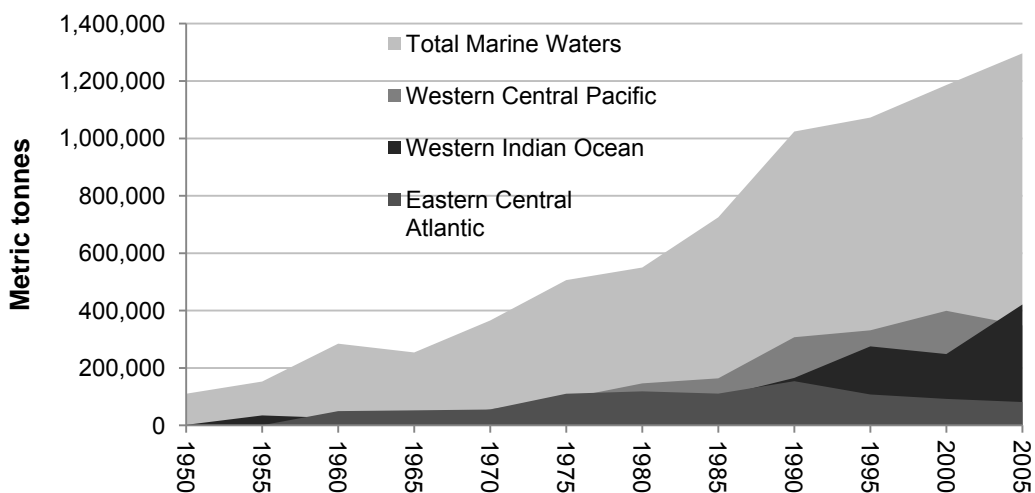
Ocean, with the latter region (incorporating Indonesia and the Philippines) the main location of artisanal catch. Nonetheless, due to the problems of data-collection from ‘artisanal’ fleets ‘there is a high level of uncertainty with respect to the total catch’ (Anonymous 2009: 14).<sup>31</sup>

**Figure 2.2: Global skipjack (a) and yellowfin (b) catch by all gear types and by major oceanic region, 1950-2005**

**(a) Skipjack**



**(b) Yellowfin**



Source: FAO FIGIS time-series query 22 August 2007 <<http://www.fao.org/figis>>

<sup>31</sup> Anonymous (2009) report also cites IOTC data to show the average industrial/artisanal split (p.15). For an overview of tuna fishing in Indonesia and the Philippines see Gillett (2005).

In the late 1970s and early 1980s the growth of tuna fishing capacity and the emergence of new fisheries in the WIO and WCPO (Figure 2.2) combined to generate a storm of competition between increasingly productive fleets active across the global oceans. This resulted in a (temporary) ‘global overproduction of tuna’ (Fujinami 1987: 64). Facing a squeeze on profits in 1980-84 – and net losses for some boats – due to low cost imports, US processors realised that ‘they could buy frozen tuna on the international market at a lower cost than their own vessels could produce it’ (King 1986: 15).<sup>32</sup> Given the context of oversupply, backward integration into fishing was no longer necessary to ensure a strategic source of supply so US processors divested ownership of boats and, importantly, reinstated profitability in 1985 (Iverson 1987: 283). This vertical disintegration was interpreted by Bonnano and Constance (1996) as an instance of post-Fordism in the ‘global’ tuna industry, but it was a *contingent* response by processors based on changed world-market conditions and it applied only to the US-centred commodity chain. In addition to overcapacity in the fishing node of the chain, an investigation by the US International Trade Commission identified overcapacity in processing facilities and inventories as causes of the decline of the US purse seine fleet and the mainland-based processing industry (Southwest Fisheries Center 1985: 20).<sup>33</sup> But in parallel was the sharp rise of competition in the new international division of labour, especially from manufacturers in Southeast Asia (Chapter 3).

With the 1981-84 recession in the US canned tuna industry with losses incurred by almost all branded-firms and the subsequent restructuring of the US-centred commodity chain, boat ownership became highly fragmented by individuals or small family firms,<sup>34</sup> and prior orders for new boats by US interests were sold abroad (Doulman 1987d: 144; King 1987a: 281, 1987b: 71; Iverson 1987a: 274; Iverson 1987b: 35, 37-8). The US purse seine fleet declined rapidly from a peak of 138

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<sup>32</sup> The crisis of the US national production system of the early 1980s can be starkly illustrated by the sharp drop in price for imported canned lightmeat, which dropped from US\$30.38 per case in 1981 to US\$19.06 in 1985 (Iverson 1987: 282).

<sup>33</sup> In 1982 there were 12 canneries based on the US mainland, by 1986 there was only one (Floyd 1987a: 86).

<sup>34</sup> For example, in an anti-trust case filed in 1985 by boat owners against the three largest US processors at the time, the 24 plaintiffs represented 54 tuna purse seiners (Iverson 1987: 10).

vessels in 1976 to 68 in 1986 (King 1986: 12),<sup>35</sup> spurred by a 20-30 percent drop in landed tuna prices in 1984 which saw several boats sold or chartered to foreign interests (Southwest Fisheries Center 1985: 20). Those boats that did survive, often having transferred operations to the WCPO, dealt with the crisis by shifting their sales to export markets, primarily to *European* canneries. The annual average of 2,888 short tons exported in 1979-1983 by the US fleet rocketed to 29,570 short tons in 1984. At the time this was seen as ‘the internationalization of tuna trade in general’ (Southwest Fisheries Center 1985: 21). The effect was to cheapen the raw material prices for European canneries, to squeeze the profitability of the French and Spanish fleets, and to encourage Heinz to look to the EU market for canned tuna as a new source of profitability. While the US production system on the *mainland* was almost completely eroded with the closure of all but one cannery, its regulatory mechanisms remained and *part* of the mainland’s production shifted to canneries in the US overseas territories of American Samoa and Puerto Rico. But US demand also fed the growing giants of non-branded canned tuna production in Southeast Asia, especially Thailand (Chapter 3).

#### **2.4.2 Seychelles and the Western Indian Ocean: Fishing/steaming days**

Unsurprisingly, a core strategy for the owners of industrial fishing vessels is the maximisation of profit from their investment in constant and variable capital. What is interesting is the specific nature of how this is done in industrial fisheries – the centrality of fishing and steaming ‘days’. To illustrate the point concretely a highly stylised movement of tuna populations in the WIO is depicted Figure 2.3. The direction of this flow traces typical purse seine fishing effort at monthly locations. Again, the environmental conditions of production – in this case tuna population flows – are central to understanding business strategies. Port Victoria, Seychelles has been the central transshipment point for the EU DWF purse seine fleet since the emergence of the WIO fishery in the early 1980s. The economics of purse seining

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<sup>35</sup> The US fleet active in the WCPO fell from 62 boats in 1983 to only c.12 by mid-2006 (Campling et al. 2007: 279-80). However, reinvestment by processors led to its renewal to 39 boats by late 2009 (Havice 2010: 983).

demand that vessel owners/managers try to tranship from the nearest available port.<sup>36</sup> (Assuming that there is sufficient infrastructure and the domestic social and political situation permits, thereby discounting transshipment from the Somali coast since 1993 and problematising Antsiranana, Madagascar in light of political conflicts there in the 2000s.) The strategy allows vessel owners to maximise productivity as boats are able both to reduce operating costs (especially labour and fuel) and to increase returns to constant capital through faster return journeys between port and fishing grounds (i.e. the maximisation of ‘fishing days’ and minimisation of ‘steaming days’).

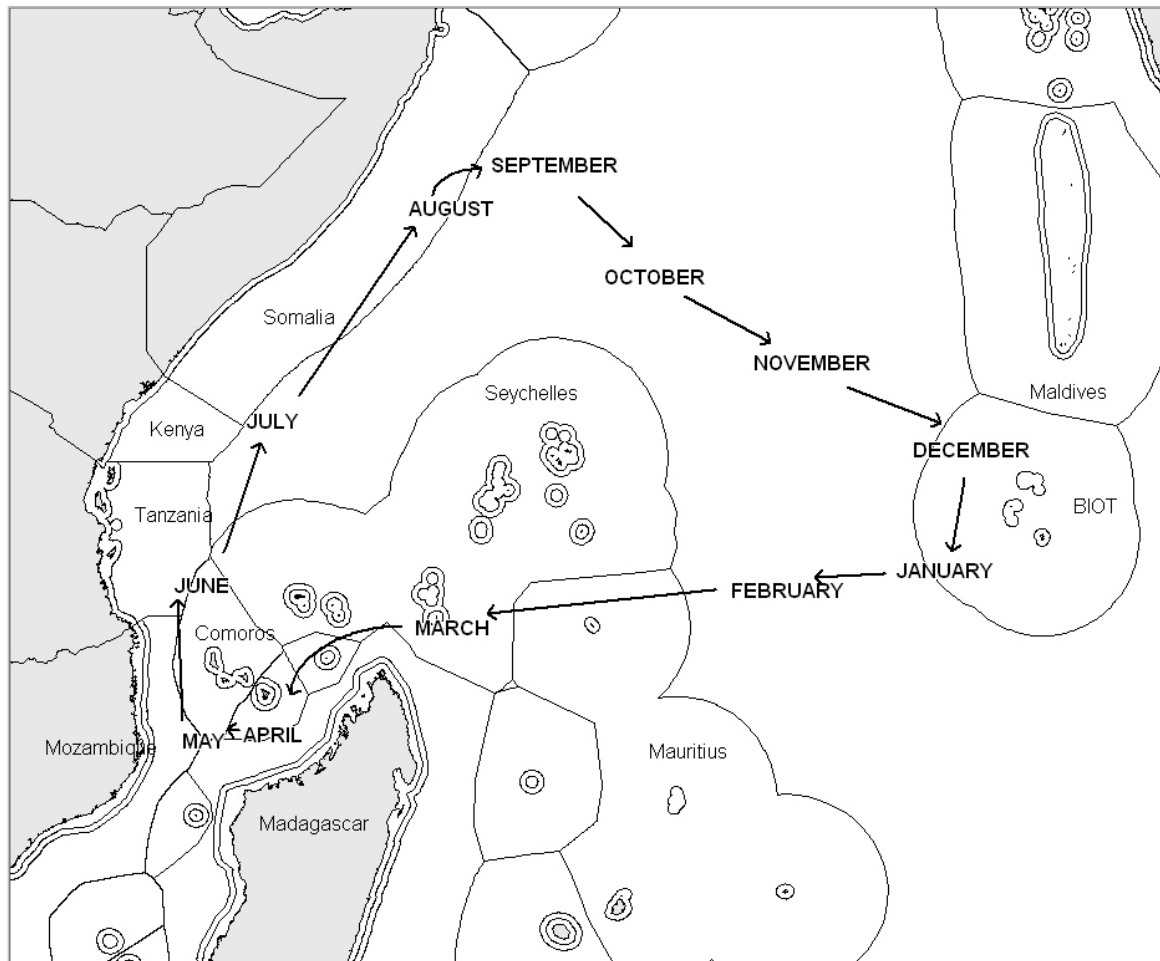
The historic prevalence of tuna flows in and around the Seychelles EEZ also explains why the Seychelles has been the centre of the EU DWF fisheries *access* strategy in the WIO (see section 4.3.2).<sup>37</sup> Despite these advantages, Seychelles suffers from a high cost structure compared to Côte d’Ivoire and Port Victoria is geographically more distant from European canning-grade tuna markets than Abidjan. In short, transshipment costs for frozen tuna to anywhere outside of the WIO are ‘much higher as are costs of supplies to vessels’, which led to the argument that yellowfin catches would have to remain higher (see below) in the WIO than the Atlantic ‘in order to be economically attractive’ (Marcille 1986: 45). As it turns out, just over twenty years later Marcille was proven right. After two years of poor yellowfin catches in the WIO from 2007 at least three Spanish boats had left for the Eastern Atlantic because the steaming days are less, the seas are calmer and operational fees are lower (EUGvt#15).

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<sup>36</sup> Purse seiners can tranship at sea if environmental conditions allow (i.e. if the oceanic conditions are not too rough). However, the regulatory mechanism of the Indian Ocean Tuna Commission (IOTC) bans transshipment at sea except for an exemption for longliners (see Section 4.2.2 on IOTC).

<sup>37</sup> Seychelles’ first commercial purse seine access arrangements were agreed with the EEC (representing the French fleet) and the government of Spain in 1983 and 1984 respectively.

**Figure 2.3: Schematic of Western Indian Ocean tuna migration**



Notes: The lines in the sea surrounding land mass depict territorial seas (12 nautical miles from shore) and national exclusive economic zones (up to 200 nautical miles from shore). BIOT = British Indian Ocean Territory (UK overseas territory).

Source: John Pearce, MRAG

The natural flows of tuna in the WIO contribute to making Seychelles one of the most important tuna transshipment/landing hubs in the world. Transshipment and landing volumes by purse seiners active in the WIO between 2000 and 2008 (which includes a small number of non-EU owned boats) are as follows: Port Victoria accounted for 88 percent of *total* known transshipment/landing volumes throughout the entire period, this was followed by Antsiranana, Madagascar with six percent, five percent in Mombasa, Kenya, 0.6 percent in Port Louis, Mauritius, and 0.04 percent in Dar es Salaam, Tanzania (SFA database). The implications of this economic activity for Seychelles ‘upgrading’ in the commodity chain are addressed in Chapter 6.



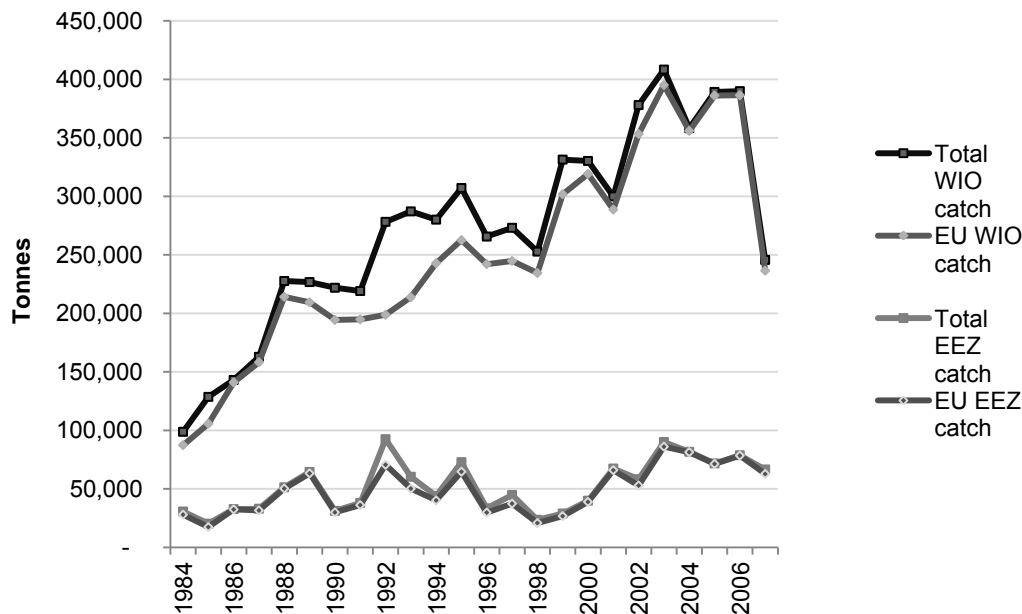
Purse seine fisheries catch a mixture of tuna species, but the WIO fishery is unusual because of the high ratio of commercially more valuable yellowfin to skipjack since the industrialisation of the fishery in the early 1980s (see Appendix 2C.1). The ratio of yellowfin to skipjack in the WIO compared to the WCPO – the only other canning-grade tuna fishery with room for growth – is illustrated visually in Figure 2.2 above (compare catch volumes in (a) and (b)). The WIO in the 1980s was the only purse seine fishery in the world where skipjack did not constitute the greatest proportion of catch (Joseph 2000:10).

The EU DWF has dominated the WIO purse fishery since its emergence with experimental fishing at the beginning of the 1980s.<sup>38</sup> The mechanisms involved in this resource access strategy are detailed in Chapter 4. For the period 1984-2007, a total of 92 percent of catch in the entire WIO purse seine fishery was by European-owned boats (Figure 2.4). The fleet also dominated the Seychelles in-EEZ purse seine fishery with 93 percent of all catch over the same period. The WIO purse seine fishery grew rapidly in importance in the late 1980s when the number of vessels expanded from 38 in mid-1988 to 51 by mid-1989 (Nageon de Lestang and Lablache 1989: 3). This move was motivated by the constant increase in WIO catch since 1983, and it made clear that sufficient intelligence was available to vessel managers/owners to make them relatively assured of its continuation. It is however, almost certainly commercially unviable to undertake purse seine operations in the WIO without access to the Seychelles EEZ (see above). It is this strategic consideration, combined with the expanding presence of DWFs, that motivated an – eventually failed – initiative of independent coastal states to cooperate to maximise benefits from the resource in the late 1980s (see Chapter 6 on this moment of South-South cooperation). The sharp drop in catch in 2007 in Figure 2.4 is discussed in Section 4.2.2.

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<sup>38</sup> Attempts by a Soviet firm to enter the fishery with the backing of the Soviet state (e.g. fisheries cooperation and access arrangements) barely made a dent, see Chapter 6.

**Figure 2.4: Comparing EU purse seine catch with total purse seine catch in the WIO and in the Seychelles EEZ, 1984-2007 (in mt)**



Notes: EU catch includes vessels flagged by France, Italy and Spain, and Spanish-owned vessels flagged by Belize, Dutch Antilles and Seychelles. Spanish-owned vessels were also registered in the Cayman Islands and Panama in the mid-1980s, but data on these vessels are available because it is not known for certain if *all* Panama-flagged vessels were Spanish-owned and there are no entries for Cayman Island vessels in the SFA database. (Lawson et al. 1986: 9; and multiple interviews and person. comms. 2006, 2008 and 2009.)

Sources: Calculations using FFA database (EEZ data is confidential)

### 2.4.3 Enhancing productivity in the 1990s and its environmental effects: Vessel capacity and artificial fish aggregating devices

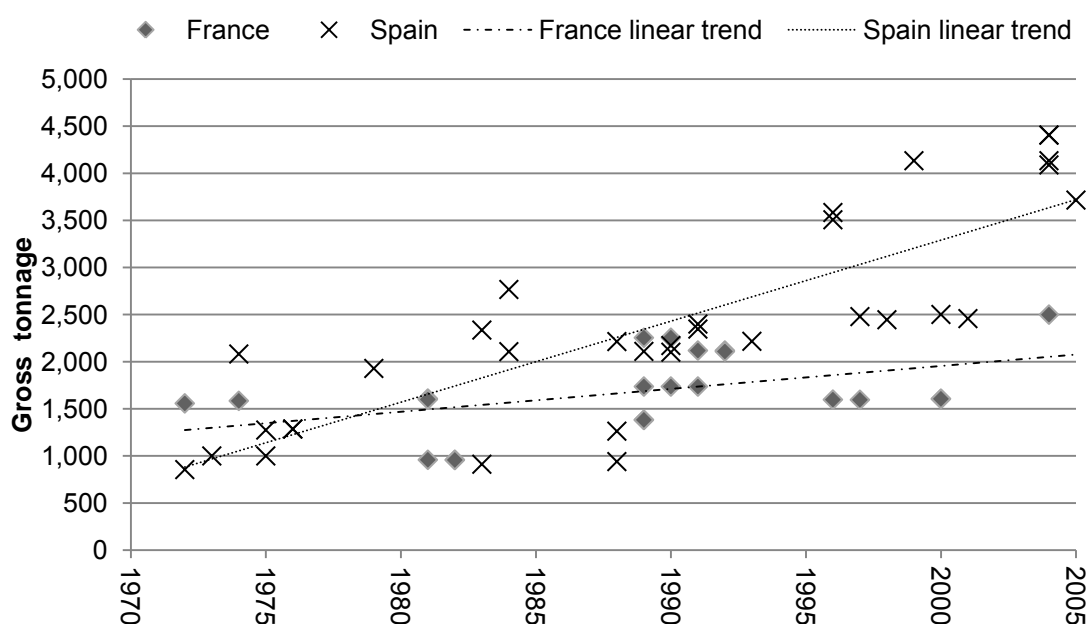
#### *Capacity-enhancing measures*<sup>39</sup>

Larger vessels are able to stay at-sea for longer periods and over longer distances. With larger fish-holds they are also able to carry larger absolute volumes of tuna per fishing trip. This commercial logic explains the construction of ever-larger boats active in the EU DWF (and elsewhere) in the 1990s and 2000s. Gross tonnage (GT) is a universally-available measure of vessel capacity. Vessels over 2,000GT are categorised here as ‘super-seiners’ and those over 3,500GT as (rather awkwardly)

<sup>39</sup> Fleet or vessel or fishing *capacity* is potential fishing effort, whereas fishing *effort* is actual activity to catch fish (e.g. the setting of a purse seine net). In terms of data that are widely available, capacity is best measured by tonnage and power rather than the number of boats as the former two are far better indicators of productivity/extractive potential. While superior measures are possible, including indicators of technological change, these are not available in a uniform format (Villasante and Sumaila 2010: 271).

‘super super-seiners’.<sup>40</sup> As is made clear through the trends illustrated in Figure 2.5 there are important differences *within* the EU DWF. Spanish purse seiners constructed after 1995 are considerably larger than the (depreciating) French fleet.<sup>41</sup> Larger vessels consume larger absolute volumes of gasoil and, of course, have a higher initial purchase cost.<sup>42</sup> Consequently, fish extraction from capital invested needs to be higher for ‘super super-seiners’ to pay off larger loans and achieve profitability. Capital depreciation costs are also higher. As we shall see, the business model for managing the new Spanish vessels is ‘tighter’, leading to the deepening of the competitive drive to maximise catch and minimise costs. The ecological implication is that the larger and newer vessels in the EU DWF are deepening pressures on the resource and heightening tensions in negotiations with the Seychelles government over (and compliance with) resource access arrangements (Chapter 6).

**Figure 2.5: Year of vessel construction and gross tonnage (GT) for global EU distant water purse seine fleet active in 2007**



\*Includes data for 55 EU flagged vessels, 22 French and 33 Spanish.

Source: Oceanic Développement (2008) database.

<sup>40</sup> This is an arbitrary classification. During the 1980s a vessel classed as a ‘super-seiner’ was only >1,000GRT (Doulman 1987d: 140).

<sup>41</sup> New vessels introduced into the French fleet from 2009 onwards are excluded from the thesis.

<sup>42</sup> For example, Doulman (1987d: 154 fn 15) points out that the ‘super-seiners’ of the time (>1,000GRT boats) were designed in the early 1970s when the global oil price was relatively low. He went on to argue that the oil price rises (i.e. in 1973 and 1979) and the emergence of EEZs ‘eroded the operational advantages of superseiner class vessels’.

While there is popular opposition to the new class of ‘super super-seiners’ (e.g. Greenpeace 2010), it was claimed by one Spanish boat-owner that ‘these boats engage in a different type of operation’ compared to smaller vessels: ‘the net size is similar, [and] the fuel to catch ratio is lower on bigger boats, thus better for the environment, and of course for owners’ businesses, they are [also] safer for the crew ... [with] wider, better working conditions’ (EUInd#13–#15). The main commercial advantage of these boats is that the fish holds are larger allowing the maximisation of fishing days before steaming to port to offload. However, while the fuel to catch ratio of ‘super super-seiners’ may well be more efficient, their operations are also more sensitive to fuel price rises (Miyake et al. 2010: 42-3). A corroboration of this finding can be found in the fuel buying strategies of Spanish vessel owners compared to their French counterparts: the former are more concerned about benefitting from short-term price fluctuations and the latter preferring a stable price that might not reflect potential gains if the world-market price declines (SVS#13–#16). In addition, during the heights of the oil price hike in 2007/8, some Spanish boats operating in the WIO were reported to have cut their engines and drifted while waiting for signs of fish grouping around their fish aggregating devices (SGvt#43).

Another source of differentiation in the EU DWF in terms of capacity-enhancing measures is the use of ‘supply vessels’, which are solely employed by Spanish firms. First introduced to the WIO in the mid-1990s and more intensely used in the 2000s, these are normally converted pole-and-line vessels with 7-10 crew. Their principal activity is to deploy, maintain and monitor fish aggregating devices, and inform purse-seine captains when tuna are present. Their secondary role is to deliver supplies and transfer injured crew (Roberto et al. 2007: 2; Miyake et al. 2010: 44; EUInd#40). Both of these roles allow the supported purse seiner to maximise fishing days and minimise steaming days. Six supply boats were estimated to be active in 1999, peaking at 15 in 2004 and settling at 13 in 2005 and 2006 (Roberto et al. 2007: 7, Pianet et al. 2009: 1). Individual supply boats normally provide dedicated support to a large Spanish purse seiner, but occasionally one will work with two seiners.

### *Effort enhancing measures*

The extent and intensity of fisheries exploitation must also be understood in terms of the technological and organisational changes that enhance fishing effort (Miyake 2005: 24-6). Modern industrial purse seiners utilise cutting-edge technology to locate and hunt fish, especially in the EU DWF, so while physical vessel capacity might be a constant (e.g. in GT or kW) the efficiency and effectiveness of a vessel's ability to catch fish can change. These effort enhancing innovations are known as 'effort creep'. Techniques used in the 2000s include vertical and horizontal sonar and hydro-acoustics, satellite imaging of oceanographic conditions such as temperature (including through cloud cover), satellite imaging of plankton concentrations, bird radar (birds prey on small fish driven to the surface by feeding tuna below, introduced in 1987), and the first-hand spotting of schools using small on-board helicopters (Hampton and Williams 2003: 16; Hill and Hammann 1998; Holmquist 2002; Gaspar 2000: 181; Jennings et al. 2001: 96; Miyake 2005a: 26; Prado 2000: 176; SEAFDEC 2004; and direct observation of vessels and multiple interviews, 2006 and 2009). Many of those who first board a modern purse seiner and inspect the control deck comment on its similarity to the 'Starship Enterprise' or the like.

Differences within the EU DWF can also be identified in techniques and technology employed in fishing operations in the WIO. Before the 1990s the EU DWF would hunt for fish in the WIO by: a) scanning the horizon for birds which are attracted to tuna feeding frenzies or searching for a school from the air using a helicopter (known as catching on 'free schools'), or b) engaging in a 'hunt for logs' (Sibert 1987: 44) because tuna aggregate under floating logs or other debris ('log-school'). Until the early 1990s tuna 'FAD fisheries' were mainly *log*-schools, including in the WIO (Miyake et al. 2010: 29). Subsequently, *artificial* fish aggregating devices (FADs) rapidly became an important source of 'effort creep'.

FADs were introduced en masse into the Atlantic and Indian oceans in the 1990s and directly contributed to an increase in CPUE (Hinton 2007: 4), with fishing around logs and artificial FADS constituting around 50 percent of the *global* catch of tropical tunas since the 1990s (Fonteneau, Pallares and Pianet (2000) as cited by Fauvel et al. 2008: 2). FADs employed in the purse seine fishery are normally drifting rafts

equipped with transmitting positioning buoys situated in zones where principal market tunas are believed to migrate.<sup>43</sup> Tuna aggregate around the FAD as it mimics *natural* floating objects, such as logs, on which smaller fish feed. By the mid-2000s, a FAD in the WIO typically used ‘a GPS satellite receiver and a transmitter, a thermometer to measure water temperature, a system to gauge the state of the batteries and a microprocessor to control these systems’ (Roberto et al. 2007: 4). By the mid-2000s some FADs were also equipped with expensive sounders to detect and estimate volumes of fish to a depth of up to 400m (direct observation on docked vessel, Seychelles January 2009). In the mid-2000s the French fleet was releasing around 130 FADs per year and the Spanish over 300 (Moreno et al. 2007 as cited by Miyake et al. 2010: 44).<sup>44</sup>

Over the period 1990-2008 the Spanish DWF caught a total of 2.4 million tons of skipjack and yellowfin tuna and the French 1.6 million. Broken down by fishing technique: the Spanish caught 71 percent on FADs (a ratio of roughly 2: 1 skipjack to yellowfin) and 29 percent on free schools (1: 2 skipjack to yellowfin); and the French caught 58 percent on FADs (2.5: 1 skipjack to yellowfin) and 42 percent on free schools (1: 3.5 ratio skipjack to yellowfin) (analysis based on data reported in de Molina *et al.* 2009: 3-4 and Pianet et al. 2009: 9; see also Figure 2C.2 and discussion in Appendix 2C.1). Contrary to the generalisation of many observers that the French fleet can be typified by free-school fishing (EUInd#5; IntFS#37; #38), it is clear that this fleet also makes extensive use of FADs, albeit significantly less so than the Spanish.

Fishing with FADs is a technique which results in a high proportion of skipjack; also, yellowfin catch on FADs tend to be smaller *juvenile* fish which are less valuable. Given that yellowfin caught on a free school tend to be mature, and thus larger sized fish, they command a higher price because of improved recovery rates (see above and Appendices 2C.2, 3A.2 and 3B). Therefore, while the French DWF can be characterised as consisting of smaller vessels than the Spanish, and thus having a

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<sup>43</sup> In the WIO they are normally bamboo rafts with nets hanging underwater (Fauvel et al. 2009: 2), although various other materials can be used (de San and Pages 1998: 24, see also for a technical review of FAD use in other types of WIO fisheries).

<sup>44</sup> Before Moreno et al. the actual ‘number of FADs used by the [WIO] purse seine fleet [was] not known precisely’ (Mina et al. 2002: 336).

lower fuel to catch ratio, smaller fish-holds and a reduced maximum number of fishing days, this is compensated for by a strategy of *some* boats targeting free schools to extract higher value raw material. French purse seiner captains also appear to be more effective in catching yellowfin on free school sets than the Spanish equivalent as they record a significantly larger ratio of this species to skipjack. Conversely, the larger and more numerous Spanish boats predictably caught 35 percent more tuna than the French between 1990 and 2008.

The increase in FAD use raises three major ecological concerns. The first is the sustainability of tuna biomass because of the *juvenile* yellowfin taken in association with FADs. The exploitation of immature fish cuts these individuals out of the reproduction cycle ('yield per recruit') (Joseph et al. 2007: 155; Joseph 2000: 19; Int#12). Second, the use of FADs leads to the increased incidence of *bycatch*. By the mid-1990s FAD utilisation in the WIO purse seine fishery had developed widely, resulting, for example, in nearly 40,000mt of bycatch of small bigeye tuna (Miyake et al. 2004: 39; IntFS#3).<sup>45</sup> Third, fisheries science research indicates that FADs can artificially shift the migration patterns of tuna populations from areas where rich foraging is in evidence (e.g. near natural logs) to other areas that may not be favourable for tuna feeding, leading to a deterioration in population health; known as the '*ecological trap thesis*' (Hallier and Gaertner 2008; Marsac et al. 2000; Fauvel et al. 2009).

Despite these concerns over the impact of FADs on the long-term sustainability of the resource and, in turn, the commercial survival of the fishery itself, they continue to be used because they enhance profitability. However, even this narrow commercial logic contains a contradiction. The roll-out of FADs across the world's tuna purse seine fisheries in the 1990s has increased fishing effort and led to more canning-grade tuna on the world market. It is widely believed that this has depressed prices and 'eroded profit margins' (Mills 2001: 27), which, in the context of continued rises in constant capital costs (e.g. steel for vessel holds and fuel), puts pressure on vessel owners to catch ever more fish. As one specialist put it: 'Purse seiners at the moment need FADs

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<sup>45</sup> It should be noted that this is the main interaction between the Japan-centred commodity chain in sashimi grade bigeye tuna and the global commodity chain in canned tuna, where the former is supplied by specialised long-line vessels.

because there are too many boats and the value added is not enough. There is too much capital chasing too few fish' (Int#13).

#### 2.4.4 A note on the environmental sustainability of tuna fisheries

The most important dynamic of the GCC in canned tuna is the sustainability of current levels of exploitation of the resource itself. Table 2.2 summarises the population status of those tuna stocks that are relevant to this analysis, which (it should be emphasised) are probably conservative estimates. The central point here is that almost all stocks of yellowfin tuna cannot be fished any more than the current levels, including in the most recent commodity frontiers in the WIO and WCPO. Capital is well aware of this problem, even though some representatives claim that stock fluctuations are solely due to environmental conditions such as shifts in oceanographic conditions (see Chapter 4). In 2007 cannery managers in the Pacific islands and Western Indian Ocean all reported problems in sourcing sufficient supply, including for skipjack,<sup>46</sup> which is the main explanatory variable for the rapid increase in skipjack price for this year (Appendix Figure 2C.5). In a comprehensive global study, the same problem was reported in most major locations of canned tuna production in 2010 (Hamilton et al. 2011).

**Table 2.2: Exploitation status of tuna stocks used for canning**

Species	Ocean	Sub-area	Exploitation status
Skipjack	Atlantic	Eastern	Fully
		Western	Not fully
	Indian	NA	Not fully
	Pacific	Eastern	Not fully
		Western	Not fully
Yellowfin	Atlantic	NA	Fully
	Indian	NA	Fully
	Pacific	Eastern	Fully
		Western	Fully

Source: Hinton 2007: 8

<sup>46</sup> Discussions in 2007 with industry representatives at meetings in Port Vila, Vanuatu (March), Port Louis, Mauritius (May), Le Morne, Mauritius (July), and multiple person. comms. via email. See also Globefish tuna market reports, various issues (2007) which report similar supply constraints on a global level.



## **2.5 Corporate Concentration and Industrial Organisation of the European Tuna Fleet in the Western Indian Ocean in the late 2000s**

This section shifts tone and emphasis to examine the *firms* involved in the EU DWF. In so doing it implicitly takes the prior periodisation into the 2000s (the cut off point of the research was 2009/10) but narrows this down into one geographical area, the Western Indian Ocean. This is the first known firm-centred analysis of industrial tuna fisheries. It is undertaken to identify levels of corporate concentration and industrial organisation so as to better understand the EU DWF in its own right, but also to locate ‘lead firms’ in the fleet, moments of wider chain governance and business strategies employed to counter the market power of other players in the commodity chain, especially branded-manufacturers, which are addressed in the next Chapter.

### **2.5.1 The European distant water tuna fleet in the 2000s – an overview**

The combined French and Spanish share of total EU tuna catch of all species and by all gear types was 83% in 1950 and 96% in 2000. In short, these two players *are* the European tuna fleet. As we have seen, the main fishing grounds of the EU DWF are the Eastern Tropical Atlantic (since the 1950s) and the Western Indian Ocean (since the early 1980s). Spanish-owned vessels are also active in the Eastern Tropical Pacific, often using foreign ‘flags of convenience’. But while the combined catch of all species of tuna by France and Spain is the second largest in the world (Japan leads, with Taiwan in third position, see Table 2.1 above), EU DWF activity in the WCPO – the largest tuna fishery in the world (Figure 2.2 above) – is marginal.<sup>47</sup>

Tropical tuna purse seiners are the largest segment of the entire EU external fleet in terms of vessel power (kW) (Oceanic Développement 2008: 3). For general discussion, the European tropical tuna purse seiners are best categorised as the ‘EU distant water tuna purse seine fleet’ (EU DWF), rather than by national flag as

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<sup>47</sup> Only the Spanish purse seine fleet is active in the WCPO. Spain had between 6-12 purse seiners active in the WCPO between 1999-2001, but in 2002 it had only one and in 2010 it had four vessels registered (registration does not mean that they actually fished) (SPC 2003: 103; FFA database, 2006 and 2010).

‘Spanish’, ‘French’ or ‘Italian’ (IntFS#22).<sup>48</sup> Since Spain’s accession to the EEC in 1986, these ‘national’ fleets are all regulated by the European Commission, receive substantially the same benefits under the Common Fisheries Policy and the EU trade regime (see Chapters 4 and 5), and are active largely in the same fishing grounds. In other words, they are all part of the same ‘EU production system’. Nonetheless, as will be shown below and in Chapter 3 there are important national- and firm-level differences in terms of ownership structure, industrial organisation and markets.

From the late 1980s to 2010 combined French and Spanish interests controlled the largest purse seine fleet in the world. In 2000 it constituted 18 percent of world purse seine vessel capacity with only 11 percent of world vessels, indicating a fleet of larger sized vessels (Committee on Fisheries 2003: 15-16).<sup>49</sup> In 2007 European firms controlled an estimated 84 boats of a global purse seine fleet of c.450 vessels at >500GT,<sup>50</sup> of these, 57 vessels were actually flagged by EU Member states (Oceanic Développement 2008; SFA vessel license database 2008).<sup>51</sup> The EU-flagged boats were estimated to have an annual turnover of more than €400 million (Goujon and Riva 2009: 3).

In the late 2000s, the majority of *foreign* flagged Spanish-owned purse seines fly the Seychelles flag and those of several Latin American countries (see Table 2.3 below for a full break-down of the fleet by firm). In the case of the French-owned purse seine fleet only two used a ‘foreign’ flag in 2007 – that of Mayotte, a French *collectivité d’outre-mer* (Oceanic Développement 2008). European vessel owners are

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<sup>48</sup> There was only one Italian-flagged vessel by 2007 and because of connections with Heinz/MW Brands (which owns the cannery in Seychelles), it is considered here under the French fleet. Even when Italy was the world’s third largest producer of canned tuna in the late 1980s and early 1990s, it still relied almost exclusively on imported raw material (Josupeit 1993: 2, 32-4; AfDB/INFOFISH 1991: 28)

<sup>49</sup> The second largest distant water purse seine fleet is owned by Taiwanese interests, estimated to total 55 boats in mid-2010 (33 Taiwan-flagged, 18 registered in Vanuatu, and 4 in Marshall Islands). All of these vessels operate in the WCPO (Hamilton *et al.* 2011)

<sup>50</sup> The average EU purse seiner has a mass of 2,099GT and power of 3,191kW. Oceanic Développement (2008).

<sup>51</sup> A database created by Oceanic Développement (2008) details a grand total of 56 vessels, but an additional Spanish-flagged vessel (*Txori Gorri*) is known to have been in operation in the Seychelles EEZ in 2007 (SFA licensing database, 2008) and is included in the DG MARE Fleet Register (call sign: 3-BI-21-07). The French industry association, ORTHONGEL, estimated that the EU fleet totalled 84 boats in 2008/0: 33 Spanish, 21 French, 1 Italian and 29 FOC vessels owned by Spanish interests, of a total global purse seine fleet of 450 boats of >550GT (Goujon and Riva 2009: 3). Despite these differences, all agree that EU interests control the largest fleet of purse seiners in the world.

not alone in using flags of convenience (FOC). For example, a large fleet of Taiwanese-owned longliners are flagged by Indonesia (the third largest individual catching nation in Table 2.1, above) and purse seiners by the Marshall Islands and Vanuatu, however the Taiwanese government has little power to regulate this activity (IntFS#3; AGvt#4; AInd#5; NGO#10; JInd#7; #8; #16–#18). The FOC issue serves to highlight the complexity and problems involved in analysing ‘national’ catch data and its relationship to the ‘nationality’ of capital invested under multiple FOC (several countries do not permit the use of their flag as a FOC).<sup>52</sup>

The French and Spanish DWF is organised under three *national* ‘producer organisations’ (industry associations). Their role is primarily a commercial one, using collective bargaining power in fleet relationships with ‘home’ states, the European Commission and governments in regions of fishing activity.<sup>53</sup> Since 1992 the various owners of the French purse seine fleet have been represented by a single producer organisation – ORTHONGEL.<sup>54</sup> Representation of the Spanish fleet is divided into two producer organisations: OPAGAC and ANABAC.<sup>55</sup> The main players in OPAGAC are vertically-integrated into processing (i.e. the firms Albacora and Calvo, see below), while ANABAC members are mainly specialised boat owning firms. These three producer organisations are partly organised around their relationship to the EU fisheries subsidy and tuna regimes (see Section 4.3 and Chapter 5). They also act as lobby groups at the levels of their ‘home’ states, the Commission, in diplomatic negotiations over fisheries access arrangements with third countries, and as collective operational representatives in third countries (e.g. OPAGAC employs a permanent representative in Seychelles).

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<sup>52</sup> The broad complexities and debates over FOC and ‘national’ data in economic analysis and applied fisheries management cannot be addressed here. On the politics and political economy of flags of convenience in maritime industries, see DeSombre (2006), EJF (2009) and Lillie (2006).

<sup>53</sup> The first formal recognition at the EEC of producers organisations in the fishing industry was in 1971 (Council Regulation (EEC) No 171/71), introduced three months after the setting-up of the common organisation of the market in fishery products (Council Regulation (EEC) No 2142/70). See also, for example, Council Regulation (EEC) No 105/76 and Council Regulation (EC) No 104/2000. For a brief history of French producer organisations in the tuna industry as a basis for the EU model, see Le Roy (2008: 132-137) and Lequesne (2004: 44-8, 84). See also Meuriot (1986).

<sup>54</sup> Organisation des Producteurs de Thon Congelé. Until then they were organised under the Syndicat National des Armateurs de Thoniers Congélateurs (SNATC) (Le Roy et al. 2008: 4).

<sup>55</sup> Organización de Productores Asociados de Grandes Atuneros Congeladores and Asociación Nacional de Buques Atuneros Congeladores y la Organización de Productores de Túnidos Congelados.

## 2.5.2 Control of the EU DWF licensed to fish in Seychelles in 2008

Almost all known analyses of industrial fisheries focus on the ‘nationality’ of the vessel by its flag and, in some cases, by assumed ‘national’ ownership.<sup>56</sup> For the small minority of analysts and commentators that even consider questions of the political economy of vessel ownership and control, the limitation of incomplete data is normally cited as a barrier to such analysis. In order to interrogate levels of effective *control* of fishing activities and their various relationships to the rest of the EU-centred commodity chain, Table 2.3 presents vessel ownership at the level of the firm for the *global* EU DWF; an estimated 88 purse seiners owned or controlled by EU-based firms. The table combines data for two years: all data are for 2008 except for areas of operation which are based upon interviews and personal communications on fleet status in 2010. The main point of difference is that 54 EU-owned boats were licensed to fish in the WIO in 2008 (although all vessels were not necessarily active there), and in 2010 active vessels had dropped to 47. This shift was due to two key factors – a decline in catch rates, especially of yellowfin (see above and Section 4.2.2), and the impact of Somali piracy on fishing vessel operations which worsened from 2009 onwards and, while of considerable economic and political importance, is excluded from the thesis due to limits of space (for overviews, see Campling 2008g, 2008h; Havice and Campling 2009). While the following draws out some elements of the EU DWF as a whole, the focus is on those firms licensed to fish in Seychelles EEZ in 2008 (see Appendix 2D for details), which, as we have seen, means by default that they were the only EU purse seiners fishing in the WIO as access to Seychelles waters is a commercial necessity for this gear type in the region.

The most important difference between the French and Spanish DWFs in terms of ownership and control is that the former is highly concentrated through only three firms/consortiums of firms. Conversely, control of the Spanish fleet is highly fragmented and are all family-owned firms (EUInd#12–#17; #21–#24; #55; #56; EUGvt#15; IntFS#37; #38; SGvt#14).<sup>57</sup> We address the firm-composition of the French fleet first: Cobrecaf, the consortium of Kühn-Ballery, France-Afrique and

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<sup>56</sup> Le Roy and Guillotreau (2001), Le Roy (2008) and Le Roy et al. (2008) are notable exceptions, albeit empirically limited to the French purse seine fleet up until the 1990s.

<sup>57</sup> See Puig and Pérez (2009) on the internationalisation of Spanish family firms, including in the food industry.

CMB, and Saupiquet. While share ownership may have changed, to a large extent the same firms concentrated the French DWF in the 2000s as they did in the 1960s, albeit in different combinations. In the late 1980s for example, Cobrecaf, CMB, Saupiquet and France Thon (part owned by Kühn-Ballery) were the major players (Section 2.4.1 above).

In 2008 the consortium of the firms Kühn-Ballery, France-Afrique and CMB – ‘Kühn-Ballery *et al*’ for short – owned four of the 19 French purse seiners licensed in Seychelles EEZ in 2008. All four of these vessels were constructed after 1994, indicating a medium-term commitment to fishing in the WIO. The consortium’s vessels are leased to France Thon, a *Groupement d'intérêt économique* (GIE, or Economic Interest Group), which under French law is an entity created by two or more persons or entities for the purpose of the development of their activities.<sup>58</sup>

Cobrecaf is by far the largest French purse seiner firm, but it is addressed second because of cross-financing with Kühn-Ballery *et al*. In 2008 Cobrecaf owned ten of 19 French vessels licensed in Seychelles EEZ. In mid-2008, the largest share of Cobrecaf (38 percent) was owned by Kühn-Ballery *et al*, 36 percent by MW Brands and 25 percent by Jaczon Group (a Dutch fishing and shipping firm). Except for MW Brands (Heinz European Seafood until 2006), which controlled canneries in Ghana and the Seychelles and major EU canned tuna brands (see Chapter 3), none of these firms was vertically integrated into the processing or branding of canned tuna. Like Kühn-Ballery *et al*. with France Thon, Cobrecaf uses a financial subsidiary – Cobrepeche. This is a vessel ‘leasing’ firm and functions to limit taxation by the French state (EUInd#5; #9; #38; #39). (See below for more on Cobrecaf.)

The significant third entity is Saupiquet, which owned three purse seiners active in the WIO. Saupiquet is a vertically-integrated branded-manufacturer owned by the Dutch consumer goods marketing firm – Bolton Group (Chapter 3). Saupiquet markets canned tuna and ‘value added’ tuna products in France and Germany under the Saupiquet brand of processed fish products: a diversified product range that includes

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<sup>58</sup> Under Ordinance No. 67-821 of 23 September 1967 (OJ 28 September). Definition obtained from the online *Dictionnaire du droit privé français*. Available at: <http://www.dictionnaire-juridique.com/definition/group-d-interet-economique.php>

canned sardines and mackerel. Bolton Group is the lead branded firm on the EU canned tuna market (see Chapter 3).

There were 28 Spanish owned purse seiners licensed to fish in Seychelles EEZ in 2008, the majority of which are owned by four firms. Albacora is the only purse seine firm in the world to operate in all tropical tuna fisheries and is probably the world's largest. It is vertically integrated into Salica – a mid-range branded-processor – and an estimated 60 percent of its catch goes to its own factories in Ecuador and Spain (EUInd#13–#15; see Section 3.4.1). Like most other vertically-integrated firms, Albacora is a member of the OPAGAC producer organisation. It uses both Spanish and Seychelles flags and had a total of eight boats licensed to Seychelles in 2008, of which three were 'super super-seiners' constructed between 2000 and 2004, indicating a long-term strategic investment in tuna fishing with expectations of future profitability. It is worth noting that the firm Calvo, like Albacora, is a member of OPAGAC and is vertically integrated into branded-manufacturing. Its brand is the largest in Spain. However, its two purse seiners based in the WIO left in 2007 due to poor fishing and shifted their activities to the Eastern Tropical Atlantic, and its best and biggest boats are based in the Eastern Tropical Pacific (EUGvt#15; EUInd#16).<sup>59</sup>

After Albacora, the next largest four players in the Spanish-owned DWF in the WIO were all members of ANABAC: Inpesca, Atunsa, Echebatar and Pevasa. These four are also among the top seven largest players in the *global* EU DWF and, as shown in the next section, they have ties through their tuna trading activities. Inpesca's activities are concentrated in the WIO and its number of boats based there remained stable at six between 2008 and 2010. Atunsa also has the majority of its boats based in the WIO. Both Echebatar and Pevasa's entire fleets – six and five boats respectively – were based in the WIO in 2008 and remained there in 2010.

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<sup>59</sup> As a result it is excluded from further analysis here, which deals solely with vessels licensed in the Seychelles EEZ in 2008.

**Table 2.3: EU-owned distant water purse seine fleet in 2008 (areas of operation – 2010)**

Controlling firm(s)	Vessel flags	EU industry assn.	Boats by area of operation				Gross tonnage (GT)			Average year of construction	
			Atlantic	Indian	Pacific	Not known	Total	Total fleet	% of Total EU DWF		Average per vessel
<b>Albacora Group*</b>	Spain (6); Seychelles (3); Ecuador (3); Panama (3); Netherlands Antilles (1)	Opagac	3	6	6	1	16	46,699	25	2,919	1989
<b>Cobrecraf</b>	France (7); Mayotte (2); Italy (1)	Orthongel	0	10	0	0	10	21,741	11	2,174	1992
<b>Inpesca</b>	Spain (7); Seychelles (1)	Anabac	1	6	0	1	8	19,052	10	2,382	1986
<b>Atunsa</b>	Spain (5); Seychelles (1)	Anabac	2	4	0	0	6	15,490	8	2,582	1992
<b>Echebастar</b>	Spain (3); Seychelles (3)	Anabac	0	6	0	0	6	14,843	8	2,474	1995
<b>Calvo Group</b>	El Salvador (4); Cap Verde (2)	Opagac	2	0	4	0	6	12,821	7	2,137	1988
<b>Pevasa</b>	Spain (5)	Anabac	0	5	0	0	5	11,222	6	2,244	1992
<b>Kühn-Ballery, France-Afrique and CMB</b>	France (7)	Orthongel	2	4	0	1	7	10,131	5	1,447	1993
<b>Garavilla Group**</b>	Spain (2); Ecuador (2)	Opagac	0	0	4	0	4	9,558	5	2,389	1993
<b>Bolton Group (Saupiquet)</b>	France (5)	Orthongel	2	3	0	0	5	8,354	4	1,671	1983
<b>Jealsa-Rainxeria#</b>	Guatemala (2)	--	2	0	0	0	2	4,218	2	2,109	1992
<b>MW Brands</b>	Ghana (5)	--	4	0	0	1	5	4,198	2	1,050	1980
<b>Others###</b>	Spain (6); France (2)	Misc.	5	3	0	0	8	11,106	6	1,778	1982
<b>Total</b>	<b>EU flag (56); Other (32)</b>		<b>23</b>	<b>47</b>	<b>14</b>	<b>4</b>	<b>88</b>	<b>189,433</b>	<b>100</b>	<b>2,310</b>	<b>1988</b>

*Notes:* averages are not always precise because data for three boats is for GRT rather than GT, and data for the tonnage for one vessel and for four construction years is missing (which are excluded from averages).

\* Two boats are permanently based in the WCPO; \*\* 2 boats fish in the WCPO for c.20% of their activity; # a vessel included here sank in 2009; ### 'Others' includes the following firms and their number of boats: Nicra-7 (2 boats); Petusa (2); Compania Europea de Tunidos (1); Pebertu (1), reported in receivership in 2010; and Sapmer (1), which has since bought at least two new boats. *Sources:* estimates based on multiple interviews and person. comms. in 2006, 2009 and 2010; company websites; FIS website; FFA, IATTC, ICCAT, IOTC and WCPFC vessel registries and databases; CIMB 2010.

Given that Cobrecaf is the largest firm in the French fleet and of central importance to the business strategy of Heinz European Seafood/ MW Brands, which owns the cannery in Seychelles (see Chapters 3 and 6), the history of its ownership is worth some elaboration. From the late 1980s to the mid-1990s, the control of Cobrecaf was a major site of struggle between more specialised boat-owners and vertically-integrated branded-processors, especially Heinz. The outcome of this struggle was that between 1994 and 2006 Cobrecaf was effectively controlled by Heinz European Seafood through its 36 percent share combined with a 32 percent share owned by the Moroccan group ONA, which itself had taken control of one of the ‘big three’, Pêche et Froid (Le Roy 2008: 137, 139; Guillotreau and Le Roy 2001: 3-4). This alliance allowed these two firms to close factories in France to focus on production in West Africa and the WIO while remaining assured of supply from the French DWF which was necessary to enter the EU duty free from these locations of production (see Section 5.4 on EU preferential rules of origin). In effect, throughout this period these two firms controlled over 50 percent of the French DWF by gross tonnage (Table 2.3). Sovetco continued to sell to other firms, but this strategic control gave Heinz and ONA-Pêche et Froid improved supply when raw material was tight (Guillotreau and Le Roy 2001: 4). The 36 percent was transferred with Heinz European Seafood’s sale to Lehman Brothers in 2006 and placed under the management of MW Brands, so it ‘still has clout for supply’ (EUInd#61; also, EUInd#49; #50; SGvt#1).

In late 2008 MW Brands sold its share of Cobrecaf to Kühn-Ballery *et al.*<sup>60</sup> This left the Kühn-Ballery *et al.* consortium with a controlling share and represented a major shift in the control of France’s largest DWF from a vertically-integrated branded-processor to a specialised boat-owning consortium.<sup>61</sup> MW Brands divested its minority shareholding because of ‘insufficient flexibility’: as it no longer had majority control it could not drive price or a ‘cost plus formula’ for supply. Nonetheless, after the sale it did maintain a five-year supply contract with Cobrecaf vessels providing MW Brands with first refusal on price negotiations, accompanied with a one year get-

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<sup>60</sup> MW Brand’s 36 percent was divided among Kühn-Ballery *et al.* as follows: Kühn-Ballery (18%), France-Afrique (16%) and CMB (2%) (CREFMPPM 2008).

<sup>61</sup> On 1 January 2011 a new company was established – Compagnie Francaise du Thon Oceanique – which represents the set of interests identified as Cobrecaf and Kühn-Ballery *et al.* The combined fleet size has been reduced from 17 to 13 purse seiners and the average age of the vessels is now 1997 rather than 1993 (EUInd#5). Nonetheless, Compagnie Francaise du Thon Oceanique remains the dominant entity in the French DWF, the second largest firm in the EU DWF, and one of the largest in the world.



out clause. However, MW Brands would like to have its *own* boats and ‘it is ready to jump into another formula if the appropriate situation arrives’ (EUInd#6).<sup>62</sup> (Heinz European Seafood/ MW Brand’s strategy of vertical integration is discussed in detail in Section 3.4.3.)

There are important relationships between vessel construction yards and domestic fishing firms in the French and Spanish ‘national production systems’. For example, all Spanish-owned purse seiners were built in Spain, and it is known that the ship-yard in Concarneau receives vessel construction subsidies to build purse seiners for French firms (EUInd#8). Due to limits of space, the vessel construction node of the canned tuna chain is excluded from this thesis, but it is clearly an important part of the EU-centred commodity chain.<sup>63</sup>

### **2.5.3 Industrial organisation of EU DWF active in Seychelles in 2008-9**

Having detailed ownership and relationships of commercial control of the EU DWF, the following highlights four dynamics in its industrial organisation: producer organisations, vertical integration (or not), flags of convenience, and fish sales.

#### ***Producer organisations***

The Spanish boats under the OPAGAC producer organisation are perceived by some as being more ‘modern’ or ‘internationalist’ in their approach to business because of their vertical integration into processing, whereas ANABAC members were seen as more ‘traditional’ due to their specialisation in boat-ownership and fishing (EUInd#10; SGvt#14).

ANABAC members have different behaviour. They’re more old fashioned, they talk about themselves as ‘fishermen’. Whereas OPAGAC are business men (‘we’re in it to make money’). They [ANABAC] didn’t want canneries, but they’re changing now. (EUGvt#15)

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<sup>62</sup> MW Brands *did* buy two more boats in 2008 as *sole*-owner, but they were active in the Eastern Atlantic supplying its cannery in Ghana, the firm’s only other non-EU factory (MW Brands 2008).

<sup>63</sup> The relationship between boat building and ‘national’ fishing fleets is also important to the United States, Japan, Taiwan, South Korea and China.

More experienced EU industry representatives dismissed this distinction, stating that it was more a question of particular business strategies (EUInd#5; #7). The main exception to the ANABAC-OPAGAC distinction based on industrial organisation and associated business strategies is the Echebatar fleet which has a 25 percent share of a processing facility in Mauritius (Thon des Mascareigne) – the only ANABAC member with known interests in processing (EUInd#7; #40; #54; SGvt#14). As we have seen, the main ANABAC members are most focussed on the WIO and they are only active there and the Eastern Tropical Atlantic, whereas OPAGAC members are also active in the Pacific, primarily to supply their processing facilities in Latin America (Table 2.3 and Section 3.4). There are also important differences among OPAGAC membership: Albacora is more specialised in the fishing node, Calvo and Garavilla’s main business is branded-processing but it also has significant purse seine fleets, and Jealsa is a minor player in tuna fishing (Table 2.3 and Section 3.4).

Under EU regulations on producer organisations, one national association normally represents the entire segment of a country’s domestically registered industry. The division of the Spanish fleet into two national producer organisations is reported to stem from a dispute between vessel owners in ANABAC which resulted in Albacora leading the splinter to form OPAGAC (EUInd#51; #52;#54; EUGvt#15). Most agree that this split has weakened the collective voice of the Spanish DWF. Nonetheless, the Spanish DWF is ‘a powerful lobby and we can negotiate for licenses with the EU authority for fishing. The association is the way for us to have a voice’ (EUInd#54).

### ***Vertical integration***

When asked about the importance of vertical integration, one very experienced interviewee argued that:

It’s a question of culture. It depends a lot upon the leader of the company. The business of boats is very specific. You can make money and lose huge amounts of money. You need a big heart for fishing. ... It’s a strategy and [its existence is] evidence that you can make money. (EUInd#7)

Vertical integration into fishing by processing firms ‘to guarantee part of their needs’ (EUInd#7) is thus an additional corporate driver for vessel ownership along with the maximisation of rates of return on vessels discussed earlier. It also has implications

for fish procurement at the Seychelles-based cannery (see Chapter 6) as the priority of the vertically-integrated fleets active in the WIO – especially Albacora, Echebatar and Saupiquet – is to supply their own processing capacity. For example, while Albacora is known to supply the Seychelles factory (EUInd#14; #15), there are also known flows of WIO-caught tuna ‘traded’ by Salica (Albacora) to its processing facility in Ecuador (confidential industry database).<sup>64</sup>

In the context of the problem in the 2000s of global overcapacity in canning plant (see Section 3.3.5), ensuring supply through the control of purse seine capacity (whether through direct ownership, effective control, financial linkages or medium-term supply contracts) is a major strategic consideration in the commodity chain. This explains why Heinz European Seafood/MW Brands was vertically integrated into fishing with the TTV fleet in Ghana and through control of Cobrecap (see Section 3.4.3). However, this is far from a universal strategy in the industry. As we saw with the restructuring of the US-centred commodity chain in 1981-4, and as pointed out by a representative of an EU-centred firm specialising in the marketing of canned tuna: ‘why own boats when there is a global tuna price? Plus the risk taken if price drops?’ (EUInd#11). Given that it no longer had effective control over Cobrecap, it is precisely this logic which seemed to push MW Brands to sell its share in late 2008.

### ***Flags of convenience***

A regulatory mechanism to reduce costs is to use non-EU flags, or flags of convenience (FOC). As a result of a decline in international tuna prices in the early 1990s (Appendix Figure 2C.5),<sup>65</sup> the then general manager of Saupiquet noted that ‘to reduce costs drastically’ some EU DWF owners transferred ‘to non EEC flags with less European crews’ (Antonietti 1993: 62). Combined with a strategy to increase catches, this resulted in an average cost saving of 15 to 20 percent for the French fleet. By 2008, the French DWF no longer used FOC, but Spanish boat owners used them widely (Table 2.3). All of Pevasa’s boats are Spanish-flagged; while 50 percent of Echebatar’s fleet are Seychelles-flagged which allows it to overcome the cap

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<sup>64</sup> It is not known if the fish was caught by Albacora vessels, but it is very likely.

<sup>65</sup> This was the result of the ‘tuna-dolphin issue’ in the US market in 1990. Consumption in the US declined because of the widely reported incidence of dolphin mortalities in the Eastern Tropical Pacific purse seine fishery – a major source of supply for the US-centred commodity chain.

imposed by the EU on the total size of its distant water fleet and also avoid several EU regulations. As one EU official put it ‘flags of convenience are much better because of less regulations’ (EUGvt#15). Despite this, at least for the Spanish fleet and Mayotte-flagged French vessels, ownership connections means that these FOC vessels are still supported by national producer organisations even if they are not formal members (EUInd#10). (See Chapter 6 for more on the use of Seychelles flags by some Spanish firms.)

### ***Raw material trade***

Boat owners do not wait to offload to sell their catch, they start negotiating while at sea (EUInd#11; #35; USInd#5; #10; #11). This is a complex process especially if the boat is only part of a small fleet and has limited bargaining power. Some of the Spanish firms own their own reefers, e.g. Atunsa has one reefer based in the WIO which can carry the catch of 1.5 purse seiners (EUInd#37), but except for a huge fleet such as Albacora, the volumes will always be relatively small and when that reefer is full and on route to a buyer, the firm must sell in-port either to local processors, cold stores or reefers. A key feature of the French DWF in the WIO is that, except for the Saupiquet fleet, all vessels were operationally managed by CMB and sell their catch to processors through the ‘Sovetco’ trading company (IntFS#37; #38; SGvt#14; Guillotreau and Le Roy 2000; Le Roy et al. 2008: 5; see Figure 2.5).

Soveto is a public limited, not-for-profit entity that is ‘in charge of selling at the best price’ (EUInd#7). It buys at a provisional price and the final allocation depends upon actual sales (Josupeit 1993: 19). The scale of the collective sales of the vast majority of the French DWF gives Sovetco enhanced bargaining power. Sovetco sold solely to canneries in France in the 1960s when the French fleet and processors formed a clear national production system. By 1988 this was reduced to nominal amounts and instead the French DWF catch was sold around the world throughout the 1990s and 2000s, albeit largely to EU-centred canneries based in Africa (EUInd#5; #38; #39; Le Roy 2001: 4-5; Guillotreau and Le Roy 2008: 134; AfDB/INFOFISH 1991: 28).<sup>66</sup> For

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<sup>66</sup> France-based canners source their raw material internationally – mainly from Latin American and US fleets (AfDB/INFOFISH 1991: 95) – as whole tuna imports into the EU are not subject to tariffs or rules of origin if they are to be reprocessed into canned tuna (see Chapter 5 on tariff escalation in the EU tuna trade regime). Since the mid-1990s however, France-based canneries have relied increasingly on tuna loins (Section 3.3.3).

example, of total Sovetco trade flows from the WIO in the mid-2000s, less than 5 percent went to France, 23 percent to Spain and Italy and 15 percent to Columbia (re-exported to the EU as tuna loins, see Chapter 3). The vast majority of these flows was yellowfin; while the remaining catch (mainly skipjack) went to Thailand (around ten percent) and over 35 percent to WIO-based canneries (confidential industry data). Sovetco's sales to Thailand-based processors are handled by a subsidiary called Interpral (IntFS#37; #38). Before the rapid rise of the Taiwanese fleet in the WCPO Interpral had a 20-30 percent share of the tuna trade with canneries in Thailand in the mid-1980s (Comitini 1987: 264), and in 1992 the EU DWF as a whole (including that registered as coming from 'Seychelles') still accounted for 20 percent of Thailand's skipjack supply (Sribhibhadh 1993: 28)

The largest and fourth largest firms under ANABAC – Inpesca and Pevasa – use a cooperative trading arrangement through a non-profit entity called Peva Eche (EUInd#12). Peva Eche owns at least three reefers for the transshipment of its members' catch (EUInd#40; EUGvt#15), thereby allowing the fish to be sold to the highest bidder rather than selling in-port. According to one EU official, Peva Eche's consolidation of catch for international trade gives its members a 'more powerful structure, they're less influenced by the canneries' (EUGvt#15). Echebstar used to be included in this relationship but pulled out in September 2005 (EUInd#7; #40). Other ANABAC members simply trade their catch as individual firms (EUInd#12). The full details of OPAGAC trading arrangements are not known, but it is known that the Albacora Group sends around 40 percent of its fish to its own plant in Ecuador, its tropical Atlantic catch goes mainly to Spain and its WIO catch is mainly sold 'locally' (i.e. to Madagascar, Mauritius and Seychelles) (EUInd#13–#15). Also, Calvo and Garavilla boats – while not active in the WIO – primarily supply their own plants (EUInd#16; #21; #22; see Section 3.3. and Table 3.2). Spain-based canneries invoice Spanish boat owners directly and there is little room for specialised trading companies, although Tri Marine does do some business there, albeit mainly supplying tuna loins (EUInd#17–#20; #55; #56).

It appears that *types* of ownership influence, to a degree, the organisational structure of the EU DWF. On the one hand, ownership of the French DWF is highly concentrated and 'collective' in orientation. Boat owners cooperate very closely, both

through a complex interplay of ownership and control and mutual management in the case of the CMB-managed fleet, and through effective day-to-day cooperation in the context of the ORTHONGEL producer organisation (Direct observation in 2009; EUInd#5; #9).<sup>67</sup> Relationships between ANABAC members, on the other hand, are reported to be marred by personal politics and histories, with the vast majority of boat owners originating from the small town of Bermeo, which has only 17,000 inhabitants. Some interviewees even commented on the role of personal rivalries since school years and of inter-marriage between the families of ANABAC vessel owners as playing a dynamic part in inter-firm relationships (EuInd#51; #52). Members of the OPAGAC producer organisation, by contrast, are focussed on supplying their own processing facilities for the branded-manufacture of canned tuna.

## 2.6 Chapter Summary

This chapter has made clear that the environmental conditions of production are the starting point of any analysis of capture fisheries. We saw how tuna biology in general and population dynamics in the WIO in particular determine the available range of business activities and industrial organisation of firms engaged in fishing for this species. We also saw how the relationship between cultures of consumption – the preference for skipjack or yellowfin – shape strategies of exploitation, with the smaller vessels of the French fleet placing greater emphasis on targeting this more valuable species. Conversely, the Spanish fleet has invested in larger boats to increase maximum fishing days per trip which brings with it additional pressure to reduce the risks of hunting for fish, including those associated with setting on free schools, which the introduction of FADs (sometimes supported by service vessels) since the 1990s seemed to have solved. However, the unintended consequences of these productivity enhancing measures appear to include negative effects on the environmental conditions of production. As we shall see in Chapter 4, disputes over the *causes* of declining catch rates have resulted in the impotence of the one institution in a position to regulate this fishery.

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<sup>67</sup> For example, the CEO of ORTHONGEL was a senior Saupiquet representative in 2009 despite its minority representation of the French DWF.

The periodisation developed in this chapter has outlined several dynamics of technological change and ‘territoriality’ in the fishing and processing nodes of the EU-centred commodity chain in canned tuna. Driven by the imperatives of competitive accumulation, innovation in fishing technology and industrial organisation allowed the opening up over time of new commodity frontiers in tuna raw material: from the coastal waters of France and Spain to Portugal and North Africa from the 1880s to the early twentieth century, and from West Africa in the 1950s to the Western Indian Ocean in the early 1980s. This was a necessary response to the market compulsion of following and extracting tuna raw material to supply the expanding market for canned tuna in Europe and elsewhere. Each of these capital flows was quickly followed by investment in new canning capacity, initially concentrated in the ‘big three’ French branded-manufacturers – Saupiquet, Pêche et Froid and Pêcheurs de France – the ‘lead firms’ of the time. The regulatory mechanism of French and then EU trade policies (see Chapter 5) allowed the spatial extension of the French ‘national’ production system. We also saw how technological and organisational innovations in fishing gear, refrigeration and reefer transshipment eventually allowed firms to overcome all prior limits to geographical distance and organic durability in the global commodity chain. As Chapter 3 shows, the rise of export-orientated Taiwanese and South Korean purse seine fleets and emergence of reefer transshipment laid the basis for important shifts in the global commodity chain, especially the emergence of Thailand as the world’s most important location of canned tuna production.

Concentration in the processing node of the France-centred commodity chain was met by concentration in the fishing node, which became dominated by four main firms Cobrecaf, France Thon, Saupiquet and CMB. Similarly, Soveto was established explicitly as a source of collective bargaining power with the ‘big three’ French manufacturers. This trend is an example of the ‘cascade effect’: where lead firms ‘stimulated industrial concentration across the whole supply chain’ (Nolan et al. 2008; see also, Hymer 1975; Gibbon and Ponte 2005). However, the French national production system was also influenced by dynamics at the world scale. Changes in the US national production system in the early 1980s led to Heinz turning its commercial gaze to France and, eventually, the UK. Heinz already had a foothold in Cobrecaf since the mid-1960s, but we saw how it took effective control of the lead firm in the

French fleet in the mid-1990s so as to ensure strategic supply for Heinz European Seafood.

The Spanish DWF is far more fragmented, not only in terms of ownership and control, but also in terms of the main model of industrial organisation, with specialised boat-owning firms grouped in the ANABAC production organisation and firms vertically-integrated into branded-manufacturing in OPAGAC. While this weakens the full collective potential of the Spanish fleet's lobby power in some fora, it does cooperate effectively against 'external' threats to its position, such as changes to trade rules (Chapter 5) or relations with the Seychelles state (Chapter 6). Moreover, the sub-national politics of the 'home' region of this fleet in the Basque Country gives it additional political leverage in Madrid and Brussels, connecting with the GPN emphasis on the role of social and territorial embeddedness of commodity chains. As with the French DWF, we were able to identify the most important players in the Spanish purse seine fleet at both the global scale and in the Western Indian Ocean region (i.e. Albacora, Inpesca, Atunsa, Echebatar and Pevasa). While the French production system was geographically extended from as early as the 1950s to incorporate francophone West Africa, similarly protected by high tariff peaks, the Spanish production system continued to grow domestically until it would become by far the most important production location in the EU-centred commodity chain, as Chapter 3 explores.



## **Chapter Three**

### **The Manufacturing and Retail of Canned Tuna in the EU-centred Commodity Chain: Firm Activities, Concentration and Business Strategies, 1990s-2000s**

#### **3.1 Introduction**

This chapter engages with the ‘classic’ concerns of GCC analysis – manufacturing and retail activities and vertical relationships between these two nodes, particularly the role of ‘supermarket power’. The analysis continues to be framed by an appreciation of the historical formation of the EU-centred commodity chain and emphasizes horizontal – or intra-nodal – competition among branded-firms and among supermarkets and its effects. The following account starts in the 1980s with the reconfigurations in the global commodity chain outlined in the last chapter, especially overcapacity in the global purse seine fleet and the wider effects of the recession in the US-centred chain. Historically and analytically the focus is on the EU-centred chain and shifts in the international division of labour in the 1990s and 2000s, which is followed by a detailed account of corporate concentration and competition in the latter decade. The primary purpose is to identify and explain lead firms and dynamics of ‘drivenness’ in the chain. Secondary purposes are to highlight the importance of regulatory mechanisms (especially the EU tuna trade regime, Chapter 5) and the industrial organisation and business strategies of Heinz European Seafood/ MW Brands, which controls the tuna cannery in Seychelles (Chapter 6).

The first section develops a typology of firms in tuna processing and offers a basic account of differences in principal EU markets for canned tuna. Section 2.3 focuses on the international division of labour, delineating dynamics according to the French and Spanish ‘national’ production systems and extra-EU locations of production primarily engaged in supplying the EU market. This section argues that the EU tuna trade regime

directly shapes this division of labour and that the dispersal of export-orientated canned tuna production is of considerable benefit to buyers at branded-firms and supermarkets.

The third section (3.4) focuses on the branded-manufacturing node of the commodity chain, starting with a detailed account of Heinz's initial entry into the EU-centred chain in 1981 through its purchase of a major French branded-processor and its eventual take-over of leading brands in Italy and the UK in the mid-1990s. In addition to brand ownership, the analysis places particular emphasis on Heinz's backward integration into the fishing node and on its manufacturing strategy based on factories in Ghana and Seychelles. This is followed by an explanation of Heinz's sale of its European tuna business in 2006 to an investment fund controlled by Lehman Brothers and the effects of this shift in ownership on business strategy. This firm-centred account continues into the next section with an overview of the horizontal competitive conditions in which Heinz European Seafood's successor – MW Brands – operates. Lead branded-firms in the principal EU markets are identified and similarities and differences are highlighted. A short sub-section on non-branded manufacturers follows as these firms are important suppliers to supermarkets for their own-brand ('private label') canned tuna.

The role of supermarkets in the principal EU markets for canned tuna and their relationship to branded-firms is discussed in Section 3.5, starting with a general overview of supermarket power and the retail distribution of canned tuna, and followed by an account of this market power based upon relative levels of supermarket and branded-firm concentration. This sub-section shows that the tendency to supermarket power cannot be generalised across EU principal markets as important differences are demonstrated. This section ends with a focus on the UK market to discuss two important elements: the commercial implications of oligopolistic relationships in branding and retail and the impact of intra-nodal competition in retail on downgrading/upgrading for locations of production in the global South. Section 3.6 summarises the chapter and offers some concluding reflections on conditions of competition, lead firms and 'drivenness' in the EU-centred commodity chain. Substantial supplementary material is provided in the appendices to this chapter which serve to support empirically several statements made in

the main body, including the canned tuna production process (Appendix 3A) and the comparative cost structure of locations of tuna processing (Appendix 3B).

### **3.2 The EU-centred Commodity Chain in Canned Tuna: Definitional Issues**

#### **3.2.1 Typology of tuna processing firms**

This sub-section lays out a typology of firms involved in the processing node of the commodity chain. It draws upon interviews in 12 countries with representatives of 21 firms directly involved in the processing of canned tuna.<sup>1</sup> The purpose is to situate the industrial organisation of the branded-manufacturing firm most important to this thesis – MW Brands (Heinz European Seafood prior to 2006) – in comparative context. Two main categories of firms are identified, branded-firms and non-branded manufacturers, each with two sub-categories.

##### ***Branded-Firms***

There are two main types of branded-firms in the canned tuna GCC:

1. *Full branded-manufacturers* are often also integrated backward into fishing; these firms rely in large part on own-manufacturing for supply. This category of firm also normally sources product from non-branded manufacturers (see below). The primary commercial rationale for (part) ownership of processing facilities is to produce for their brands. But these facilities also process ‘private label’ (or ‘supermarket own-brand’) products. Heinz European Seafood/ MW Brands is the closest example of this type of firm discussed in this thesis.

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<sup>1</sup> Interviews in Fiji in 2006 (Pafco), France in 2007 and 2009, Mauritius in 2007, the Netherlands in 2010, Seychelles in 2006 and 2009 and the UK in 2007 (Princes, MW Brands), Mauritius in 2007 (Thon des Mascareignes), Japan in 2006 (Hagoromo), Papua New Guinea in 2006 (RD Tuna Cannery, Frabelle, Southseas Tuna Corporation), Singapore in 2009 (Tri Marine), Solomon Islands in 2005 (Soltai), Spain in 2010 (Calvo, Jealsa Rianxeira, Garavilla, Salica), Thailand in 2006 (Thai Union, Kingfisher, JMB International, StarKist, Tri Marine, Maldives Industrial Fishing Company), and the United States in 2006 (Bumble Bee, Chicken of the Sea, StarKist). See Appendix 1A for detail.

2. *Marketing companies* generally rely on non-branded manufacturers and contract processors to supply their branded product (see below). The strategic focus is on marketing and total supply chain management/coordination, and profits derive primarily from the rent from the brand. Princes and Bolton Group are the closest to this type of firm discussed in this thesis, although both do also own processing facilities.

### ***Non-Branded Manufactures***

This category of firm may own a ‘brand’, but it would normally be orientated to the domestic or other minor sub-regional markets. Local brands tend to contain lower quality product (i.e. dark meat, see Appendix 3A.2), which is not suitable for principal market consumer ‘tastes’. While often important to the profitability of these firms’ particular production models (i.e. it allows the maximum utilisation of the fish), these minor brands are not important to the GCC as a whole, and as such are not considered here. There are two sub-categories of this type of manufacturer:

1. Referred to as ‘co-packers’ by US industry,<sup>2</sup> *non-branded manufacturers* receive a contract to produce private label (supermarket own-brand) and/or principal market brands according to buyer specifications. Sometimes they are integrated backward into fishing and therefore active participants in the chain, from fishing through to eventual sales to importing firms in principal markets. Jealsa in Spain and RDTC in PNG are the closest to this type. Thai Union used to be in this category until it bought the US Chicken of the Sea brand in 2000 and, in July 2010, MW Brands.
2. *Contract processors* never own the fish. Instead, tuna trading companies normally play a central role in terms of supply, procurement and, in some cases onward sales of finished product (loins and canned). Two state-owned enterprises, Pafco in Fiji and Soltai in Solomon Islands,<sup>3</sup> fit this category in their processing

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<sup>2</sup>As argued by one very experienced Thai industry representative: “Co-Packing” [as a term] is only really used to denote someone supplying fish and you just “pack”, such as Pafco’ (TInd#8).

<sup>3</sup> Each was initially established as a joint-venture with Japanese multinationals in the 1970s.

contracts with the US branded-manufacturer Bumble Bee and the specialised tuna trading companies Tri Marine and FCF respectively.

### 3.2.2 Principal EU markets for canned tuna

There are important similarities and differences among EU principal markets for canned tuna. Spain, Italy, the UK and France are all above the EU15 annual average per capita consumption of canned tuna, which was 1.53kg in 2000/25. Germany registered only the tenth largest per capita consumption, but because of the sheer size of the market (the fifth largest in the EU15 in absolute terms), it is considered here as one of the five principal EU markets.

**Table 3.1: Canned tuna consumption per capita by principal EU market, mid-1970s-2008**

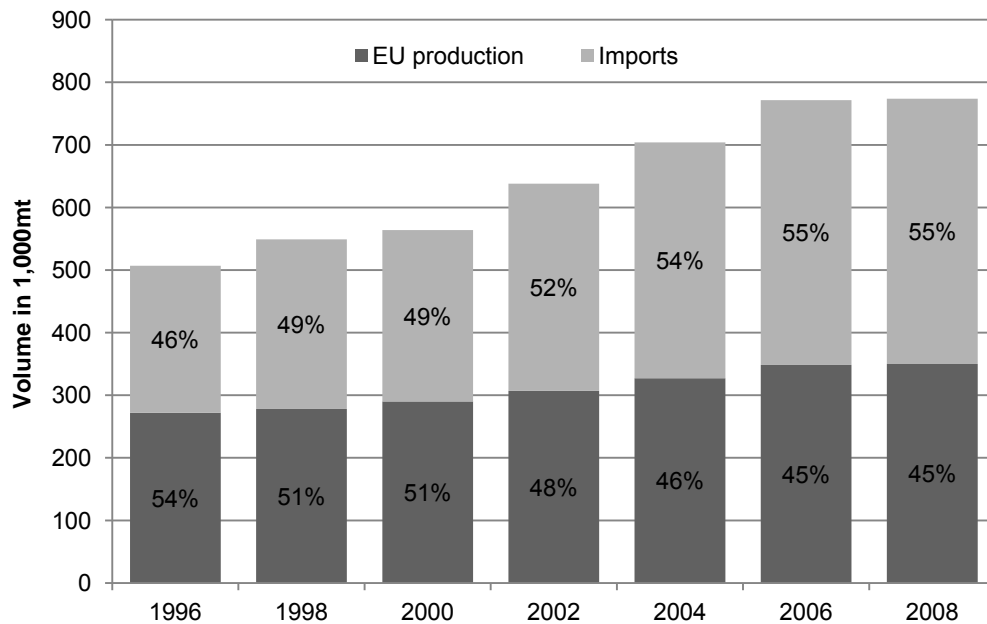
	Mid-1970s (kg)	1980 (kg)	1985 (kg)	1990 (kg)	2003 (kg)	2008 (kg)	2005 consumption, in tons <sup>#</sup>
Spain	1.9	2.0	--	3.7	2.79	3.1 <sup>**</sup>	143,000
Italy	1.1	1.5	1.5	2.4	2.24	2.33	138,000
UK	0.02 <sup>*</sup>	0.4	0.54	1.7	--	2.15	129,000
France	1.6	2.0	1.1	2.4	2.21	1.93	128,000
Germany	0.35	0.5	0.29	0.9	0.87	--	61,000

\* average over 1969-1974; \*\* 2007; <sup>#</sup>Total EU15 consumption of canned tuna (net weight) was 690,000mt.

Sources: Data for mid-1970s from Fisheries Development Ltd (c.1975/6: 43-6); for 1980 and 1990 from Josupeit (1993: 1); for 1985 from Elsy (1987: 94); 2003 from Trovamala (2004: 112); 2008 from Commere (2009); all other data Valsecchi (2007: 143).

Differentiation between EU15 markets is based upon two main criteria. The first is between import dependent markets, such as the UK and Germany, and countries where domestically-based firms produce a large proportion of national supply (Spain and Italy). France is an intermediate market under this criterion having long combined domestic production with a national production system that incorporated Senegal and, then, Cote d'Ivoire. In 2002, for the first time the majority source of supply for the EU15 volume market for canned tuna shifted from domestic production to imports from extra-EU countries (Figure 3.1). The declining *share* of domestic production of total EU supply stabilised in 2004 at around 45 percent, but as illustrated in Figure 3.1, this was of considerably larger *absolute* market volume. Behind this broad trend are significant losses in market share for canned tuna production based in France and Italy, but not for the major Spanish processors which have successfully *expanded* their export markets in Italy and France (see below).

**Figure 3.1: Domestic production vs. imports in total supply of canned tuna to EU, 1996-2008**



Source: author's calculations based on Commere (2009)

The second criterion of differentiation of EU markets is by product type, already noted in Chapter 2. The southern European market can be typified by consumption of canned yellowfin in olive oil (especially Italy and Spain), and Northern Europe by lower cost skipjack canned in brine or vegetable oil where competition is primarily on price rather than quality (especially in Germany). Again, France straddles this second criterion as an ‘intermediate’ market in terms of product quality, where the main product is ‘raw pack’ or *thon au naturel* (tuna in brine that is only cooked once, in the can, see Appendix 3A.2). As we shall see, the five principal EU markets are structured by varying degrees of corporate concentration by major canned tuna branded-firms and by supermarkets.

### **3.3 The EU-centred Commodity Chain and the International Division of Labour in the 1990s and 2000s**

Canned tuna manufacturing centred on EU markets can be broadly categorised as that based around ‘national’ production systems in Spain, Italy and France, and extra-EU production focussed on the main import markets in the UK, France and Germany. These two categories of production locations are shaped both by the competitive conditions of the new international division of labour of manufacturing in the global South (imported ‘loins’ for EU-based production and competing export-oriented firms) and the regulatory mechanism of EU tariffs and trade preferences. As we shall show here and expand upon in Chapter 5, the EU national production system is a central political-economic justification for the maintenance of high tuna tariffs, despite opposition from other EU member states, which in turn shapes the conditions of production for extra-EU export-orientated production. In other words, without successful national production systems *within* the EU the commercial logic for tariffs and thus trade preferences is largely eroded.

### 3.3.1 Overview of the EU-centred commodity chain in the 1980s

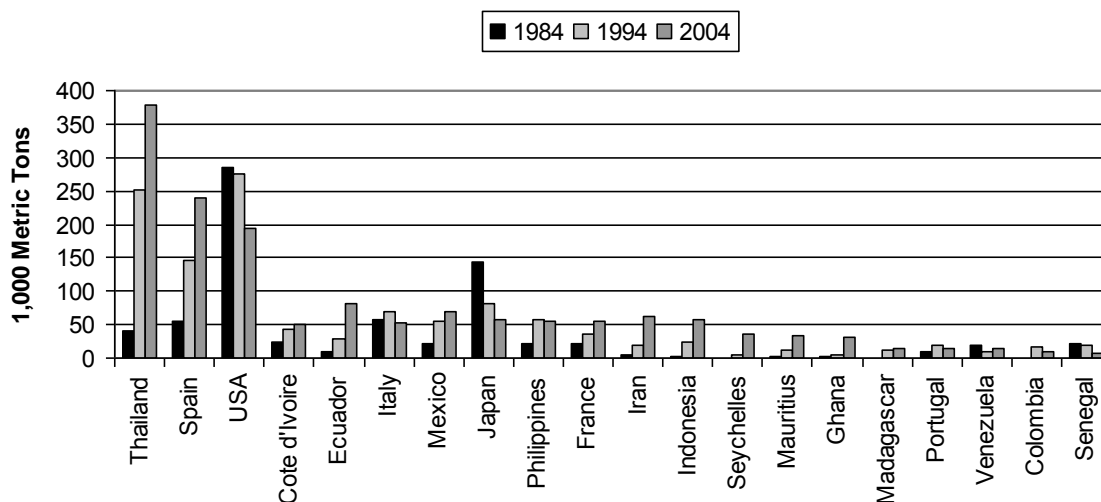
In the search for new commodity frontiers the EU tuna fleet moved southwards from the Bay of Biscay to West Africa in the 1950s and the Western Indian Ocean in the early 1980s. As we saw in Chapter 2, the blue revolution, colonialism and post-colonial trade preferences facilitated the creation of canning capacity in coastal areas in these two regions of Africa. Factories in Dakar, Senegal and Abidjan, Cote d'Ivoire were established by the 'big three' French branded-processors – Saupiquet, Pêche et Froid and Pêcheurs de France, all of which were integrated backward into fishing through the ownership of purse seiners and each also had a cannery in France.<sup>4</sup> By the end of the 1980s, Pêche et Froid and Pêcheurs de France had also established new factories in Seychelles and Madagascar respectively. In 1991 their shares of the French canned tuna market were Saupiquet (23.5 percent), Paul Paulet (16.8 percent, owned by Heinz, see below), Pêcheurs de France (4.6 percent) and Pêche et Froid (4.2 percent), although the last had a leading (and growing) share of the French supermarket own-brand ('private label') market (Josupeit 1993: 27). Raw material supply for these *France*-centred canneries and for production in Spain, Italy and France (see Figure 3.2) was supplied by the highly concentrated French DWF and the more fragmented Spanish fleet.

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<sup>4</sup> Along with Paul Paulet/Heinz which owns the *Petit Naivre* brand (see below), these were the largest four of 19 tuna canneries based in France in 1991 (Josupeit 1993: 24).



**Figure 3.2: Global canned tuna production by major producing country (in mt)**



Source: Globefish 2006: 78-9

In parallel to these developments in the French and Spanish ‘national’ production systems, the growing demand for canned tuna elsewhere in Western Europe was being met by Japan, which dominated the UK and German import markets in the 1970s (Fisheries Development Ltd. c.1975/6: 43). When Japanese canned tuna production ‘first started it was export orientated, then we started focusing on the domestic market’ (JInd#2; #3). Throughout the early 1980s Japan was the second largest producer of canned tuna in the after world the US (Figure 3.2; King 1987b). Unlike the US though, Japanese canned tuna production was partly export-orientated: at the peak of its production volume, in 1984, 35 percent was exported (AfDB/INFOFISH 1991: 44, 31, 43; Ashenden and Kitson 1987a: 246-7, 1987b: 118). Japan accounted for over 50 percent of the UK market for canned tuna in 1978 and continued as one of the leading supplying countries until 1985. In (then) West Germany, Japan also led the market in 1971 with 81 percent share, but was displaced by Taiwan which supplied 64 percent in 1980 but began to decline afterwards (Elsy 1987: 96; Josupeit 1993: 28; AfDB/INFOFISH 1991: 57).

Japan and Taiwan's decline was paralleled by Thailand's rise. Australian and Japanese investment in canned tuna production in Thailand began in the early 1970s, including by the *sogo shosha* (giant trading companies) Mitsui and Mitsubishi (see below on the latter firm). Foreign capital flowed there because of its relatively low-wages, liberal economic environment and government incentives.<sup>5</sup> Thailand also benefitted from the rise of tuna transshipment on reefers and the emergence of new commodity frontiers in the WIO and the WCPO in the early 1980s; 'a whole industry was built on low-priced skipjack' (AfDB/INFOFISH 1991: 17; TInd#2-#4; #8). In 1985 Thailand overtook Japan as the world's largest exporter and in 1986 became the second largest producer (AfDB/INFOFISH 1991: 44, 51; Figure 3.2).<sup>6</sup> By the late 1980s exports from Thailand accounted for almost 60 percent of the UK market and the UK was its second most important market after the US (AfDB/INFOFISH 1991: 29, 60, 101). These export-orientated manufacturers were competing for share of a global import market for canned tuna worth US\$ 419.8 million in 1985, rising to US\$ 1,578.7 million in 1994, and US\$ 3,170.3 million in 2004 (Globefish 2006: 64-6). The principal import markets are the US and EU, with the latter valued at €1,666.4 million in 2004 (see Table 3.2 below). Western Europe was the driver of growth in the export-orientated global commodity chain in the 1980s with imports of 9.4 million standard cases of canned tuna in 1984 rising to 21.3 million cases in 1989 (AfDB/INFOFISH 1991: 90).

With the restructuring of the US-centred commodity chain in 1981-84 (Chapter 2), the US production system fragmented: branded-manufacturers divested financial connections with the US purse seine fleet and increasingly relied on imported canned light-meat, 'co-packed' by non-branded manufacturers in Thailand.<sup>7</sup> By the late 1980s the US was

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<sup>5</sup> For detailed analysis of Thailand's historical emergence and competitive advantages in the global canned tuna industry, see Campling et al (2007: 336-350), Campling and Doherty (2007) and Crough (1987a, 1987b).

<sup>6</sup> Japan's declining canned tuna production into the 1990s and 2000s was dominated by branded-firms (especially Hagoromo) solely supplying the domestic market (Campling *et al* 2007: 264-270; Ashenden and Kitson 1986: 17, 75-6).

<sup>7</sup> US production is exclusively for domestic consumption, and even though the US (mainland and overseas territories) was one of the largest canners in the world into the 2000s, it relies on additional supply from low cost regions either through long running relationships with non-branded manufacturers or through US industry-owned or managed production (see Appendix 3.D for an overview of the US industry in the mid-2000s).

Thailand's largest export market, followed by the UK and West Germany; at this time Thailand had the largest share in all three of these major import markets (AfDB/INFOFISH 1991: 60, 31). In 1991, Thailand alone accounted for 40 percent of canned tuna exports to Europe (Josupeit 1993: 8). Despite their successes, Thai non-branded manufacturers were unable to penetrate the main other European canned tuna markets in the 1980s (AfDB/INFOFISH 1991: 31), primarily because highly protected French, Italian and Spanish branded-firms already had sufficient productive capacity domestically and, for the French, in Africa too.

In short, Thailand's rise to become the largest producer of canned tuna in the world in the 1980s cannot be explained simply as an uncontested outcome of the new international division of labour in manufacturing, not least because France, Italy, Japan, the US and *increasingly* Spain continued to be major producers into the 2000s, protected behind significant tariff barriers (see Chapter 5 on the EU and Campling et al. 2007: 12-21 on the US and Japan). Thailand did, however, temporarily become the lead supplier in EU *import* markets. But as we shall see, the combination of EU protectionism and interconnected preferential trade arrangements and investment in Africa and Latin America soon eroded Thailand's lead position and continued to shape significantly the geography of the EU-centred commodity chain in the 2000s.

### **3.3.2 EU 'national' production systems in the 1990s and 2000s**

Ownership of canned tuna production in France and Spain has become progressively concentrated. The number of tuna canneries in Spain shrank from 463 in 1974 to 187 by 1987 (AfDB/INFOFISH 1991: 107). While by the late 2000s only a handful of Spanish firms dominated production there (Section 3.4.1), the industry 'continued to be very divided between small firms':

The future of small firms is concentration, with a focus on only one centre of production. The small fishing canneries of Galicia and the Basque

Country and small brands are already gone. It is clear that this will deepen.

(EUInd#16; see also ANFACO 2010 data; EUInd#55)

The French industry has already been through this transition. The number of canning firms based there declined from around 200 in the 1950s to only 18 factories by 2002 (Catarchi 2004: 23; Le Roy 2008: 130-1). In the 1980s the key players were ‘the big three’ firms engaged in Africa plus Paul Paulet, but by the 2000s only three firms remained – Heinz (Paul Paulet), Bolton Group (Saupiquet) and Thunnus Overseas Group (see below), none owned by French capital.

Spain is the most important producer of canned tuna within the EU, accounting for 59 percent of production in 1998 and 68 percent in 2007. It is also the world’s second largest producer of canned tuna after Thailand, having overtaken the US in 2004. Spain’s production peaked in 2002 at 251,000mt; it has since declined, but production in 2007 at 216,400mt was still 13,000mt higher than in 1998 (Figure 3.3). Given highly competitive conditions in the Spanish market, this indicates the effectiveness of tariff protection and the various productivity-enhancing strategies of firms (see below). Italy is the second largest producer in the EU (Figure 3.3), but production is traditionally for domestic consumption and is in significant decline, from 24 percent of total EU production in 1998 to 19 percent in 2007.<sup>8</sup> Canneries based in Spain are leading suppliers to the Italian market (Section’s 3.4.1 and 3.5.1). As such, production in Italy is not significant for the focus of the thesis and so is not considered further.

While France is the minor player of the three EU ‘national’ production systems it is important both to the business strategy of Heinz/MW Brands which owns a processing facility there and to extra-EU imports from the ACP (see below), and is thus of greater significance to the thesis. Production in France has remained relatively stable, falling from 12 percent of the total in 1998 to 10 percent in 2007.<sup>9</sup> Importantly, ready-made tuna salads constituted 70 percent of all domestic production of ‘ambient’ tuna products in

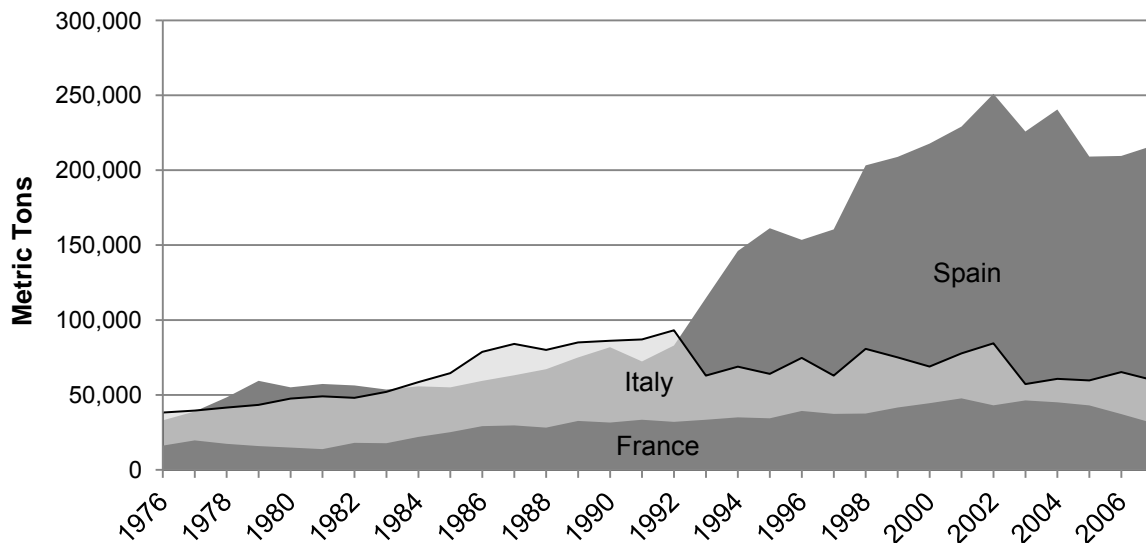
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<sup>8</sup> Italy did start to export to other EU markets in 2005 (see Table 3.2 below).

<sup>9</sup> The fourth location of EU production is Portugal, which had a six percent share of the EU total in 1998, falling to four percent in 2007.

France in 2002 (Catarci 2004: 23).<sup>10</sup> This aspect neatly encapsulates the international division of labour in tuna processing: this product type is considerably more profitable because of the significantly reduced use of the highest cost raw material (the tuna itself, see Appendix 3B), and is the main explanation for the survival of ‘ambient’ tuna production in France.

**Figure 3.3: Canned tuna production in Spain, Italy and France, 1976-2007**



Note: EU production excludes Portugal

Sources: FAO Fishstat+ and Globefish (2010: 75)

All of the top five Spanish firms have at least two processing facilities based in Spain (see Sections 3.4.1 and 3.4.2 on these firms). In general terms, the basic business model for each firm is to have one plant specialised in the production of canned tuna, and the other in various seafood products; although some firms have shifted production of the latter overseas in recent years (i.e. Jealsa and Garavilla). The comparative cost structure

<sup>10</sup> In the UK, ‘ambient’ product (‘shelf-stable’ in the US) refers to traditional canned products, as well as tuna in pouches and other so-called ‘value-added’ tuna products that can be kept in nonrefrigerated conditions for long periods of time (i.e. on the supermarket shelf).

of canned tuna production in Spain is reduced through a number of business strategies and competitive advantages. These revolve around fish purchasing strategy and recovery rates, automation, competitiveness on cans, and ‘the logic of loining’.

Relatively high labour costs in the EU mean that cannery managers require large sized whole round fish (e.g. yellowfin over 10kg) to enhance labour productivity through high recovery rates: the average recovery rate for a large yellowfin is 48.5 percent, but it can reportedly go up to 51 percent, whereas for skipjack it ranges from 37-40 percent (EUInd#23; #24; #55). In other words, unlike factories in relatively low wage sites of production, EU industry pays greater attention to the ratio of labour time/cost to fish yield. In Thailand, for example, more effort is placed on gaining additional yield by ‘throwing labour’ at the process because ‘a one percent better yield directly translates to a one percent increase in profit margin’ (EUInd#11; broadly confirmed by IntFS#3; #5; PICInd#45–#47 and direct observation, canneries in Thailand and Spain, 2006 and 2010). Given relatively high wages compared to locations of production in the global South, Spanish industry unsurprisingly also invests heavily in the automation of production wherever possible and cost effective, and is a world leader in advanced process technology (Valsecchi 2006: 141; *Eurofish Magazine* 2010). However, as discussed in Appendix 3A.2, the lack of uniformity in fish size prevents mechanised butchering, so this element of production necessitates ‘living’ labour-power.

A major competitive advantage of Spanish industry is the industrial cluster in Galicia. This region is home to a wide range of seafood canning firms (66 of a national total of 147 companies), including the five major branded- and non-branded-manufacturers detailed below. Historically and today, these are mainly family owned companies (Table 3.2; Josupeit 1993: 48; Alimarket 2010; EUInd#13–#16; #21–#24; #55; #56). As a result of this distinctive combination of fragmented ownership and geographical clustering, Galicia-based canneries benefit from locally-based, sharply competing can-producing firms and thus have ready access to relatively low priced cans (EUInd#23; #24).<sup>11</sup>

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<sup>11</sup> Including the multinational firm CarnaudMetalbox; the French multinational Impress, which bought a small Spanish firm (‘Megasa’) in 2009 and which also has a close relationship with Heinz/MW Brands (see

Spanish firms also benefit from the specificity of the Spanish and Italian market ‘preference’ for 80gm sized cans, which compare with 185gm size in the UK.<sup>12</sup> With relatively low steel prices in Spain compared to import-dependent developing countries and a higher ratio of tins per volume of drained weight tuna (1: 1.8g of fish, compared to 1: 4.3gm for 185gm size cans), Spanish firms are well positioned to fend off competition from the global South. In other words, margins are based on the size of the can, smaller cans are more profitable because tuna raw material – the most expensive input<sup>13</sup> – costs the same per gram. This is what Brus (2004: 120) calls the ‘Tinplate-Tuna factor’ – a business advantage that was confirmed in multiple interviews (EUInd#57 – #60; TInd#9; USInd#18). As one industry representative put it:

This is a major source of protection for the EU industry versus the Thais – national specialities of various products. They’re different in France, Spain and Italy, which would push Thai production line costs right up. (EUInd#55)

In addition, as the EU is a large (and highly subsidised) producer of olive oil, this packing medium is readily available domestically. These economies of scale and the purchase of large fish explain why the Spanish production system survives in the face of duty-free imports from the ACP and elsewhere.

### **3.3.3 The ‘logic of loining’ in the 1990s and 2000s**

Before moving to specific components of the EU-import market for canned tuna it is essential to emphasise the strategic commercial importance of trade preferences to the ACP and Andean countries. Exports of canned tuna and tuna loins from the African, Caribbean and Pacific Group of States (ACP) to the EU benefit from duty-free access

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Chapter 6); and, Mivisa, Spain's leading manufacturer of tinplate cans for the food industry and the third largest in Europe (EUInd#23; #24; company websites).

<sup>12</sup> Around 80 percent of tuna sold in Italy is in cluster packs of two to four cans, which is almost equally divided between 170g and 80g sizes (Brus 2002: 95). In Spain, almost 95 percent of product is sold in 80gm cans (Brus 2004: 120).

<sup>13</sup> See discussions in Appendices 2C.1 and 3B.

subject to rules of origin and other conditions. The Andean countries of Latin America also receive duty free market access, subject to slightly stricter rules of origin, under the EU's Generalised System of Preferences *Plus* (GSP+). Other developing countries only benefit from the EU's standard GSP, which imposes a tariff of 20.5 percent; and if a country cannot meet the GSP rules of origin (as with tuna raw material supplied by the Taiwanese and other non-EU fleets to Thailand), then the 'most-favoured nation' tariff of 24 percent is applied. (This regulatory mechanism is the subject of Chapter 5.) The competitive advantage of this trade preference is made clear when comparing the estimated full manufacturing cost per case (48 cans) by region of production with the landed cost in the EU (Appendix 3B). On a three-year average, full manufacturing cost per case is around US\$ 25 in Southeast Asia and \$32 in the Indian Ocean ACP. The average EU customs duty of US\$ 6 applied to Southeast Asian product (plus freight) is thus a fundamental competitive advantage for the ACP. As will be argued in detail in Chapter 5, the regulatory mechanism of EU trade preferences is perhaps the most important factor in explaining the location of canned tuna production in coastal areas of the ACP (or their 'upgrading').

Cleaning and butchering the fish into loins is the most labour-intensive process of canned tuna production (Appendices 3A and 3B). To reduce labour-power costs in canneries based in France and Italy, firm managers began to import vacuum-packed frozen tuna loins in the mid-1990s; these are defrosted and packed into cans. By 2005 loins constituted the majority of raw material imports in both of these countries. The Spanish began to follow suit in the early 2000s (Figure 3.4).<sup>14</sup> The 'logic of loining' is a reflection of the international division of labour as canned tuna manufacturers search for low wage cost sites of production for labour intensive aspects of the production process.<sup>15</sup> It is however, not *solely* a question of international wage differentials, but also one of

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<sup>14</sup> EU import data for loins for reprocessing underestimate actual flows as customs agencies often count them as canned tuna as they receive the same tariff treatment (IntFS#22).

<sup>15</sup> The only remaining cannery on the US mainland relies exclusively on imported loins for tuna raw material. It can be categorised as a 'canning only' plant (interviews, US, 2006; direct observation, Bumble Bee cannery, Sante Fe Springs, 2006; for an overview of its production model, see Campling *et al* 2007: 285-288). There is also an increase in demand by the remaining canneries based in Japan for tuna loins. One industry manager stated that 'loins are a logical choice for Japanese production in the future' (JInd#2; #3).



production efficiencies as more loins can be stored in available cold storage than whole tuna and production capacity can be more quickly met because they simply need to be defrosted rather than butchered first. Transportation costs are also reduced as firms are not importing ‘waste’ (EUInd#17–#20; #23; #24; #55; #56; IntFS#2).

As with the formerly French-owned canneries in West Africa, imported loins are a major direct interaction between EU national production systems and extra-EU locations of production. This has resulted in a number of specialised loin processing facilities being established in coastal tropical regions, including direct investment in loining facilities in Ecuador, El Salvador, Guatemala and Mauritius by Spanish firms (see below). Imported loins are subject to the exact same tariffs and trade preference as canned tuna, which explains Spanish investment in these GSP+ and ACP countries. EU-based processors also procure loins under supply contracts, such as with the tuna trading company Tri Marine International, the primary supplier of loins to the Bolton Group’s factory in Italy and a major supplier to Spain. It manages or effectively controls loining plants in Kenya, Solomon Islands and Trinidad and Tobago, all of which benefit from the ACP preference.

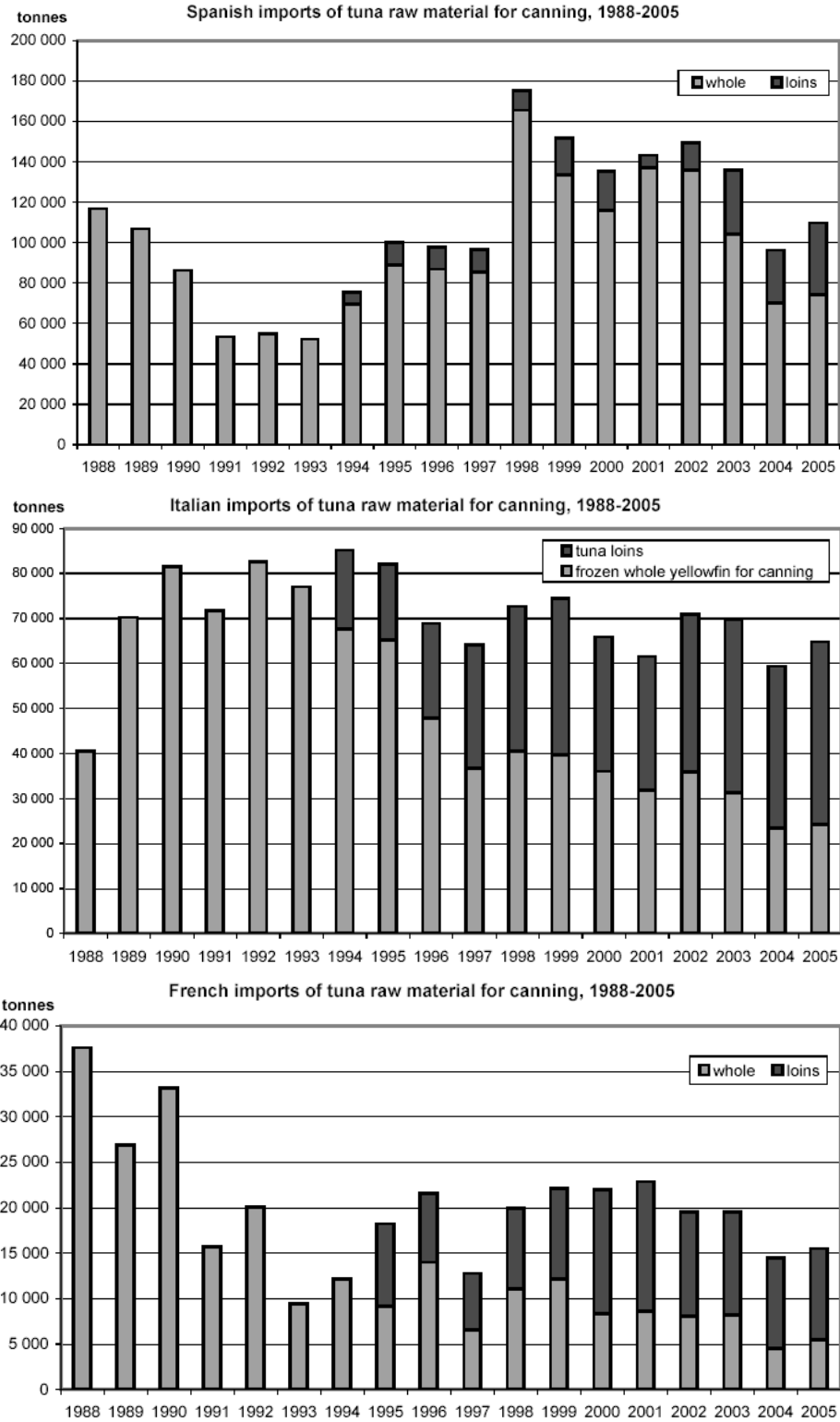
In 2005, 58.9 percent of EU loin imports were sourced from GSP+ countries, and 16.2 percent from the ACP (based on Globefish 2006: 36).<sup>16</sup> This tendency is met by important counter-tendencies. While Spanish firms want to reduce the scope of their production in Spain they have encountered opposition from trade unions and the Spanish Department of Labour and Works (IntFS#22). In addition, unlike in France and Italy, production in Spain is unlikely to become ‘canning only’ (i.e. based on the import of all raw material as loins). As noted, the optimum production strategy of some Spanish canneries is to process big yellowfin from whole round fish and, because it is a smaller fish, skipjack from loins (the labour time/cost-fish yield ratio). In addition, there are specialised firms that produce *fresh* loins from butchering the fish in Spain, reportedly run by owners of the Spanish DWF (EUInd#17–#20; #23; #24; #55; #56; direct

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<sup>16</sup> Due to the relatively high cost of labour in Seychelles and a controversial exclusivity agreement with Heinz (see Chapter 6), it has not significantly interacted with this segment of the EU-centred commodity chain.

observation, Jealsa cannery, 2010). This results in a product of higher quality as there is no need to freeze and defrost the fish.

**Figure 3.4: Selected EU imports of tuna and tuna loins for canning, 1988-2005**



Source: GLOBEFISH database

### 3.3.4 The EU import market for canned tuna, 1990s-2000s

We have identified the role of French investment in canneries in West Africa and the Indian Ocean, and pointed out the importance of imported tuna loins to the EU production system since the mid-1990s. This section establishes shifts in share of locations of EU-centred canned tuna production from the late 1980s to 2009.

The EU import market for canned tuna was valued at €1551.1 million in 2006, rising from ECU323.5 million in 1988 (Table 3.2). The top six principal markets accounted for almost 90 percent of EU15 volume imports in 2005: the UK 21 percent, France 19 percent, Italy 18 percent, Germany 13 percent, Spain 11 percent and the Netherlands 8 percent (FAO Fish Stat+ 2007). As we saw in Section 3.3.1, Japan used to be the main supplying country, but was displaced by Thailand in the 1980s. Table 3.2 details the changing share of the EU volume market for imported canned tuna by supplying country over the period 1988-2009. Suppliers include the top-ten non-EU producing countries and the main three producing countries involved in intra-EU trade (Spain, France and, from 2005, Italy). Several broad trends are identified (all data are based on Table 3.2 unless otherwise specified).

The most important regulatory aspect of the EU canned tuna import market is the trade regime. Spain first dominated the EU import market in 2009 with a 14 percent share, demonstrating the importance of tariff protection for the EU-based production system. Except for the three Southeast Asian countries (Thailand, the Philippines and Indonesia) which only potentially benefit from the EU's standard GSP (subject to rules of origin), all other non-EU supplier countries have duty free access to the EU market (ACP and GSP+ preferences).<sup>17</sup>

For francophone West Africa, average annual share of the EU import volume market from 1988 to 1991 was almost 40 percent; 27 percent Cote d'Ivoire and 12 percent

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<sup>17</sup> Note that the ACP arrangement changed to sub-regional Interim Economic Partnership Agreements (IEPAs) in 2008, but the preference regime remained largely the same (see Chapter 5).

Senegal. France was consistently the principal market for this production. As noted in Chapter 2, French investment shifted with the centre of EU DWF operations from Senegal to Cote d'Ivoire in the 1970s. Senegal's share of the EU market consistently declined year-on-year throughout the period 1988-2009 and its absolute volume of exports declined similarly. This was in spite of receiving export subsidies from the Senegalese government to the tune of 10 percent of the value of canned tuna exports (AfDB/INFOFISH 1991: 122). Cote d'Ivoire is a different story: while its relative share declined from the mid-1990s onwards, its absolute volume was relatively stable until the mid-2000s (averaging 46,600mt between 1995-2004), but declining then onwards (average production of 33,800mt between 2005-9).

**Table 3.2: Share of EU import market for canned tuna by supplier country, every third year, 1988-2009 (all in % of volume market unless otherwise specified)\***

	Tariff regime	1988	1991	1994	1997	2000	2003	2006	2009
<b>Spain</b>	N/A	3.3	5.4	5.0	10.4	14.8	10.3	12.0	14.1
<b>Ecuador</b>	GSP+	0.2	1.5	2.4	4.0	5.3	7.0	10.8	12.2
<b>Thailand</b>	GSP	22.0	21.1	19.7	12.0	6.4	9.1	14.5	12.0
<b>Philippines</b>	GSP	1.9	4.1	7.2	7.5	7.9	8.0	7.9	10.3
<b>Seychelles</b>	ACP	3.4	3.2	2.1	4.8	11.0	10.6	10.3	8.1
<b>Mauritius</b>	ACP	2.9	2.8	2.6	3.5	4.2	5.9	6.5	6.8
<b>Côte d'Ivoire</b>	ACP	29.8	24.1	20.3	14.2	11.9	8.7	5.4	6.0
<b>Ghana</b>	ACP	0.2	0.0	1.1	6.6	6.4	5.9	4.4	5.1
<b>France</b>	N/A	5.1	2.4	1.7	3.4	3.3	4.4	2.4	2.3
<b>Italy</b>	N/A	*	*	*	*	*	*	2.8	2.1
<b>Indonesia</b>	GSP	0.9	1.6	2.1	2.4	2.5	1.8	1.4	2.1
<b>Madagascar</b>	ACP	0.0	1.4	4.4	3.4	2.7	4.8	3.0	1.4
<b>Senegal</b>	ACP	14.7	9.7	7.4	5.4	1.8	1.8	0.5	0.3
<b>Total volume market share of top-13 suppliers (%)</b>		<b>84.3</b>	<b>77.1</b>	<b>76.0</b>	<b>77.6</b>	<b>78.2</b>	<b>78.3</b>	<b>81.8</b>	<b>82.8</b>
<b>Total volume (1,000mt)**</b>		124.3	192.4	257.9	317.9	405.9	483.9	586.9	523.7
<b>Total value (€/ECU million)**</b>		323.5	447.3	610.3	909.8	994.3	1214.3	1551.1	nd

Notes: N/A = not applicable, intra-EU trade; Generalised System of Preferences (GSP) = 20.5% tariff; African, Caribbean and Pacific (ACP) and Generalised System of Preferences Plus (GSP+) = 0%; GSP regime and ACP preference subject to rules of origin, if latter not met most-favoured nation tariff of 25% applies; nd = no data. \* Excludes known re-exports among EU countries (i.e. Netherlands, Germany – the former is a major EU re-export base). Data for France and Italy may include re-exports; \*\* Value and Volume totals include all 'other' countries

Source: Globefish (2010: 40-1); and FAO database (2008:18-9) for volume and value 1988-1997

Several factors explain the relative and absolute declines of exports from West Africa. Its canned tuna was reported to be relatively highly priced in the late 1980s (AfDB/INFOFISH 1991: 29), which may contribute to explaining the failure to penetrate EU markets other than France (where close commercial relations locked-in this location of production). Côte d'Ivoire's absolute decline in the mid-2000s can be explained by Bolton Group (which owns the *Saupiquet* brand) selling its factory there in 2005 (see Table 3.3 below). In cooperation with Tri-Marine International, it shifted the centre of its procurement strategy away from Africa to Latin America and Southeast Asia (EUInd#9; #57; Atuna 2010). Another factor is the rise of production in the island states of the Western Indian Ocean.

The case of the Indian Ocean ACP was an inversion of the trend in West Africa. Investment in enhanced processing capacity by Princes and Heinz in Mauritius and Seychelles respectively (see below and Chapter 6) both came online in 1999 and resulted in significantly increased EU-centred output. EU-centred investment by Heinz in Ghana in 1994 had a similar effect on this country's share of the EU import market (see Table 3.3 and below). Seychelles, the existing factory in Madagascar (built by Peche et Froid in 1989-91), and the rising export-orientation of Spanish production, combined to displace West African exports to France in the 2000s (see data in Globefish 2010: 51). More broadly, the annual average share of the three Indian Ocean ACP sites of production in the EU import market was 9.6 percent between 1990-9, and peaked at 20 percent over between 2000-6, before declining to 16.1 percent between 2007-9. The Heinz/MW Brands factory in Seychelles peaked in 2006 with an EU-centred production of 61,000mt of canned tuna – the only year when it had largest share of the EU import market. Mauritius peaked at 41,000mt in 2007, while Madagascar experienced year-on-year declines from a peak of 23,000mt in 2003. (Chapter 6 discusses competitive dynamics between Mauritius and Seychelles.)

Sites of EU-centred production in Southeast Asia went through dramatic shifts in market share from the 1980s to the late 2000s. The period of relative dominance was between 1988-1998 when Thailand, the Philippines and Indonesia had a combined share of the EU import market of 28 percent, and also peaked in their individual market shares: Thailand in 1992 with 25.2 percent; the Philippines in 1993 with 15

percent; and Indonesia in 1998 with 3.4 percent. However, during the period of the Indian Ocean ACP's ascent, in 2000-6 the combined Southeast Asian share of the EU import market fell to only 18 percent.<sup>18</sup> It subsequently rose again to almost 23 percent between 2007-9. Given that the price of Thai canned tuna imported into the EU was consistently lower than that from the African ACP (see Annex 3B),<sup>19</sup> it is clear that the tariff preference available to the latter played a central role in its industrial 'upgrading' (see Chapter 5).

### 3.3.5 The dispersal of export-orientated canned tuna production

This sub-section ties together the preceding discussion and draws out several implications of the international division of labour in the global commodity chain in the late 2000s. This also serves to situate Seychelles' relative position in the canning industry. Figure 3.5 provides a snap-shot of this division of labour in the mid-2000s. The square symbols represent primarily 'canning only' locations of production, the triangles represent specialised loining locations, and the circles represent full manufacturing from loining to canning. Canning only locations are all in the global North and specialised loining only takes place in the South. The figure depicts estimated production *capacity* of factories across the planet based upon volume of tuna raw material needs (i.e. whole fish or equivalent in loins of all canning-grade tuna species); thus not necessarily actual output. Larger capacity is depicted with black symbols, and symbols for less significant locations of production are white. It should be emphasised that this aspect of the new international division of labour is not solely about the search for cheap labour-power, but also for ready access to tuna fisheries (as with Seychelles, see Chapters 2 and 6), more lax labour standards and environmental regulations, and, importantly, access to EU and US trade preferences and US fiscal advantages (for American Samoa and Puerto Rico).

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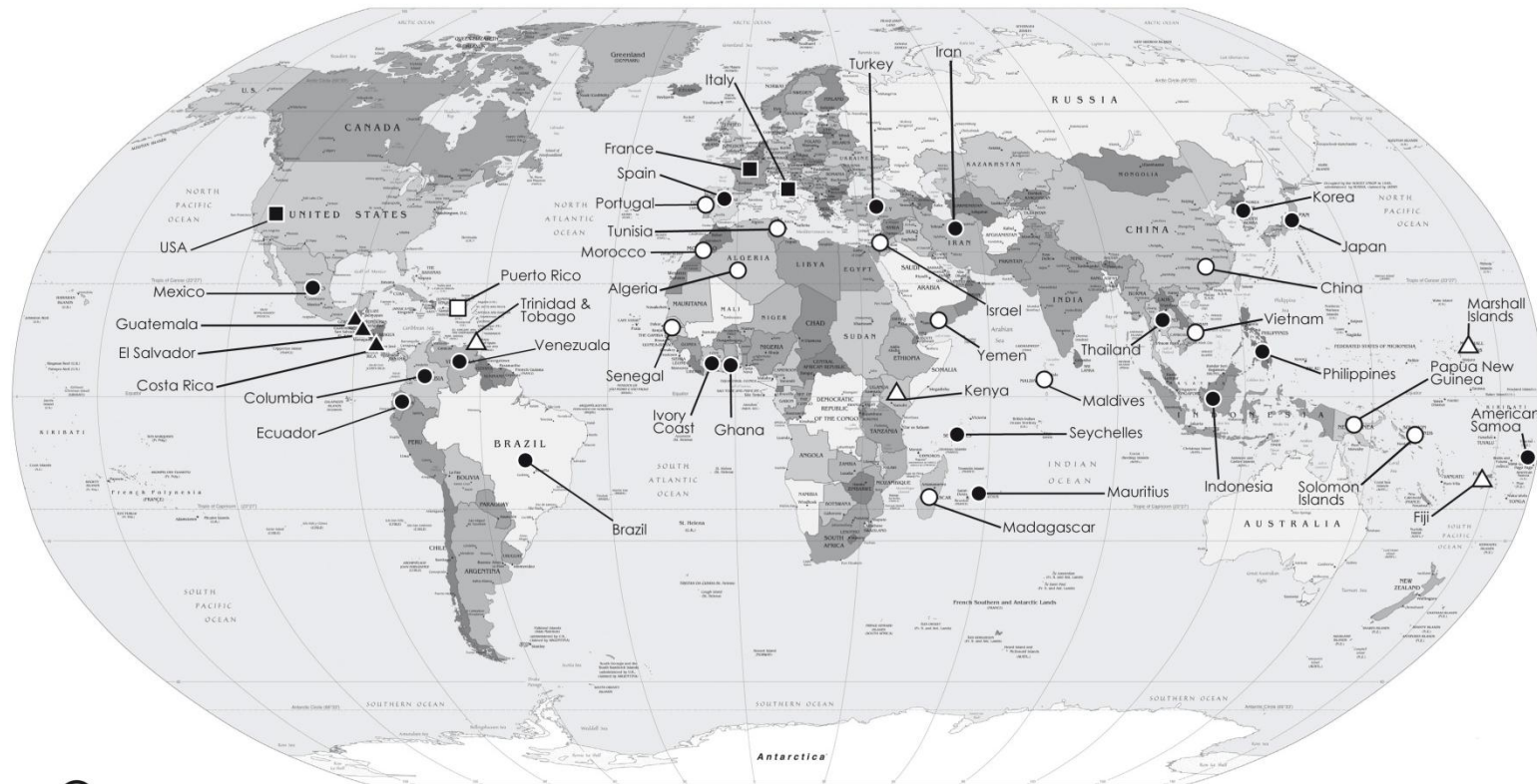
<sup>18</sup> This was not an outcome of the 1997/8 so-called 'Asian' crisis as the Thai tuna industry was largely unaffected and probably in fact benefitted because the devalued Baht made Thai exports more competitive internationally (Yamao 2000; Subhapholsiri 2000b).

<sup>19</sup> This was the case throughout the period 1992-2008 with the sole exception of 1993, based on annual average price of imported canned skipjack (US\$ /carton 48x6.5oz cans). Over this 17 year period, the Thai-EU price averaged US\$ 20.6 per carton and the 'ACP' price was 20 percent higher at US\$ 25.6 per carton (see Appendix 3B).



Export-orientated production of canned tuna and tuna loins is highly dispersed. For example, in regard to the EU-centred commodity chain, in the 1970s the main locations of production were in Japan, West Africa and the EU itself. The manufacturing node of this commodity chain became increasingly geographically dispersed from the early 1980s onwards due to a combination of factors. These included (neoliberal) policies of export-orientated industrialisation, new commodity frontiers in the WIO and WCPO, new industrial purse seine fleets divorced from supplying their own 'national' production systems (especially boats owned by Taiwanese and South Korean firms), and technological and organisational change (such as the emergence of a global trade in tuna using reefers, of particular importance to Thailand given the lack of a large tuna fishery close to its shores). These combined to facilitate the emergence of new locations of production in Southeast Asia, the Indian Ocean and the Pacific islands; where factories very often received substantial state subsidises, including through joint-ventures with foreign firms (e.g. in Seychelles). This in turn, resulted in widely recognised global overcapacity in processing. Global processing capacity in 1991 was estimated at 183.3 million cases of canned tuna, when actual consumption was only around 128 million cases. In 1999 a global capacity of 227.5 million cases supplied consumption of about 161.3 million cases (StarKist 2001: 10). In other words, throughout the 1990s there was a 30 percent gap between potential production and actual consumption. This worsened in the 2000s with investment of US\$ 0.5 billion in new processing plants in the three-year period 2006-8 (Hamby 2009: 15), while consumption declined in the US and levelled off in the EU (Hamilton et al. 2011).

**Figure 3.5: Global production capacity of canned tuna and tuna loins in the mid-2000s**



○ = full canning (i.e. from whole fish, may also produce loins for export)

□ = canning only (or predominantly canning only)

△ = loining only (or predominantly loining only)

Black symbols = Annual production over 25,000mt.  
White symbols = Annual production 5,000-25,000mt.

World Map Courtesy of the University of Texas Libraries, The University of Texas at Austin.

Sources: Estimates for production for each country are based on Fishstat Plus Database (using average annual production for 2000-2004), FIDI data for export data for 2004, author estimates (China, Venezuela, Vietnam), industry sources (for American Samoa, Brazil, North Africa, the Middle East and Puerto Rico), interviews (for Fiji, PNG and Solomon Islands).

The dispersal and overcapacity of export-orientated production provides an important advantage to branded-firms as they came to rely upon an increasing number of non-branded manufacturers for supply of canned tuna. This provided the opportunity for branded-firms to divest direct ownership of production facilities, as happened with much of the industry based on the US mainland in the 1980s, in Puerto Rico in the early 1990s and in American Samoa in the late 2000s (King 1987b: 67; COS 2001: 5; *FFA Fisheries Trade News* May 2009).<sup>20</sup> It also gives supermarket buyers of private label product the stability of ‘ensuring regular supply ... because of the possibility of sourcing from so many places around the world’ (EUInd#25). Alternatively, branded-manufacturers became able to source intermediate goods (loins) from a range of potential suppliers in the South, as in the case of France, Italy, Japan and one firm based on the US mainland. In addition, given the importance of regional fluctuations in raw material supply (e.g. declining catch rates, occasional El Nino events, the impacts of piracy in the WIO), their temporary effects on sub-regional raw material prices, and wider local political-economic dynamics (e.g. labour struggles, political crises, violent conflict), a branded-firm or a supermarket procuring private label became able to quickly source from a range of firms in several locations of production across the world.

In addition, supermarket buyers in an increasingly concentrated grocery sector (see below) are able to play an ever-increasing number of non-branded manufacturers – and branded-manufacturers who produce private label – off against each other in price negotiations. Leading branded-firms have similar advantages due to the tendency to concentration in the number and market share of canned tuna brands (see below on the EU). Along with productivity-enhancing technologies in tuna fisheries (e.g. the rising use of artificial fish aggregating devices in the 1990s), these new competitive conditions of production help explain why the price of canned tuna in the US declined by 68 percent in real terms between 1980 and 2004 (Lischewski 2006: 11; see also, Binotto 2004: 99; COS 2001: 9-10 and Exhibit 4; 2010b: 17-8 and Exhibit 1; Lischewski 2000: 90).<sup>21</sup> This evidence supports the notion of a fallacy of composition, where multiple locations of production engage in the same functional node of export-orientated production with a dampening effect on terms of trade (e.g. Mayer 2002), a particular problem for highly standardised manufactures such as canned tuna (e.g. Arrighi et al. 2003). In other words, branded-firms and supermarket buyers had

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<sup>20</sup> At its height, the US industry owned five canneries in Puerto Rico and two in American Samoa (Doulman 1987: 157, fn. 28).

<sup>21</sup> The top-ten US supermarkets accounted for 38.9 percent of national grocery sales in 1987, but by 2002 they held 69.6 percent market share (Binotto 2004: 99-100).

adopted a type of ‘spatial fix’ through establishing a ‘global ocean strategy’ (see below).<sup>22</sup> Not only do these conditions serve to ensure supply of competitively priced product, they offer firm managers the strategic *threat* of relocation between sites of production as a disciplinary mechanism in negotiations with governments and workers in the new international division of labour (IntFS#31; USInd#22; see Chapter 6 on Seychelles government negotiations with the EU DWF and Heinz/MW Brands; see also, Peoples and Sugden 2001; Ietto-Gillies 2007).

### **3.4 EU-centred Canned Tuna Manufacturers in the 2000s: Corporate Concentration, Business Strategies and Competition**

This section focuses on the branded-manufacturing node of the EU-centred commodity chain, with a discussion of a firm-level case study of industrial organisation that connects directly to the prior discussion of the international division of labour. It also provides necessary context for Chapter 6 on Seychelles ‘upgrading’ in the canning-node of the chain as Heinz was the most important player in developing this interaction. The following sub-section looks at horizontal dynamics of competition between branded-firms in principal EU markets and identifies and differentiates the leading players. This is followed by a short overview of French and Spanish non-branded manufacturers who specialise in supplying supermarket own-brand (‘private label’) canned tuna, which feeds directly into Section 3.5 on supermarkets and canned tuna in the EU.

#### **3.4.1 The case of Heinz European Seafood: Brand ownership, ‘global ocean’ strategy and vertical integration (1990s to 2006)**

The food multinational H. J. Heinz had extensive experience in the canned tuna industry through its ownership of the branded-manufacturer StarKist since 1963, the largest firm in the highly concentrated US-centred chain.<sup>23</sup> StarKist’s tuna and tuna-related products (e.g. pet

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<sup>22</sup> One manager called this a ‘multi-regional strategy’ (USInd#22).

<sup>23</sup> Starkist and Chicken of the Sea controlled around 60 percent of canned tuna sales between 1972 and 1985 (King 1986: 70; Gallick 1984: 81, 88). StarKist had a 36 percent share of the US market in 1986, 40 percent in 2001 and 37 percent in 2005 (Iverson 1987: 281; FDM (Food and Drug Mass Channels, minus Wal-Mart) data

food) averaged 19 percent of Heinz's consolidated sales in fiscal years 1984-86 and was reported to be one of this corporation's most profitable businesses (Iverson 1987a: 275-6, 272; Iverson 1987b: 12-13). Under Heinz, StarKist was the first branded-firm to implement a genuinely 'global ocean' procurement strategy for canned product.<sup>24</sup> It owned US-centred factories on the US mainland (in Terminal Island from 1950 to its closure in 1984); in Mayaguez, Puerto Rico from 1960, which was estimated to have been the largest cannery in the world until its closure in 2001; in American Samoa between 1963 and 2010 (the world's second largest); two plants in Ecuador (in Guayaquil and Manta); and, importantly for the following account, in 1976 it bought 50 percent of the Pioneer Food Cannery plant in Ghana in a joint venture with the domestic firm Mankoadze Fisheries, establishing the only US-owned tuna cannery in Africa (Southwest Fisheries Center 1985: 20; StarKist 2001: 13; StarKist 2010; Iverson 1987a: 272; Doulman 1986: 18; Doulman and Kearney 1987: 23; MW Brands 2011; Iverson 1987b: 20-21).<sup>25</sup> In addition, StarKist had an equity interest in a fleet of almost 50 purse seiners, reduced to 15-20 by the mid-1980s after the restructuring of the US production system (Iverson 1987b: 9, 12).

There are three major components to Heinz's entry into the EU market: the purchase of leading branded-firms, which in one case came with processing capacity; investment in canned tuna production capacity in ACP countries; and effective financial control over a large part of the French DWF. (A schematic of this industrial organisation is provided in Figure 3.5.) In short, it pursued a similar form of industrial organisation as its US-centred activities with StarKist. Heinz first entered the growing EU market for canned tuna at the beginning of the 1981-84 recession in, and subsequent restructuring of, the US-centred commodity chain (Chapter 2).<sup>26</sup> Heinz's choice was either to 'advertise heavily under the

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supplied by Bumble Bee in 2006). StarKist developed as a family-owned firm that benefitted from government contracts to supply US troops in World War One and Two (StarKist 2010).

<sup>24</sup> A strategy reflected in a corporate statement from 1977: "Star-Kist is prepared to make commitments in any part of the world that will maintain its position of leadership and will aid in local fishery and economic development" (as cited by Iverson 1987b: 20). This was re-iterated almost twenty years later, but now without the 'development' rhetoric: 'StarKist's future thinking is simple and direct. StarKist will manufacture at locations which provide the most advantageous cost competitive environment' (StarKist 2001: 28).

<sup>25</sup> The US fleet began fishing off the West African coast in 1958 and StarKist entered into an agreement with the Ghanaian government to established Ghana as a tuna hub (Iverson 1987b: 20-1; ADB/INFOFISH 19991: 124). (Felando (1987: 99) dates this from the late 1960s.)

<sup>26</sup> Another major interaction between the US and EU-centred commodity chains is the effect of shifting consumption in the former. Given that the US is the world's largest single import market for canned tuna, small declines in per capita consumption result in the flooding of the world-market. For example, between 1981-82 US consumption dropped from 1.4kg per capita to 1.2kg per capita, contributing to a seven percent decline in *international* tuna prices (King 1987b: 64; King 1987a: 287-8).

Heinz brand (very expensive) or buy brands' (EUInd#61). Heinz took the latter option and bought the French firm Paul Paulet in 1981 (H. J. Heinz 2005: A-8). It owned the leading brand *Petit Naivre* (established in 1932) and three factories in France, including one in Douarnenez, the former 'European capital of canned fish' (MW Brands 2011).<sup>27</sup>

While the restructuring of the US-centred chain contributed to recovery in profitability in 1985, US consumption of canned tuna decreased by an average 0.5 percent per annum from 1990-1999. Conversely, the EU market grew by 3.8 percent per year over the same period and 1991 was the first year that EU15 consumption of canned tuna exceeded that of the US (StarKist 2001: 7; Peckham 1996: 122; Lischewski 2000: 87; see also Munoz 1996: 104-6; Table 3.1).<sup>28</sup> The UK was the largest source of this growth: imports of canned tuna grew by six and a half times between 1980 and 1993, from 11,000mt to 71,600mt, making it the second largest volume import market in the world by 1989 (AfDB/INFOFISH 1991: 101, 45; Globefish 2010: 47; see also Appendix 3C; Josupeit 1998: 119; and Elsy 1987: 104), and as noted above, it is a mid-priced market for canned tuna.<sup>29</sup> The combination of market size, growth and relatively high retail price provided further incentive for Heinz to deepen its positioning in the EU-centred chain through the UK market. In 1997 Heinz bought John West from another multinational, Unilever (H. J. Heinz 2005: A-8; Catarchi 2004: 36; EUInd#49). Established in 1888, John West was a market leader for canned fish in the UK, the Netherlands and Ireland in the 1990s and 2000s.<sup>30</sup> But John West was primarily a marketing company – it 'used to work effectively as a merchant' – and did not own tuna processing capacity (EUInd#49). In 1996 Heinz also entered the Italian market through the purchase of the Mareblu branded-firm. Unlike the *Petit Naivre* and John West brands, having only been established in the 1970s Mareblu was a minor player in the Italian canned tuna market at the time with around fourth largest branded market share.<sup>31</sup> But because of the relatively high

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<sup>27</sup> This factory had initially been set-up by the Paulet family in 1963. Two of Paulet's French factories were closed by Heinz: one in mid-1988 and another (in Pornic) in 1994 (MW Brands 2011; ADB/INFOFISH 1991: 96). The funds raised through the closure of the Pornic plant were invested in the US\$ 10 million modernisation of the PFC factory in Ghana (Guillotreau and Le Roy 2001: 4)

<sup>28</sup> Between 1975 and 1985 west European import of canned tuna experienced 51 percent growth, driven by France, the UK and Germany (Elsy 1987: 91-2).

<sup>29</sup> The relatively UK high price compared to the German market might also be explained by the fact that canned tuna was first introduced in Germany as a 'discount item' with a very limited role for brands, while it was first introduced to the UK in the 1960s as a 'delicatessen item' (Brus 2002: 96, 2004: 118).

<sup>30</sup> The firm started as an importer of canned salmon from North America and first sold canned tuna in 1952 (John West 2010). It had around 35 percent share of the UK canned tuna retail market in the mid-1980s (Elsy 1987: 96).

<sup>31</sup> It had 11 percent share of the very high retail value Italian market in 1989 and was owned by Simmenthal Monza in 1990, which was in turn 'connected' with a multinational (ADB/INFOFISH 1991: 104).

profits to be made in Italy (see below) and consistent growth in per capita consumption (Table 3.1) this brand gave Heinz a vehicle for growth (Valssecchi 2007: 144).

Rather than rely on non-branded manufacturers from Southeast Asia which would have exposed the new giant firm Heinz European Seafood to procurement risks (EUInd#50), Heinz drew on its experience with StarKist and established a new global ocean supply strategy for its EU-centred brands. In 1993 Heinz bought-out Mankoadze Fisheries to take full ownership of the Pioneer Food Cannery (PFC) in Ghana and invested in enhanced production capacity (Antonietti 1993: 63). The new PFC plant opened in 1994 and is the largest cannery in Ghana with an annual turnover of around US\$ 57 million and accounts for around 70 percent of the country's canned tuna exports (Catarchi 2004: 21). In the following year Heinz bought 60 percent of the (now) Indian Ocean Tuna (IOT) cannery in Seychelles, established by Pêcheurs de France in 1987. The remaining 40 percent was owned by the Seychelles government. Heinz subsequently invested heavily in expanding IOT's production capacity (see Chapter 6 for a detailed account of IOT). This meant that Heinz controlled canneries in EU preference receiving ACP countries on the Eastern Atlantic and Western Indian oceans. As the former general manager of Saupiquet put it, these 'are the two plants of Starkist to dominate the E.U. market' (Antonietti 1998: 80). As one MW Brands representative<sup>32</sup> made clear: 'In 2006 we'll process around 102,000 tonnes of raw material and around 40-45,000mt in Ghana. Thus our consolidated position must be considered in any analysis' (EUInd#49).

With this model of industrial organisation Heinz was able to shift emphases of production according to fluctuations in raw material availability and prices, exchange rate shifts, and domestic political-economic dynamics. For example, in the first half of the 2000s, production at PFC in Ghana was split roughly 50:50 for the EU and US markets (EUInd#6; #7). But when conditions changed in the Western Indian Ocean in 2007 onwards with declining catch rates and the rise of piracy (see Chapter's 2 and 6) the availability of raw material supply to IOT at 'the right price' lessened. MW Brands responded by increasing EU-centred production at PFC and reducing it at IOT (EUInd#35; *Daily Guide*, 2008). Raw material prices are normally lower in West Africa because the fishery is closer to shore (EUInd#11; Appendix Table 3B.2). This decision was also partly motivated by movements in exchange

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<sup>32</sup> I refer to MW Brands rather than Heinz because interviews were all done after Heinz European Seafood's sale to Lehman Brothers in February 2006. However, as management did not change, this does not misrepresent Heinz strategy, not least as several interviews were done only a few months after the buy-out in September 2006.

rates. Because Ghana is a ‘dollar cannery’ and IOT buys tuna raw material and sells finished product in euros, the relatively lower priced dollar at the time made PFC more profitable (EUInd#7; see also EUInd#34). Exchange rate shifts in favour of the US dollar were seen by UK buyers as a general ‘barrier’ to canneries trading in Euro (such as the Spanish industry) (EUInd#25). (See Chapter 6 for more on IOT’s fish procurement strategy in the context of regional competition, especially from Princes in Mauritius.)

Heinz entry into the EU-centred commodity chain and its purchase and expansion of the canneries in Ghana and Seychelles meant that some strategic control over raw material supply became paramount,<sup>33</sup> especially given EU rules of origin which mean that both plants have to buy from the EU DWF or ACP-owned vessels. As we saw in Chapter 2, Heinz had already bought a 36 percent share of the French purse seiner firm Cobrecaf in 1963. In 1994, through a strategic alliance with ONA-Pêche et Froid, Heinz wrestled effective *control* of this leading French purse seining firm (see Section 2.5.1). The PFC factory was supplied by a fleet of locally-based purse seiners owned by Heinz (the TTV fleet, see Table 2.5; Antonietti 1996: 89), which gave around 50 percent of raw material needs (EUInd#6; #7). Even though the CEO of MW Brands was also the Chairman of Cobrecaf, this effective control apparently did not reduce the price paid for tuna raw material (EUInd#50). According to a representative of MW Brands:

There’s no different in price for Cobrecaf, we pay the *market* price. Vertical integration is just profit and loss. We can’t cross-subsidise as we will get worse fishers. We have to pay for performance based upon the market.  
(EUInd#7)

This was re-iterated by another MW Brands manager: ‘Our simple logic is from boat to brand. But a chain is only as strong as one link. If you allow fishing companies to go belly up ...’ (EUInd#49; a separate vertically-integrated firm agreed with the need for boats to operate as independent profitable entities, EUInd#53).

It may well be the case that raw material prices paid to Cobrecaf boats were at the world-market rate as they were negotiated by Sovetco (Guillotreau and Le Roy 2001: 6; see Appendix 3B on raw material and canned tuna prices). But it is likely that the intensity of

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<sup>33</sup> As pointed out by the former Saupiquet executive: ‘Professionals are more and more conscious of the necessity either of a vertical integration from fishing to packing, or even from fishing to marketing’ (Antonietti 1998: 81).



price negotiations with the wholly-owned TTV fleet is minimal; instead, a cross-referenced ‘market’ price is probably paid. In addition, if one of the operations experiences financial difficulties it is likely to be cross-subsidised. For example, representatives of one Japanese multinational pointed out that, while

most of our fish is purchased through auction, there are rough times for our own ships, so when price at auction is very low ... at risk to [our] buying section we will buy at a higher price, keep fish in cold storage and sell when the market price rises. This is a fifty-fifty risk. But it does keep the vessels afloat. (JInd#28–#29)

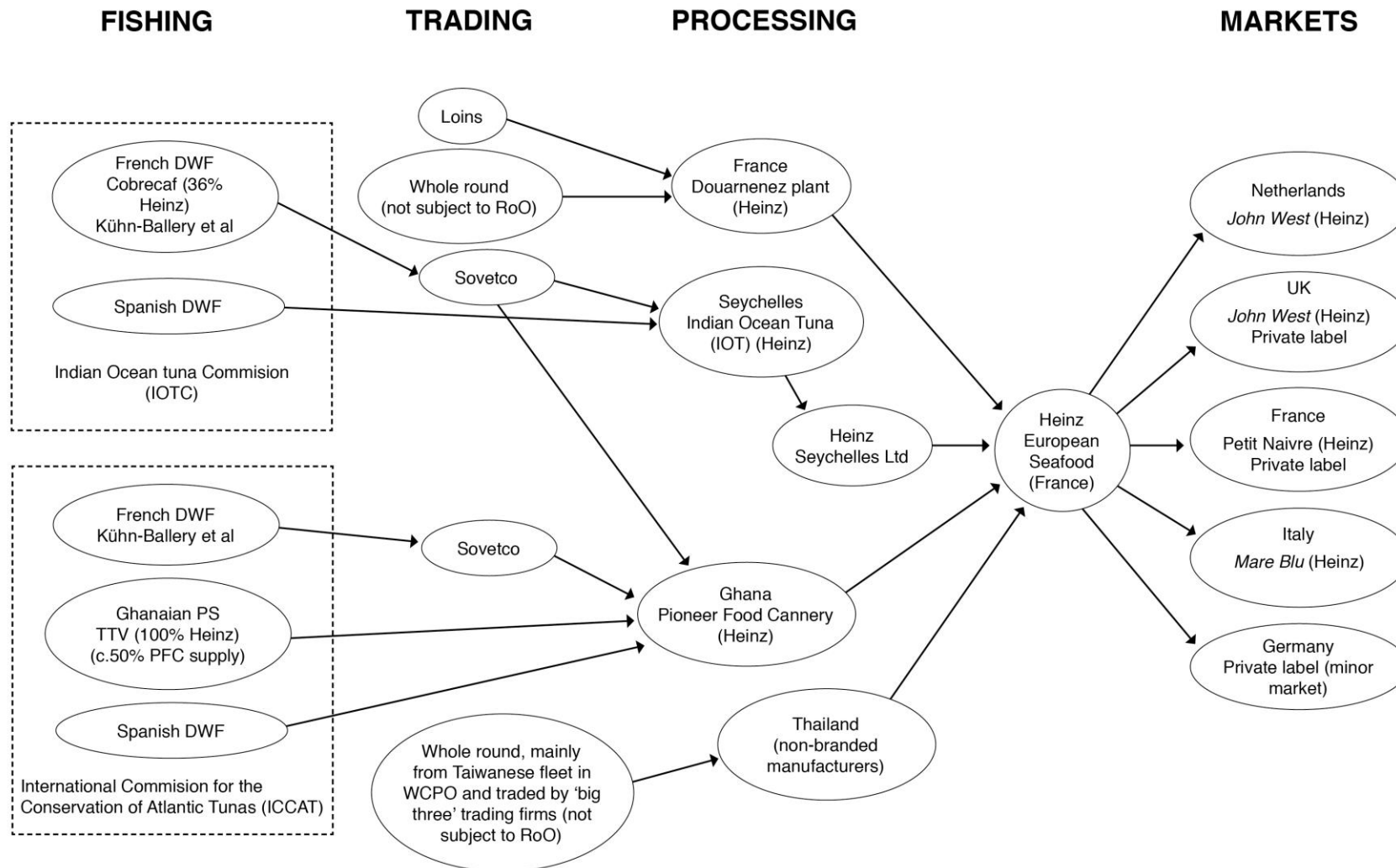
Nonetheless, the core business rationale for control over the Cobrecaf fleet was certainly strategic access to raw material supply. As one Heinz employee put it: the ‘controlling stake [of Cobrecaf] via the other partner [meant that we] could *guarantee* supply’ to factories (EUInd#61; see also discussion of Sovetco in Section 2.5.2). *Additional* raw material needs of Heinz’s canneries are communicated to and centralised in the firm’s Paris headquarters. It procures on the spot market based on real-time knowledge of regional pricing trends (EUInd#7; #46–#49). Again, Heinz’s economic scale and associated market power provides an advantage: ‘Heinz was making bulk purchases for [canneries in] Portugal, France, Seychelles and Ghana, so it had a lot of clout’ with vessel owners (EUInd#61). Information and other market power advantages are central to the business strategies of major branded-firms (see Section 3.4.3); for example, the factories in Ghana and Seychelles benefitted from discounted ocean freight rates made available to Heinz (EUInd#49).

Together, these three major brands, two factories and control of the (then) largest firm in the French DWF constituted the core business of Heinz European Seafood (see Figure 3.6). Along with StarKist and more minor businesses in Australia, New Zealand and elsewhere,<sup>34</sup> by the late 1990s Heinz was indisputably the largest canned tuna firm in the world (e.g. Krampe 2000: 116). But in the more narrow terms of the EU, Heinz was only the second largest with an estimated 9.4 percent of the total market; Bolton Group (see below) led with 13.1 percent market share (Trovamala 2004: 114), which, as we shall see, is primarily due to its dominance of the Italian market.

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<sup>34</sup> Heinz had also entered canned tuna markets in Australia in 1974 through the purchase of the leading Greenseas brand and its canneries, and in New Zealand in 1992 through the purchase of the leading brand Wattie (Crough 1987c: 229; US Department of Labour 2001b: 5).

**Figure 3.6: Flows, ownership and control in Heinz European Seafood’s EU-centred canned tuna chain in 2005**



*Notes:* a) Except for TTV, flows of fish from EU DWF are *never* solely to IOT and PFC, the figure only illustrates potential sources of supply; b) not known whether PFC supplies all three of Heinz national brands or what other major players it packs for (e.g. supermarkets in whatever countries); c) excludes Heinz Portugal plant because it does not manufacture tuna products.

### 3.4.2 From Heinz European Seafood to MW Brands

The 'tuna sector' was 'one of Heinz's fastest growing global businesses' according to its Annual Report for 2000. However, the firm's President, Bill Johnson, claimed that 'StarKist and Heinz Pet Products have a been a keen disappointment and a drag on earnings for fiscal year 2001' (StarKist 2001: 12-13). The rising relative market power of supermarkets and competition between brands – including the purchase in 2000 of the number two brand Chicken of the Sea by the giant non-branded manufacturer Thai Union – 'created serious margin deterioration' in the US-centred chain, as indicated by declarations of bankruptcy in the late 1990s by StarKist's two main competitors (StarKist 2001b: 21). Given that the US was a mature canned tuna market as early as the 1980s, and began to decline in the 1990s, it was more difficult for firm managers to generate shareholder value through continuous increases in growth and profitability (Krampe 2000: 116). In this context, StarKist began to divest tuna-related assets: its can manufacturing assets were sold to Impress but continued to supply StarKist plants; its facilities in Ecuador were sold (apparently losing US\$ 30 million in its operations there) but it maintained a tightly controlled supply agreement with the buyer; a fleet of eight purse seiners was sold but, again, a supply contract was maintained; and the cannery in Puerto Rico was closed (USInd#1; #20; StarKist 2001). Except for the Puerto Rico cannery, all of these divestments were motivated primarily by Heinz's concern with demonstrating a stronger financial statement – to 'improve upon its overall ROA [return on assets]' (StarKist 2001: 27). This is a clear example of 'corporate financialisation' (Gibbon and Ponte 2005). As it turns out, this restructuring seems to have been motivated by a desire to strip assets and improve financial statements for StarKist's sale. It was acquired by Del Monte Foods Company (USA) in 2002 in a reverse take-over<sup>35</sup> (Del Monte Foods Company 2005: 4; H. J. Heinz Company 2005: 11).

Shortly afterwards in 2005 Heinz European Seafood was put up for auction by its parent firm (Wiggins 2005). It was purchased by Lehman Brothers Merchant Banking (in

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<sup>35</sup> This method was used mainly because of complications regarding Heinz stock ownership (USInd#5; #10; #11).

combination with other private institutional investors and five former Heinz employees<sup>36</sup>) in February 2006 for €425 million (Lehman Bros. 2006; USInd#1; EUInd#49). 43 percent of the purchase price was reportedly paid in cash (a very high ratio for a leveraged buy-out) making the new business ‘strongly capitalised’ (EUInd#6), which was opportune given the fate of Lehman Brothers (see below). Lehman’s formed a new entity ‘MW Brands’, but the management team and assets remained the same (EUInd#10). Why did Heinz sell? The short answer is provided by the CEO, Chair and President of Heinz, William R. Johnson: Heinz’s global strategy was to focus on building profitability and ‘innovation’ in the three ‘core categories’ where it has strong brands and which totalled around 90 percent of its total profits in 2005: infant nutrition, ketchup and other sauces, and meals and snacks (e.g. soup) (*Frozen Food Europe* 2006; Nathanson 2006). This was echoed in the explanations of executives at a number of branded-firms. One stated that ‘It wanted to focus on ketchup and Weight Watchers. The only sections of value [in Heinz European Seafood] are John West, Petit Naivre and Mareblu’ (USInd#22). Another elaborated on its core category focus: ‘Heinz is going to concentrate on running its new acquisition – HP. It perhaps sold Seafood Europe to raise capital for this core aspect of its market’ (EUInd#25). In other words, it sold one part of its business to fund the deepening of its market power over another, more profitable, segment – ketchup and other sauces.<sup>37</sup>

The strategy of focussing on core categories was mirrored by several other food multinationals in the 1990s, and is driven, for Gibbon and Ponte (2005: Ch. 1), by oligopolistic rent-seeking (see below on this issue). In short, while Heinz European Seafood was no doubt profitable, it did not comply with ‘Heinz’s investment policy of a return of 30 percent’ (EUInd#61). As one US industry executive pointed out: in 2004, Heinz demanded earnings (measured by earnings before interest, taxes, depreciation and amortization, or EBITDA) at least twice as high as those of other US canned tuna firms (USInd#11). EBITDA developed as an accounting measure in the 1980s wave of mergers

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<sup>36</sup> Three of whom are: Dave Williams, Chair of MW Brands, who was also on the board of Lehman Brothers in Europe (and a former Heinz executive who came up through Starkist), Adolfo Valclessi, head of Heinz European Seafood/ CEO MW Brands, and David Bentley, manager of the Ghana and Seychelles factories.

<sup>37</sup> It paid US\$ 855 million to buy HP Foods and Lea & Perrins sauces businesses from Danone in June 2005 (Atuna 2005). Heinz dominates the UK tomato ketchup market with 80 percent share (Smithers 2011)

and acquisitions in order to assess the firm's ability to service debt. In short, it is a financial measure and an element of corporate financialisation, to which we turn.

Aside from the 'internal' logic of enhancing profitability through limitation of branded competition on the supermarket shelf, Heinz was also, of course, motivated by wider dynamics. As pointed out in Chapter 1 in the discussion of Bair's (2005: 170) call for incorporation of the '*structural properties*' of capitalism in chain analysis, how lead firms are *themselves* governed is important (Palpacuer 2008: 406). Of particular relevance here is the role of 'corporate financialisation', where even non-financial firms are compelled to perform to the indicators used by the financial sector either to access loans or to comply with the 'doctrine of shareholder value' (Gibbon and Ponte 2005: 11-15). As we saw in relation to Heinz's stripping of several of StarKist's productive assets, it was motivated by the *financial* objective of improving return on assets (or return on capital employed, Gibbon and Ponte 2005). As one executive put it:

Heinz wants low debt on its balance sheets and high value businesses with low working capital. ... as financiers prefer higher returns/ less risk, it's difficult for Heinz to grow in the [seafood] sector. (EUInd#49)

This dynamic provides an additional explanation why Heinz divested from the tuna industry, but it had also shaped the terms of its joint venture with the Seychelles government in 1995. The government's 40 percent share consisted of fixed assets such as the building and the land which are of limited 'value' on Heinz's profit and loss accounts (see Chapter 6 for more detail). Moreover, and for the same reason, Heinz sold its investment back to the government and then leased it as 'a strategy to influence share price' (EUInd#61) as Heinz did not have to show a profit on these fixed assets.

On announcing Heinz's strategy of focussing on its three core categories, its CEO William R. Johnson stated that: "We are going to place our focus and resources on our big brands with number-one and number-two market positions" (*The Manufacturer*, 2005). However, Heinz was the world's largest firm in the global commodity chain in canned tuna, owning premier brands in the three principal import markets (US, UK and France), and was thus in an oligopolistic position of rent extraction. There may also then

be additional, industry-specific explanations for its divestment from the chain. Two seem to be of particular importance. The first is the unpredictability of raw material supply, and its ecological limit: ‘where can you expand?’ (USInd#5; #10; #11). The environmental conditions of production in capture fisheries, especially a highly migratory resource like tuna, generate several risks for a firm like Heinz which is focussed on achieving consistently high profitability, which is the second explanation: A bad tuna fishing season ‘can see financial results drop off’ (EUInd#35). Heinz European Seafood’s gross profit margin decreased from 38.5 percent in fiscal year 2004 to 36.1 percent in 2005, which, in a context of ‘struggles for profits amid heavy price discounting from retailers’ (Wiggins 2005), was ‘primarily related’ to lower volume sales, but also ‘increased commodity and production costs, particularly in European seafood’<sup>38</sup> and greater spending on seafood advertising (H. J. Heinz 2005: 14, 17). The latter was probably to increase market share to enhance balance sheet value in anticipation of the sale of its subsidiary.

A multinational like Heinz, which can ‘almost see the world’ (Hymer as cited by Pearce and Papanastassiou 2006: 151), was certainly in a position to understand the broad concerns of more forward-looking industry executives interviewed for this research. The ecological limits of tuna fisheries and the associated long-term upward pressure on raw material costs in a market segment that is stagnating in principal US and EU markets necessitate *either* an increase in retail prices (with its associated risk of product substitutability by consumers with other canned fish or animal protein more broadly), which is difficult without the connivance of US and EU supermarkets through simultaneous price increases of private label product,<sup>39</sup> *or* a further squeeze on profits for branded-firms. As it turns out, Heinz’s sale of its subsidiary was prescient as tuna raw material prices rocketed in 2007-08 (Appendix Figure 3B.1).

The next question, then, must be why did Lehman Brothers buy Heinz European Seafood? The simple answer is that: ‘Lehman Brothers have got to invest somewhere!’

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<sup>38</sup> Tuna raw material prices were at their highest in 2004-05 since 1998 (Appendix Figure 3B.1).

<sup>39</sup> A strategy they are unlikely to pursue given the highly dispersed supply base of non-branded manufacturers (see above) and that canned tuna is a core category product for increasing wider grocery sales (see below).

(USInd#5; #10; #11). Investment banks do not need to report the same level of profitability as that demanded by Heinz. On the operational side of the business, with the levels of turnover generated by a mass commodity like canned tuna, ‘even if you only make three percent [profit] it’s still good’ (EuInd#61). Moreover, the former Heinz management involved in the buyout believed that they could develop MW Brands, in part because they could make more focussed decisions and better promote product through a dedicated sales force (EUInd#49), and, of course, they were not fettered by Heinz’s constraint of fulfilling ever expanding ‘shareholder value’ at a level above the norm. From the outset, Lehman Brothers Merchant Banking’s strategy was to increase the sale value of the tranche of investments of which MW Brands was a part within four or five years. A central component of MW Brands’ remit was thus unsurprisingly to ‘expand the business’ and ‘improve earnings’ (EUInd#49; USInd#1). The means for doing so was to expand the share of the John West and Petit Naivre brands through aggressive advertising and promotional campaigns and to lay emphasis on the Mareblu brand in Italy which had the largest room to grow (EUInd#6; #7; #49; #50). (See Section 3.5.2 on branded retail share.) A major problem, according to industry insiders, was that Lehman Brothers paid well above the market price (TInd#1; USInd#5; #10; #11). Responses to questioning on this claimed it was ‘gossip’ and ‘speculation’, with the insight that: ‘We wouldn’t pay more than the market price if we didn’t see growth’ (EUInd#49). This indicates that a high price was paid, but based on the assumption that its business strategy would be a success.

The impact of MW Brands’ strategy was mixed. For example, an expensive advertising and, moreover, promotional campaign by John West certainly contributed to a US\$ 4.95 million loss in 2008 for this arm of MW Brands. John West managed to generate a US\$ 2.14 million pre-tax profit in the following year, but by focussing on lower volume sales of premium canned fish (predominantly tuna) (*IntraFish*, 11 September 2009). In France, the CEO of MW Brands emphasised his firm’s promotion of Petit Naivre through ‘store theatre’ such as end-of-aisle counters taking up 200-300 square metres (Valssecchi 2007: 146). Competitors complained about this ‘battle for market share’ as ‘getting out of hand’ (EUInd#35). Another said:

I worry about venture capitalists in the food industry. They have different horizons and planning scope. ... they [MW Brands] are over-investing in ads and promotions. We're locked into seeking commercial advantage. ... They're pursuing very aggressive strategies – *less* than BOGOF [buy one get one free]. This is suicidal, as BOGOF is bad. (EUInd#34)

Another strategy was to peddle so-called 'value added' products. This was a broad success in the UK, even if only in a small portion of the market.<sup>40</sup> In 2008 and 2009 John West sold over 85 percent of 'value added' ambient tuna products in the UK, while Princes had only 6-7 percent share of this niche market (IRI Grocery Outlets). MW Brands also sold its share in Cobrecaf in October 2008 (Chapter 2), and procured from this firm on a five-year supply contract in which MW Brands had first refusal on price negotiations (EUInd#6). This mirrors the Heinz strategy of selling unnecessary low profit assets before it auctioned StarKist. Combined, these elements meant that in fiscal year 2009/10, MW Brands turned a total profit of €36.6mn (CIMB 2010).

The collapse of Lehman Brothers in 2008 had no real effect on MW Brands. The arm of Lehman's managing the fund that included MW Brands was not at the centre of the collapse and because Lehman's had invested less than ten percent of the value of the holding company, with the rest held by 'pension funds, public administrations – all secure investors', and Rabobank provides credit lines (EUInd#6; Freitas 2008; Cox and Arnold 2009; Real 2010). MW Brands was simply transferred to the successor fund manager, Trilantic Capital Partners, formed by former principals of Lehman Brother's Merchant Banking. It started proceedings to sell MW Brands just over four years after its acquisition (i.e. within the planned range of four to five years) and in 2009 its earnings before interest, taxes, depreciation and amortization (EBITDA) were far from the heights demanded by Heinz (noted above). MW Brands was purchased in July 2010 by the largest canned tuna firm in Thailand, Thai Union, for €680mn (including €295.9mn in debts) (CIMB 2010). It is widely recognised that this will provide Thai Union with far greater market power in global raw material markets (EUInd#13–#15; #17–#20). The

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<sup>40</sup> As one UK buyer pointed out: 'We had promoted pouch range but UK consumers didn't take to it (EUInd#25).



meteoritic upgrading of Thai Union to become the most important branded-firm in the global commodity chain by 2010 and its implications for the industry in general and Seychelles in particular are beyond the scope of thesis.

### **3.4.3 Branded-manufacturers and marketing firms: Corporate concentration and business strategies**

Excluding the Spanish production system, three branded-firms dominate principal markets in the EU in the 2000s – Bolton Group, MW Brands, and Princes (Mitsubishi).<sup>41</sup> Until the 1990s, Spanish firms were focussed on the domestic market, but with a series of take-overs in the 1990s and 2000s, primarily of Italian firms, Spain became the leading supplier to the EU15 import market. Table 3.3 provides overviews of the EU's top-six branded canned tuna firms. Taking seriously horizontal competition between branded firms in EU principal markets is necessary to understanding MW Brands relative position in the EU-centred commodity chain. As we shall see, the business strategies of leading branded-firms cannot be understood by looking at one 'national' market.

Through the take-over of major brands of canned fish in the 1980s and 1990s, Heinz' business strategy straddled the British, French and Italian markets (see Table 3.4 below for branded market share). So while Heinz/MW Brands has no direct interaction with the Spanish market, it is in direct competition with Spain's exports to the Italian market. It is primarily a branded-manufacture but also supplies supermarket own-brands ('private label') with canned tuna. The Netherlands-based Bolton Group – a consumer goods marketing firm – pursued a similar strategy.<sup>42</sup> It penetrated the French market through the purchase of Saupiquet in 2000 and the Italian market through the purchase of the dominant national brand (*Rio Mare*).

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<sup>41</sup> Like Heinz, Mitsubishi has been directly involved in shaping the global commodity chain in canned tuna (see Appendix 3D).

<sup>42</sup> A privately held (and secretive) company, whose representatives in the Netherlands and Italy refused interviews on two occasions

Bolton (via the Saupiquet fleet) and MW Brands (via control of Cobrecaf and ownership of the TTV fleet in Ghana) are both vertically integrated into fishing. This is an important similarity to the industrial organisation of the three Spanish firms, each of which own fishing capacity, albeit to widely varying degrees: Salica's parent company Albacora owns 16 purse seiners (the largest known purse seine fleet in the world), while Garavilla owns four boats (see Section 2.5 on corporate concentration and industrial organisation in the EU DWF). Princes has no backward integration into the fishing node. For both Bolton and Princes vertical integration into canned tuna manufacturing is not a key component of their highly diversified businesses. For example, Princes owns only one factory producing canned tuna and Bolton sold its factory in Cote d'Ivoire to a major non-branded-manufacturer in 2005 (see below). In fact, Bolton, Princes *and* MW Brands consistently source finished product from non-branded manufacturers to supplement production in their own factories, including Thailand for the latter two (see Annex 3.C).

Calvo is the most important producer of canned tuna *within* the EU. It is also estimated to be among the five leading canned fish firms in the world, of which around 75 percent of sales are tuna, 20 percent sardines (in Brazil) and five percent other products (EUInd#16; Calvo 2010). The Calvo brand is the volume market leader in Spain and its Nostromo brand is now second in Italy, which Calvo pushed from being in fifth position in 1989 (EUInd#17–#20; ANFACO 2010; AfDB/INFOFISH 1991: 104; Table 3.4 below). Over 50 percent of Italian consumption of canned tuna is imported from Spain. Unlike MW Brands and Princes, Calvo does not produce private label. The Spanish firm Garavilla does produce for private label, but it is not a strategic part of its business which is focussed on the major Spanish brand Isabel (EUInd#16; #21; #22). Calvo and Garavilla have been leaders of the Spanish branded market since at least the late 1980s (Josupeit 1993: 49; AfDB/INFOFISH 1991: 105). Salica is a new entrant (founded in 1991) and is controlled by the Albacora Group, which used to be a specialised fishing firm (IntFS#22; Section 2.5). It is Spain's number three branded-manufacturer and produces canned tuna to be sold in Spain under the Conservas Campos, Bachi and Salica brands (ANFACO

2010; Albacora 2010; Alimarket 2010).<sup>43</sup> As discussed below, the Italian market is typified by a high retail price: in 2003 it was worth an estimated €750 million on final sales of around 97,000mt; for comparison, France had a very similar sales volume – 95,000mt – but was only worth around €565 million (Trovamala 2004: 113). In short, Garavilla’s business strategy is to further expand into the highly profitable Italian market, not least given the highly competitive conditions in the Spanish market (see below).

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<sup>43</sup> Number five if non-branded manufacturers are included, see Section 3.3.3.

**Table 3.3: Europe’s top six canned tuna branded-firms in the late 2000s**

Branded-firm (Ownership)	Purse seiners	Production locations and product*	Notes
MW Brands	5	France (330,000 cans of various seafood per day); Portugal (350,000 cans of sardines & mackerel per day) Ghana, since 1994 (800,000 cans of tuna and 20mt loins per day); Seychelles, since 1995 (1.5mn cans of tuna per day)	Former Heinz European Seafood. Owns leading brands of canned fish (including tuna) in the UK, France and Italy: <i>John West</i> , <i>Petit Naivre</i> and <i>Mareblu</i> respectively. In fiscal year 2009/10 total profit was €36.6mn Controlling share of Cobrecaf fleet until 2008
Bolton Group (Mr Nissim 100%)	5	Quimper (France, canned tuna and misc seafood for <i>Saupiquet</i> brand) Cermenate-Milan (Italy, canned tuna for <i>Rio Mare</i> brand) Sold Saupiquet factory in Côte d’Ivoire in 2005	Bolton was connected to <i>Rio Mare</i> since at least 1990 and bought <i>Saupiquet</i> in 2000, leading brands in Italy, France, Germany and Belgium. Saupiquet turnover: €210mn in financial year 2008/09
Princes (Mitsubishi since 1989)	None	Princes Tuna Mauritius (PTM): Annual raw material production capacity 60,000mt canned skipjack Controlling share of PTM bought by Princes Ltd. in 1999.	<i>Princes</i> is a leading brand in the UK and the Netherlands. Its <i>Vier Diamanten</i> brand is number one in Austria.
Calvo Group (78% Calvo Pumpido family)	6	Spain (Carballo plant: 80% tuna; 20% misc. others) Spain (Esteiro plant: 20% tuna products; 80% mussels, salads, bean-based products) El Salvador (80% loins for Spain; 20% tuna for US and Latin America) Brazil (75% canned sardines; 25% tuna)	Owns <i>Calvo</i> and <i>Nostramo</i> – leading brands in Spain and in Italy (latter was purchased from parent company Safica in 1993). Canned fish production: 149,000mt (2009) Net sales: €353 million (2007) and €427million (2009)
Garavilla Group (Garavilla family and MCH Private Equity since 2010)	4	Spain (El Grove plant: tuna) Spain (Mundaka plant: tuna and various seafood) Ecuador (tuna and loins since 1976) Morocco (various seafood)	Owns the <i>Isabel</i> brand, significant in Spain Canned fish production: not known Net sales: €215 million (2006) and €240 million (2009)
Salica** (Albacora Group)	16	Spain (tuna) Spain (added value tuna, various seafood) Ecuador (20% tuna; 80% loins)	Owns the Spanish <i>Conservas Campos</i> , <i>Bachi</i> and <i>Salica</i> brands. Canned tuna production: 45,000mt capacity

\* ‘tuna’ = canned tuna and other ambient tuna products; ‘loins’: pre-cooked vacuum-packed frozen tuna loins; \*\* A separate subsidiary not noted here is Salica Congelados which produces and markets premium so-called ‘value-added’ products such as tuna steaks and various tuna-based ‘ready-made’ meals.

Sources: multiple interviews, 2006-2010; company websites; various RFMO registries and vessel databases; Alimarket 2010; AfDB/INFOFISH 1991: 104; Brus 2002: 99; CIMB 2010; FIS; Josupeit 1993, 2009; Lequesne 2004: 135; Loubet 2010; Moral 2008; Mieu 2010; Murias 2010a; Princes n.d.; SNI 2006..

According to the two criteria of differentiation in principal EU markets outlined above, two tendencies in the business strategies of these six firms have been identified. The first is to specialise in one type of market: Princes in the EU import market for canned skipjack, and Calvo, Garavilla and Albacora/Salica in the Spanish and Italian ‘national production systems’ for canned yellowfin. The other two firms straddle both sets of criteria: Bolton Group, very successfully, by leading the Italian national production system, the German branded import market, and the intermediate French market; and MW Brands with a leading role in the UK and France, but only a relatively small presence in the highly profitable Italian market.

In terms of raw material sourcing, the larger branded-firms have considerable information advantages as well as buying power. For example, while Princes owns only one cannery, it benefits from Mitsubishi’s ‘communications all over the world, including the Mitsubishi office in Bangkok and in Philippines’, which gives it an important information advantage over smaller players on *daily* global catch and price data (EUInd#11). Similarly, in the late 1990s and early 2000s Heinz’s canned tuna business included several processing facilities on three continents. As one interviewee put it: ‘Nobody knows the world price except for the biggest players’ (EUInd#11). Both branded-firms undertake strategies to mitigate short-term raw material price fluctuations (also first noted in Section 3.2.4): One Princes representative stated: ‘We don’t adjust our selling price to the fish price, we reset our standards annually based on seasonality’ (EUInd#34); and as a US buyer put it ‘we equalise fish price’ over time (USInd#1). It appears that Heinz European Seafood took an even longer-term approach: ‘*Before* the price for fish was based on a 7-8 year cycle. We could manage an average price over the cycle; for example, impacts of El Nino could be absorbed over the cycle. *Now*, over the past few years there are new issues, *not* related to weather and sea temperature. Things are dragging with supply’ (EUInd#7). This drag was caused by a combination of growing global processing capacity, declining extraction of yellowfin raw material and stagnant production of skipjack, which meant that fish prices and security of supply have become more pressing strategic concerns in the processing node of the commodity chain.

On the one hand, the three non-Spanish branded-firms all procure finished product from non-branded manufacturers. This is of particular importance to Bolton and Princes. The highly diversified Princes Group has 130 suppliers in 30 countries for its wide range of food products, ‘is an integrated supplier to supermarkets’ and has staff seconded to supermarket headquarters on generating cost savings in areas like logistics (EUInd#34; #11). For canned tuna, on top of its sole factory in Mauritius, Princes ‘main suppliers are from Philippines, Thailand and Ecuador, plus a global strategy’ (EUInd#11). Bolton’s role in the commodity chain is highly dependent upon its partnership with the specialised tuna trading company Tri Marine International, which exclusively supplies its small cannery in Italy with tuna loins and also helps to procure finished product. As a whole, Bolton procures canned tuna across the globe from at least 15 factories, including the two major Thai firms (EUInd#11; #53; #57–#60; TInd#9; USInd#18). In other words, unlike Heinz’s strategy of establishing factories across the global ocean, these two firms engage in global sourcing from dispersed non-branded manufacturers.

On the other hand, MW Brands and the Spanish branded firms are highly specialised in canned *fish* production. Importantly, MW Brands does not produce and market canned tuna only. This is important to relationships with supermarkets as buyers wish to source multiple products from a single supplier. As one US executive put it: ‘If you only do mono-produce you’re dead. So you come with a business package to the supermarkets’ (USInd#22). Canned tuna branded-firms try to generate selling, general and administrative (SGA) synergies by supplying other products (e.g. canned animal protein for the US firm Bumble Bee) which ‘creates a synergy for our customers’ (USInd#5; #10; #11). A major practical rationale for doing this is that they are able to offer retail buyers a ‘mixed truck’ (i.e. several products in a single order) which gives supermarket buyers greater flexibility and reduces transaction costs. In short, branded firms adapt to supermarket buying ‘needs’ through broad specialisation in canned protein (Bumble Bee in the US), canned fish (MW Brands), or various food or consumer brands (e.g. Princes, Bolton); this tendency to concentration generates significant barriers to entry. If a branded firm supplies only a single product it is likely to be squeezed out of the market

by supermarket buyers and be compelled to specialise as a non-branded-manufacturer, to which we now turn.

#### **3.4.4 'French' and Spanish non-branded manufacturers: Key players and business strategies**

Private label constitutes 65 percent of sales in the large Spanish market (see below) and specialised non-branded manufacturing supply it. The two main players are Frinsa del Noroeste and the Jealsa Rianxeira Group, the second and third largest Spain-based producers of canned tuna. Frinsa is not vertically-integrated into fishing and while Jealsa had a 20 percent share of the Albacora Group, it only directly owned two purse seiners (and one by 2010, Table 2.4). Frinsa is majority family-owned and has four factories with an estimated production of 137,000mt of canned fish in 2009, the second largest Spanish canned tuna producer in volume. Jealsa is 100 percent family-owned and has eleven factories in nine countries producing canned seafood, including two tuna canneries in Spain and a loining plant in Guatemala that exports all of its production to the Spanish plants for re-processing (EUInd#23; #24; Alimarket 2010; *Eurofish Magazine*, April 2010). Unlike Frinsa, Jealsa owns a brand but had only 0.6 percent share of the Spanish market in volume in 2009, declining from six percent in the late 1980s (ANFACO 2010; AfDB/INFOFISH 1991: 105). Its major domestic advantage is an exclusive contract to supply Mercadona – Spain's largest supermarket chain – with its private label. But because of this relationship Jealsa must export the rest of its production and has a 50:50 joint-venture with the 'Italian' firm Star (Table 3.3; Catarchi 2004: 15),<sup>44</sup> supplies the minor French supermarket System U, and the UK where 'sales are growing' (EUInd#23; #24). Exports to the UK are based upon an agreement with Princes to produce its branded-product and to sell to other UK-based clients Jealsa has to go through Princes (direct observation of Princes branded-product in Jealsa factory 2010; EUInd#23; #24).

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<sup>44</sup> Star is, in turn, owned by the Spain-based holding company Pasa Group. The *Star* brand's share of the Italian market *decreased* from 15 percent in 1989 (ADB/INFOFISH 1991: 104).

French-owned processing facilities in West Africa and the Indian Ocean have so far been considered to be part of the French ‘national’ production system, primarily because of the combination of colonial legacy and post-colonial trading relations and, when French-owned, the vast majority of their production flowed to the metropole.<sup>45</sup> But, of course, they are simultaneously part of the extra-EU export-orientated category, and thus form an important cross-over between the two categories of production location. As noted above and discussed in more detail in Section 2.3, Pêche et Froid was one of the ‘big three’ French branded-processors, establishing canneries in Côte d'Ivoire in 1978 and Madagascar in c.1990 (Josupeit 1993: 26; Cassuto 2004: 72). However, with the intensification of concentration in the French branded-market and the rising share of private label, Pêche et Froid gradually transformed itself into a specialised non-branded manufacturer. The Moroccan-owned firm Thunnus Overseas Group (TOG) bought Pêche et Froid’s factories in Côte d’Ivoire in 2005 and Madagascar in 2007, and Saupiquet’s factory in Côte d’Ivoire in 2005 (EUInd#56).<sup>46</sup> This gave TOG a total production capacity of 113,000mt of raw material (although it only operated at half of this), which it sources exclusively from the EU DWF as it does not own fishing capacity.<sup>47</sup> By the late 2000s TOG had 25 percent share of the French retail market through its production of private label for three of the top-four supermarkets (Carrefour, Leclerc and Auchan) and for its own (minor) brand, and 40 percent share of the French food service/catering market. TOG also supplies private label to supermarkets in Germany and Belgium (EUInd#5; *Les Afriques* 2009; *Jeune Afrique* 2009; Pêche et Froid 2010; Maury 2009).

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<sup>45</sup> Between 1976 and 1985 a minimum of 97 percent of French canned tuna imports emanated from Cote d’Ivoire and Senegal (Elsy 1987: 94). However, in the early 2000s the Saupiquet cannery in Abidjan supplied the Italian *Rio Mare* brand with canned tuna in brine, albeit a minor product on this market (Catarchi 2004: 27). In 1997/8, 96 percent of Cote d’Ivoire’s and 82 percent of Senegal’s exports went to France (Anzer 2000: 92).

<sup>46</sup> TOG is an aggregation of six operating companies and holdings with combined revenues of US \$166 million in 2008 (\$178 million in 2007), and employs around 4,500 factory workers. Mohamed Khachab is the majority shareholder. There is minority ownership by private equity firms: Emerging Capital Partners under its Africa Fund III (€21.4mn in January 2009) and Kingdom Zephyr under its Pan African Investment Partners II Fund (€14.3mn in March 2009) (ECP 2009; Kingdom Zephyr 2010).

<sup>47</sup> Pêche et Froid sold its purse seine fleet in 2000-2 having established it in 1973.



### 3.4.5 Summary

We have seen that MW Brands and the three Spanish branded-firms are highly specialised in the production and marketing of *canned seafood*, especially tuna. The only way for these four firms to grow is to expand their share within this product category, which is precisely their strategy: e.g. Calvo and Garvilla's forays into Italy and Latin America and MW Brands' aggressive marketing campaigns (Corrales 2004; EUInd#16; #21; #22; #23; #24; #25). Conversely, the emphasis of Bolton and Princes is on marketing a wide range of consumer brands based on a highly diversified supply base sourcing from across the planet. Both Bolton and Princes could function as profitable canned tuna businesses without ownership of processing facilities simply by contracting non-branded manufacturers and continuing to focus on the category management of their leading brands. Similarly, if economic conditions changed and branded canned tuna became consistently less profitable, both would probably sell their canned tuna businesses and concentrate on more profitable consumer brands. We have also seen how specialised non-branded manufacturers were formed, in part because they were squeezed out of branded-manufacturing by leading players and, as we shall see, 'supermarket power'. Finally, while the Spanish firms are big players, as highly specialised family-owned firms they are not as strong financially as Bolton, MW Brands and Princes, making these three the lead EU-centred branded-firms (EUInd#11; Catarchi 2004) and MW Brands Europe's lead firm *specialised* in canned fish.

## 3.5 Canned Tuna, Supermarket Concentration, Business Strategies and Competition in Principal EU Markets

### 3.5.1 Supermarket concentration, canned tuna and principal EU markets

The discussion of chain governance in Section 1.1.2 highlighted the relative rise in market power of supermarkets as a major theme of GCC analysis. The 'supermarket revolution' of the 1980s is conceived as constituting a shift in power from branded-

manufacturing firms to large retailers in the UK and USA, followed by a similar tendency in Western Europe, Japan and elsewhere in the 1990s.<sup>48</sup> The following relates this analytical concern to the case of the EU-centred canned tuna chain. Representatives of the canned tuna industry from around the world consistently emphasise the loss of their prior position of market power to the giant supermarket firms (EUInd#11; #25; JInd#4–#6; #16–#20; #29; JGvt#4–#14; USInd#1; #5; #8–#11; Krampe 2000; Lischewsky 2004: xiii; Schapira 2009: 313). As the CEO at Bolton Group’s canned tuna business put it, the retailers are ‘gaining more and more power on [sic] the producers’ (Trovamala 2004: 115). For a senior manager at a US branded-firm:

Supermarkets have 100 percent control now. In the late 70s, early 80s the food business told stores what to do. It began with increased prices for ‘real estate on the shelf’. ... Now they tell *us* what we’re gonna do, and what our margin is going to be. It’s all about information – they control it! (USInd#3)

The rising market power of supermarkets allows them to play the major branded canned tuna firms off against each other. They often threaten to (or do) switch more shelf space to their private label canned tuna so as to capture more of the profit on the product category. As one US manager put it: ‘We try to influence our shelf price (it used to be easier), but no-one wants to step-up, they’re afraid of retaliation [from supermarket buyers]’ (USInd#8; #9).

Concentration in the UK market between the two branded-firms allows supermarket buyers to ‘play one off against the other ... In the UK, Princes are fighting against John West because supermarkets are pushing them against each other, asking: “what is it worth for you to be on the shelf?”’ (EUInd#25; #11).<sup>49</sup> This is the practice of ‘slotting’: a

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<sup>48</sup> There are many categories of this type of retailer in the EU (e.g. hypermarkets, superstores, hard discounters, etc) and the US (e.g. dollar stores, warehouse clubs (e.g. Costco), supercentres (e.g. Wal-Mart), etc), but the generic term ‘supermarkets’ is used to refer to all of these in this thesis. This is not to downgrade the importance of analysing retail based upon different store types. For example, in the US the ‘supercentre’ and ‘dollar store’ categories increased their retail share by a whopping 68.6% and 60% respectively between 2001 and 2005 (ACNielsen data as cited by Connors Bros 2006b: 17).

<sup>49</sup> Repeated requests were made in 2005 and 2006 of all of the major UK supermarkets to interview buyers dealing with canned fish, these were rejected by all but one firm. I was however, able to have several discussions and personal communications with buyers through other channels, including at industry meetings, but these were primarily specialised in fresh and frozen fish.

branded-firm rents shelf space for a six month period, and even then may be squeezed for additional revenue within that period so as to not lose their retail ‘real estate’, which is a reflection of the supermarket’s short-term profit focus (‘shareholder value’) ‘as they’re so focussed on quarterly profits’ (USInd#5; #10; #11). Adding to this dynamic is the power to discontinue (or ‘delist’) a brand if it does not provide a sufficient return to the supermarket (EUInd#11; #25; Krampe 2000). As one representative of a Thai firm exporting to both the EU and the US put it, the supermarkets are ‘trying to kick out most national brands and promote their *own* brand and only one or two big brands’ (TInd#1). An EU industry representative explained this dynamic in more detail:

Delisting is a supermarket strategy to clear the shelf [for their own label]. ...  
The retailer policy in Western Europe is to have one ‘A’ brand (the reference for price), one challenger and one niche. The rest is private label – ‘valued’ at around 40 percent of the ‘A’ brand (EUInd#11).

This business strategy and other barriers to entry limit the number of branded competitors at point of retail. It is ‘very hard for small producers to get into sales in European supermarkets: they need to sell at a high price to recover the slotting fee, whereas big firms can afford to keep the price down’ (IntFS#22).

As with other products (e.g. Gibbon and Ponte 2005), supermarkets also use their market power to extract additional revenue from canned tuna suppliers, including payments for business allowances, advertising and brochures, and damaged goods. According to Miyake et al. (2010: 100), these ‘costs’ can represent as much as 40 percent of the retail price of the canned tuna. Similarly, product promotions are paid by suppliers, even for non-branded-manufactures. As pointed out by one experienced cannery manager who dealt with UK supermarket buyers in the 1980s and 1990s: ‘Once or twice they made a certain promotion and all costs come to us. As usual!’ (PICInd#38). Another manager claimed that: ‘In French supermarkets, half [of the price] is already paid by the supplier. You pay fees to enter every year – it’s a racket! You pay for special promotions, etc.’ (USInd#22). In the late 2000s, retailers in the UK were asking branded-firms for even more of their price premium (EUInd#11). The result of these conditions of competition is the heightened tendency to concentration among branded-firms already highlighted in the

discussion above on French and Spanish production systems. As pointed out by the former vice-president of StarKist, the number of branded-firms decline as supermarkets focus on those suppliers which have a broad product range and supermarkets 'will move to eliminate less profitable SKUs (stock keeping units) and the corresponding operating inefficiencies' (Lischewski 1998: 21).

At the same time, big supermarkets also compete with each other for market share by attempting to attract consumers with lower prices for 'core category' products such as canned tuna. As a non-branded manufacturer put it, European supermarkets are 'using canned tuna to attract the customers, so that is why when they buy they'd like to buy at the cheapest price' (PICInd#45-#47). In the US canned tuna is the third largest seller in terms of dollar volume per foot of shelf space, following sugar and coffee. In addition, if a supermarket customer has tuna in their 'basket' they will spend 65 percent more on a shopping trip than without it (Lischewsky 2000: 88; 2006: 135). Given that the traditional source of profitability for supermarkets is based on large volume sales of food, canned tuna plays a strategic role in driving sales and is often sold as a loss-leader (USInd#3-#5; #10; #11). The former managing direct of Princes Tuna Mauritius related this dynamic to the specifics of the UK market:

Because the consumption of tuna is heavily slanted towards young families, and these are the prime targets customers for retailers to develop, the tuna has often been used as bait to draw in other sales (Spruyt 2000: 102; see also Valssecchi 2007: 145-6).

As a result, UK supermarkets 'regard canned tuna as a discount item' (Tony Vince *Foodnews* (August, 1998) as cited by Anzer 1998: 127). The principal mechanism has been promotional offers such as 'BOGOFs' (buy one get one free) and multipacks. Both sales techniques eat into profitability but they simultaneously increase volume sales and consumer usage through 'cupboard pressure'. Keeping canned tuna sales high through promotional offers on price to attract consumers is a source of horizontal competitive pressure between supermarkets, which even, in the US at least, involves selling at a loss. This is because, from the business perspective of a supermarket, 'the tuna shopper is the preferred shopper' (Lischewsky 2006: 134).

Increased consumer willingness to buy private label further exacerbated pressures on branded-firms because supermarkets can afford to sell private label more cheaply than the branded equivalent as they do not have to pay the same level of marketing or supply chain management costs (EUInd#6; USInd#22).<sup>50</sup> Private label canned tuna is taking an increasing percentage of market share in major EU markets (Valsecchi 2006: 7; see also Spruyt 2000), to the extent that the CEO of MW Brands rhetorically claimed that: ‘Private labels are the leading “brand” throughout Europe’.<sup>51</sup> Perversely, except for those branded-firms operating in the UK market, many EU-centred brands were cutting their advertising and marketing budgets to reduce costs in the face of price competition from private label, which threatened brand-recognition and, thus, sales (Trovamala 2004: 114). According to a former Heinz European Seafood manager:

When we started producing private label canned tuna they don’t have to pay for any advertising, promotion, etc – which is high cost for brand labels. Then supermarkets started to complain that John West and other brands were too expensive so they squeezed us from both ends (USInd#22).

Combined, these competitive dynamics squeeze both branded- and non-branded manufacturers of canned tuna, forcing them to sell at lower prices and thus eat into their own profit margins or, in the case of the US-centred chain especially, degrade the quality of the product through using hydrolysed protein or vegetable broth (volume enhancing additives), smaller can sizes and/or lower grade fish so that the end product resembled ‘tuna soup’ in the 2000s (USInd#2; 8; #9; EUInd#17–#20; #55; IntFS#3; Binotto 2004: 100; COS 2001: 11, 2001b: 21; Josupeit 2004:161; King 1987b: 66, 72-3; Krampe 2000: 114; Lischewsky 2000: 92; Munoz 1993: 75, 1996: 109).

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<sup>50</sup> On the strategic significance of supermarket own-brands, see Hughes 1996.

<sup>51</sup> Speech by Adolfo Valsecchi (CEO MW Brands) at the INFOFISH Tuna 2006 conference.

### 3.5.2 Canned tuna branded-firms and differential supermarket power in principal EU markets

The field of commodity studies tends to assume that supermarkets function as lead firms. As we have seen, there is certainly a tendency to ‘supermarket power’ in the EU-centred canned tuna chain. However, these dynamics are not uniform and important differences exist between principal EU markets. Table 3.4 offers a snap-shot of corporate concentration in total grocery sales by the top-five supermarkets in six EU markets in the late 2000s (the five principal markets discussed above plus the Netherlands).<sup>52</sup> It also details the relative position of the major ‘national’ canned tuna brands in relation to each other and to private label. The very low retail selling price of canned tuna in the USA and Germany (US\$ 3.47 and US\$ 3.50 per kilogram of fish respectively in 2002) can be contrasted with the significantly higher price in Italy and France (US\$ 6.57 and US\$ 6.05 per kilogram) (ACNielsen data as cited by Binotto 2004: 100; see Brus 2002: 96 for similar estimates and Trovamala 2004: 112 for slightly higher ones). Both the US and Germany are renowned as price-focussed, low quality canned tuna markets with high levels of potential product substitutability between different canned animal protein (Campling et al. 2007: 288-298, 319; EUInd#11; PICInd#45–#47). Private label sales dominate the German canned tuna market, which, combined with lower product quality, contributes to explaining the low retail price (IntFS#22; Brus 2002: 97; Catarchi 2004: 25). As we saw earlier, this tendency in Germany (and elsewhere) resulted in the rise of specialised non-branded manufacturers to supply private label.

It is often argued that the high price in Italy can be explained by the product containing higher priced raw material (yellowfin), packing media (olive oil) and a more technical easy-open can.<sup>53</sup> This is largely discredited by the fact that Spain is close to the German price (at \$3.54 per kilogram) but consumes mainly yellowfin in oil in easy-open cans.

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<sup>52</sup> It should also be noted that Bolton had an 8.5 percent share of the Belgian market in 2009/10 through the *Saupiquet* brand, but the leader was *Imperial* with 21%. Private label as a percentage of total canned tuna sales there was 54.6 percent in 2008/09 (AC Nielsen, confidential industry source).

<sup>53</sup> Canned tuna is the seventh most important category of all shelf stable food sales in Italy (after UHT milk, pasta, coffee, etc), and Rio Mare canned tuna in olive oil is the *second* best selling individual branded item (Schapira 2009: 306-7).

Instead, the high price of product in Italy is probably due more to the *Rio Mare* brand being outright market leader with 36 percent share, which other brands base their own price on.<sup>54</sup> This market dominance is reinforced by a combination of the highly fragmented supermarket sector (the top-five have only 40 percent of grocery sales), regional loyalties for specific canned tuna brands and very small market share of private label (18 percent) able to exert competitive pressure. In fact, the Italian brands have engaged in competitive pricing against private label – ‘it is not uncommon’ to find national brands priced 10-12 percent below private label (Brus 2002: 96; IntFS#22). In other words, this market seems to be based upon oligopolistic rent-seeking by the lead branded firm. As pointed out by Spanish managers, Bolton’s position ‘is good for us as it pushes price up for everyone!’ (EUInd#23; #24). Continuing this line of reasoning, the lower-price in Spain could be explained by the high degree of competition between fragmented national canned tuna brands and a fragmented supermarket sector (five firms control only 45 percent of grocery sales) engaged in horizontal competition on private label product, which has the highest total market share of all six EU markets at 65 percent. One Spanish industry representative stated that:

Supermarkets are the cancer of this business. If taking on a price squeeze for milk or coffee, etc, there’s less of a problem for sustainability. But they’re often using tuna as a traffic mover, losing money, and fighting on price. ... Retailers are pushing each other on price points, but there’s no other protein that you can get for one Euro a kilo’ (EUInd#21; #22).

The relative power of supermarkets in Spain in the late 2000s is even more significant given that their rise was considerably later than their equivalents in France and the UK. For example, in the early 1990s private label had only 20 percent share of the Spanish canned tuna market (Josupeit 1993: 50).

There is however, no automatic relationship between levels of supermarket concentration and private label share of sales of canned tuna. The Netherlands is the most concentrated

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<sup>54</sup> Bolckton Group also owns the Italian Palmera brand, which combined with Rio Mare gives Bolton just under 50% share of the Italian market. Rio Mare has led the Italian market since at least 1990 when it had 28% share, growing from 17% in 1980 due to intense and successful marketing campaigns (ADB/INFOFISH 1991: 104; Josupeit 1993: 34; EUInd#11).

of Europe's grocery markets – the top two supermarkets *alone* have around 60 percent share – but the market for canned tuna is more dominated by branded-firms than any other, with three brands sharing 84.5 percent of value sales. Like the UK, this market is characterised by a struggle for market share between John West and Princes. In the UK, Tesco is the dominant player (with around 31 percent of total canned food sales), while three other firms compete for second position. Around 60 percent of the UK canned tuna value market is held by the two main canned tuna brands. This concentration, combined with relatively high quality canned skipjack product compared to Germany, might explain why the UK price per kilogram of tuna in 2002 sits between the two sets of extremes noted above at US\$ 4.43. This concentration may also encourage oligopolistic rent seeking (see below).

Retail in France is structured very similarly to the UK in terms of its levels of concentration of supermarkets (both are at 80 percent for the top-five firms) and national brands, as well as being led by one major supermarket chased by a handful of followers: the global giant Carrefour has 25 percent of grocery sales in France with the next four largest firms in fairly close competition for the position of second runner.<sup>55</sup> The explanation for the very high price in France (US\$ 6.05 per kilogram) is more complex. It is most likely to do with the specialised market for 'raw pack' (*thon au naturel*) and for so-called 'value added' tuna salad packs (French canners pioneered the latter in the early 1980s (Josupeit 1993: 21; IntFS#22)). Salad packs make the tuna raw material more profitable because of its reduced volume as it is mixed with other cheaper inputs. Of total retail sales of canned *fish* of €807 million in France in 2008, raw pack was 38.5 percent, standard (pre-cooked) canned tuna was only 16.5 percent, and 'salad products', which include the 'use of tuna pieces', was 14 percent (confidential industry source, 2010; see AfDB/INFOFISH 1991: 98 for break-downs in 1980 and 1988). The high proportion of the specialised raw pack and 'value added' salads contributes to explaining the relatively

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<sup>55</sup> The combination of Carrefour's premier position in France and second position in Italy and Spain provides it with immense buying power. However, very different market specifications for canned tuna in France and Italy/Spain limit production-line economies of scale for suppliers of Carrefour's private label product. For example, in Italy and Spain demand is for 80gm cans of yellowfin in oil, while the French market is mainly for larger cans of raw pack skipjack.



high price of tuna per kilogram in France, which may also be attributed to ‘market sharing’ by the two main branded-firms and strong concentration in grocery sales.

In summary, relative degrees of market power between supermarkets and branded-firms play a *central* role in shaping competitive conditions in different EU markets for canned tuna. It also appears that where a market is highly oligopolistic, whether by canned tuna branded-firm (e.g. Italy), or by a combination of branded-firm and supermarkets (e.g. France and the UK), retail sales price is higher. Conversely, the relatively more fragmented market in Spain, both by branded-firms and supermarkets, seems to generate greater competition on price *despite* the high cost of the predominant raw material (yellowfin). Finally, in order to enhance profitability, firms are increasingly focussed on so-called ‘value added’ products (i.e. that use less tuna raw material). In the EU this has so far been a significant success only in France;<sup>56</sup> in Spain for example, the ‘innovation’ segment is reported to be only two percent of the market (EUInd#21; #22).

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<sup>56</sup> The other major success in ‘value added’ was StarKist in the United States (formerly owned by Heinz). It is the US market leader in ‘pouch’ tuna (aluminium packs), which accounted for an estimated 20 percent of StarKist’s business (sales in 2005 were US\$596 million), but around 50 percent of its profit (USInd#1; see also, Campling et al 2007: 292).

**Table 3.4: Supermarket concentration in major EU markets for canned tuna in late 2000s**

Country	Top 5 supermarket chains (and % share of total grocery sales)*	Top 5 supermarkets share of total grocery market*	Main 'national' brands of canned tuna (and % share sales)	Private label as % canned tuna sales
Netherlands	Albert Heijn (29.5); Superunie (29.5); Schuitema (C1000) (14.5); Aldi (9); Super de Boer (7.5)	90%	John West (43.5); Deep Blue (22.3); Princes (18.7) (2009/10)	15.5% (2009/10)
UK	Tesco (31); Asda (16.5); Sainsbury's (16); Morrisons (12); Co-op (5)**	80.5%**	John West (35.5); Princes (24.8) (2009/10)	38% (2009/10)
France	Carrefour (25.3); Leclerc (16.1); EMC Distribution (13.2); Auchan (12.6); ITM Enterprises (Intermarché) (12.6)	79.8%	Petit Navire (23); Saupiquet (18); Chancerelle (5) (2008)#	38% (2008)#
Germany	Edeka (18.6); Rewe (14.7); Metro (14); Schwarz (Kaufland & Lidl) (11.2); Aldi (10.5)	79%	Saupiquet (4).	95% (2010)
Spain	Mercadona (15.6); Carrefour (13.9); Alcampo (5.8); Dia (5.5); Eroski (4.1)	44.9%	Calvo (10.1); Albo (9.5); Garavilla (4.3) (2009)	65% (2009)
Italy	Coop Italia (18); Carrefour (10); Esselunga (8); Pam (3); Auchan (1)	40%	Rio Mare (34); Nostromo (12), Star (9), Palmera (7), Mareblu (6), Maruzella (6) (2002)	18.2% (2008)
Average level of concentration		69%	Top 2 brands: 20%	45%

\* 2006 or nearest available year; \*\* 2007 data for share of UK retail market for canned foods, which broadly mirror their positions in the overall market (Key Note 2009: 31); \*\*\* data for *canned fish* segment (for canned *tuna* private label had 44% in 2004); note that Petit Navire is the market leader for raw pack tuna, but Saupiquet is the leader for other packs ('standard' canned tuna, salads, etc).

Sources: Seafish 2008a: 13; 2008b: 13; 2008c: 11; 2008d: 14; 2008f: 12; Key Note 2008: 32; Euro Monitor 2009; Trovamal 2004: 114; ANFACO 2010; FRUCOM, pers. comm., 2011; AC Nielsen and IRI Grocery Outlets data supplied by various industry sources; interviews and person. comms. with industry representatives in 2010.

### 3.5.3 Supermarkets and canned tuna in UK: oligopolistic rent-seeking and downgrading

As the UK is the largest importer of canned tuna in the EU, a continued source of growth and the main destination of Seychelles exports (Chapter 6), it is worth taking a closer look at retail in this market. From 1995 to 1999 UK canned fish volume sales increased by only two percent, whereas canned *tuna* grew by 17.5 percent (and 21 percent in value) (Spruyt 2000: 103). This growth appears to have been stimulated primarily by supermarket strategies of promoting their private label and delisting tertiary brands from the shelf. The volume share of private label in the UK market rose from 41 to 49 percent between 1996 and 1999, but value share slightly declined (Spruyt 2000: 104).<sup>57</sup> In 1996 private label and branded product price was roughly equal, but in 2003 the latter was retailed at almost 11 percent more (Brus 2004: 123). This is evidence of the price war between supermarkets in the late 1990s on core category (or ‘price fighting’) products in a struggle over UK market share. The impacts of this price war would be keenly felt among suppliers, especially in the Solomon Islands and Fiji (see below). Other key explanations for growing sales were an increase in shelf space allocated to canned tuna and a ‘major increase’ in advertising, especially televised commercials, by both John West and Princes (Spruyt 2000: 104).

Unlike in the US this intensified competition did not result in a downward spiral in ever lower real prices (see above). According to a former senior manager at Princes, this was because John West and Princes played a ‘leading role in the development and direction of supermarket brands, in order to encourage sustainable growth for the entire category’ (Spruyt 2000: 104). In fact, Princes and John West collectively *increased* their value share of the UK market from 45 percent in 1996 to 56 percent in 2003, and their volume share from 40 to 50 percent (Brus 2004: 123) thus gaining one percent in value over volume sales.<sup>58</sup> In other words, unlike in the US (Lischewski 2000: 90; Krampe 2000: 116), the UK branded-firms did not engage in sharp price wars; instead they ensured conditions for the maximisation of

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<sup>57</sup> Branded product volume share remained relatively stable at between 39-41 percent, but its value share increased from 45 to 46 percent (Spruyt 2000: 104).

<sup>58</sup> The supermarket private labels simultaneously increased their volume share from 41 percent to 50 percent, indicating that tertiary brands were completely squeezed out of the market.

oligopolistic rents (or, in business-speak ‘sustainable growth for the entire category’).<sup>59</sup> As one manager put it: ‘The everyday price positioning is sufficiently high’ (EUInd#34). In addition, although the supermarkets compete using private label product, it would have been commercially illogical for them to continuously push the price point established by the two branded-firms below a margin where ‘sustainable growth’ (i.e. maximised profits) could be achieved. Instead it seems that the supermarkets engaged in a dual strategy of squeezing tertiary brands out of the market by only listing the two main branded-firms and exerting greater price pressure on their suppliers of private label product (apparently pocketing much of the savings, see below). However, as we saw earlier, with the shift in ownership of John West to MW Brands it shifted strategy and engaged in sharp promotional competition which ate into John West’s profitability. This is because MW Brands was pursuing its short-term remit of expanding market share before Lehman Brothers sold the investment tranche of which MW Brands was a part. This indicates that different types of business strategies and associated time-frames have important differential effects; as we shall also see in the example of UK supermarket relations with non-branded manufacturers.

The late 1990s competition for share of the UK market between Sainsbury’s and Tesco was sparked by the latter’s seemingly inexorable rise. Sainsbury’s competed directly on price, including on its private label canned tuna which contributed directly to *downgrading* for two non-branded manufacturers based in the Pacific islands. This is worth a short explanation because it gets to the heart of one of the problems of the GCC approach with its emphasis on a one-way process of *upgrading* (see Section 1.1.2). In 1987 Fiji was the second largest supplier to the UK and the Solomon Islands was sixth largest. Each was based on only one factory – Pafco and Solomon Taiyo respectively – set-up in the 1970s as joint ventures between national governments and Japanese multinationals (Doulman and Kearney 1987: 26; Barclay 2008; Ram-Bidesi 2003). Canned tuna from Fiji was promoted by Sainsbury’s through its private label product and benefitted ‘from a very good reputation in the UK’ (AfDB/INFOFISH 1991: 29), and around 70-80 percent of Solomon Taiyo’s production went to Sainsbury’s private label and the rest to John West and Tesco as well as local and sub-regional markets (PICInd#30; 38; IntFS#2; Doulman and Kearney 1987: 27). These two firms’ ‘high level of acceptance’ in the UK import market was ‘reflected in the high prices that the Pacific product commands’ (Elsy 1987: 92; IntFS#38). Their commercial success at

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<sup>59</sup> The two branded-firms do engage in sharp competition over raw material supply in the Western Indian Ocean (Chapter 6).

the time can be explained by three factors: first, as ACP states they benefited from duty-free access to the EU market; second, the UK market for canned tuna commanded a relatively high price in the 1980s, especially compared to the geographically-closer US market (see Appendix Figure 3B.1); and third, both canneries received an additional price premium on their product because their fish was caught using labour-intensive pole-and-liners (see Chapter 2). Sainsbury's explicitly marketed the product at a premium because of the reduced environmental impact of pole-and-line gear (EUInd#57-#60; PICInd#38; #30; TInd#9; USInd#18).

However, supplying just one major buyer was a commercial risk. The bitter battle for market share resulted in Sainsbury's putting a price squeeze on first-tier suppliers of several of its own-brand products, including canned tuna. In short, the new ex-factory price offered by Sainsbury's was not high enough to cover production costs: 'Sainsbury's always showed us a good price, but at the end of the day they didn't ... US\$ 34 per case became US\$ 21!' (PICInd#38; #30; IntFS#2). In short, these two canneries not only had to contend with the higher costs associated with production in small economies in a geographically isolated area (JInd#21-#26; Section 1.2.2), but price pressures generated through competition in the UK retail market had a devastating impact, *despite* the 24 percent margin of preference. It also seemed that customers were not willing to pay for Sainsbury's 'green philosophy' as the 'pole and line preference' came to an end (EUInd#57-#60).<sup>60</sup> These conditions of competition in the UK-centred commodity chain resulted in both firms downgrading from non-branded manufacturers of canned tuna to contract processors of tuna loins. Pafco became locked into an exclusive contract to supply loins to Bumble Bee's canning-only plant on the US mainland and Solomon Taiyo (renamed Soltai) to Tri Marine (the supplier of loins to Bolton Group's cannery in Italy) (EUInd#53; EUInd#57-#60; TInd#9; USInd#3; #4; #18; #22; see Campling et al. 2007: 229-230). One production site's loss was another's gain. Sainsbury's quickly shifted its source of supply to non-branded manufacturers in Ecuador and to IOT in Seychelles (EUInd#49; Gomez-Sanchez 2004: 167).

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<sup>60</sup> Paradoxically, due to intensive lobbying and public campaigns by Greenpeace and other NGOs, from 2009 onwards UK supermarket buyers were desperately searching for supplies of pole-and-line-caught canned tuna. (I was asked on numerous occasions by UK buyers if I knew any untapped sources of pole-and-line caught tuna.) While a fundamental dynamic of increasing importance to the EU- and US-centred commodity chains, 'sustainability' criteria such as 'dolphin friendly' standards are beyond the scope of this thesis.

### **3.6 Conclusion: Conditions of competition and chain governance in the EU-centred canned tuna industry**

This chapter detailed the relative concentration and business strategies of several canned tuna firms across principal EU markets in the context of the international division of labour in canned tuna production and different levels of supermarket concentration in these markets. The findings concur with the commodity studies literature on the general rise of supermarket power in agri-business chains. Evidence of ‘buyer drivenness’ includes ‘macro’ dynamics such as the dispersal of export-orientated canned tuna production in the international division of labour which allows buyers to engage in global sourcing and ‘micro’ supermarket buyer policies such as pushing various ‘costs’ onto suppliers. The former finding mirrors the tendency in a growing number of chains since the 1980s, especially with the neoliberal push to export-orientated development, which: ‘not only squeezes prices upstream along the chain, but gives an added advantage to those firms controlling market access whether through ownership of internationally recognized brand names or through control of retail space’ (Raikes et al. 2000: 398).

While there is a dispersal of the ownership and geography of production in the manufacturing node of the global commodity chain, there is simultaneously a tendency to concentration among EU- and US-centred branded-firms. Heinz/ MW Brands was identified as one of three lead branded-firms in the EU-centred commodity chain, but it is the only firm specialised in canned fish; Princes/Mitsubishi and Bolton Group are primarily marketing firms engaged in a wide range of consumer brand segments. Barriers to entry are high in the EU-centred commodity chain, with each principal market typified by two or three major canned tuna brands, and the rest increasingly squeezed out by supermarket private label product. In terms of branding, market entry is generally limited to a category leader and a second placed brand that have the economies of scale to absorb supermarket ‘cost’ demands. This tendency contributed to the rise of the three lead branded-firms operating simultaneously in multiple markets (i.e. the branded node became more concentrated to allow firms to maintain profitability in the face of ‘supermarket power’). As recognised by the industry itself, branded canned tuna firms function as an oligopoly (e.g. Levy 2000). However, we also saw that cultures of consumption and different levels of concentration among canned tuna branded-firms and supermarkets have an effect on market dynamics (e.g. the relative role of private label), retails prices and, it is believed, strategies of oligopolistic rent-seeking. The

findings demonstrate differential levels of buyer drivenness in the EU-centred commodity chain depending upon market structure and conditions of competition. In other words, supermarkets both condition competition (through market power) and generate changing competitive dynamics (e.g. product promotions and the relative weighting of private label).

The EU-centred commodity chain was shown to reflect complexities in the international political economy generated by historical relationships and tariff protection. The French and Spanish production systems were compared and the former was shown to have been based on colonial/post-colonial relations since the 1950s, while the latter remains centred on domestic production. So-called ‘value added’ production in France in the 2000s relies almost entirely upon on the ‘logic of loining’, while canneries in Spain apply a more complex ratio of labour time/cost to fish yield and the ‘tuna-tinplate factor’. Both locations are defined by their relationship to the international division of labour and protected by the EU tuna tariff regime, but while French firms have played a historically expansionist role, pioneering tuna canning in West Africa and the Western Indian Ocean, Spanish firms have tended to focus on domestic competition, with some expansion into the Italian market through the acquisition of national brands there since the 1990s and investment in EU-centred processing in Latin America, especially in the 2000s.

The case of Heinz/ MW Brands illustrated more concretely dynamics in the international division of labour, including in relation to the Seychelles as a location of production. As with StarKist in the US, Heinz European Seafood was based upon extensive vertical integration into fishing and processing and limited reliance on non-branded manufacturers. Its ‘global ocean’ sourcing strategy for raw material and canned product means that Heinz European Seafood/MW Brands procures from two different duty-free ACP locations in two oceanic regions, a form of industrial organisation that reduced risk and increased profitability depending upon how environmental and economic conditions affected either location at particular times. As in Chapter 2, this demonstrated the centrality of business strategies employed to mitigate the complexities and fluctuations of environmental conditions of production, especially Heinz/MW Brands control over Cobrecaf and ownership of the TTV fleet in Ghana. We also saw how Heinz chose to penetrate EU principal markets for canned tuna by buying-into existing brands, demonstrating the important role that established brands play as a barrier to entry, even for this globally-recognisable food brand. On a similar theme, the emergence of specialised ‘French’ and Spanish non-branded manufacturers showed how,

unless in a leading position, branded-firms were squeezed out of the market by the buying practices of increasingly concentrated supermarkets. Heinz/ MW Brands also illustrates how different types of ownership demand higher (or lower) profit rates and how this translates into specific business strategies, with Heinz trying to generate above normal financial returns and Lehman Brothers trying to boost market share over a four to five year timeframe so as to increase resale value for its investors.

In his analysis of US-centred clothing and apparel chains, Gereffi argues that profits in buyer-driven commodity chains derive more from ‘unique combinations of high-value research, design, sales, marketing, and financial services’ than from ‘scale economies and technological advances as in producer-driven chains’ (1994: 99). Similarly, Gibbon et al. argue that: ‘Vertical integration was much less common in buyer-driven chains, since independent contractors performed production functions here, while lead firms concentrated instead on product development, branding, design and marketing rather than manufacturing’ (2008: 320). Neither is the case for the EU-centred canned tuna chain. Instead we see a range of different approaches by lead branded-firms, with some owning processing facilities and focussing on economies of scale and technological innovations (MW Brands), and others more on their role as ‘strategic brokers ... linking overseas factories and traders’ (Gereffi 1994: 99), such as Bolton Group.

We also saw how competitive dynamics between supermarkets in the UK directly resulted in the *downgrading* of non-branded manufacturers of canned tuna in Fiji and Solomon Islands to become contract processors of tuna loins, but simultaneously how the branded-manufacturer Heinz quickly stepped in to supply lower priced private label to replace them using its factory in Seychelles. This is a clear indication of chain governance by supermarkets, especially in relation to non-branded manufacturers. In terms of the implications for ‘upgrading’, it appears that concentration among supermarkets and branded canned tuna firms in the EU-centred chain severely limits the possibility of new entrants, even if they are major coastal state ‘resource owners’. The volatility of tuna raw material price fluctuations lessens as the commodity moves through the various nodes of the chain – from fishing to processing, wholesaling/importing and, finally, retail. In addition, wholesalers and supermarkets especially are able to mitigate price fluctuations through the control of inventories (e.g. King 1986: 11). For smaller manufacturers and fishing vessel owners these competitive conditions



are generally translated into reduced profit margins for upstream suppliers (EUInd#57; PICInd#44–#47; USInd#1).

Degrees of ‘drivenness’ in commodity studies is often typified by barriers to entry, so that if they are particularly high in the production node the chain will be producer driven, and if they are low they will be buyer driven (e.g. Raikes et al. 2000: 397). But while the capital and operating costs of a purse seine fleet are very high, this node of the chain is not producer-driven. Instead, boat owners are subject to pressures of buyer-drivenness which translate into sharp struggles over raw material price between boat owners and processors (unless vertically integrated). It appears that one of the reasons for this is that, ecological conditions allowing, purse seiners will catch the same amount regardless of price – aside from exceptional circumstances such as the 1999/2000 cost-price squeeze (see Appendix 2C.2) – which is the result of a combination of fragmented ownership of the global fleet and high levels of overcapacity. One industry representative cited ‘the tremendous pressures that retailers are putting on suppliers’ and that this pressure translates downstream to boat owners, who ‘get hit the hardest’ because they ‘are the least organized’ (USInd#2) (and the least concentrated!). This is why the various regulatory mechanisms available to the EU DWF are so important to their commercial survival, as we shall see in Chapter 4 on the EU fisheries subsidies regime and in Chapter 5 on preferential rules of origin.

**PART II**  
**REGULATORY MECHANISMS**

## Chapter Four

### International Resource Regulation and the EU Common Fisheries Policy, 1970s-2000s

#### 4.1 Introduction

Part I traced the ‘economic’ aspects of the EU-centred commodity chain across three ‘nodes’ – purse seine fisheries, branded-manufacturing and supermarket retail. While the rise of supermarket power certainly contributes to driving the chain both through specific buyer demands and wider conditions of competition in retail (e.g. private label, the squeezing out of tertiary brands), we also saw that the structures of principal EU markets have differential effects for branded and non-branded-firms. The case of Heinz European Seafood/ MW Brands – as well as the main Spanish branded-firms – demonstrated that backward integration into the fishing node is a major business strategy. Chapter 3 concluded by arguing that, of the three nodes, firms engaged in fishing are under the greatest amount of economic pressure because they are the most immediately effected by fluctuations in tuna raw material prices and gasoil costs, as well as the vagaries of changing environmental conditions of production. Chapter 2 established that there are very high levels of concentration in the French distant water purse seine fleet and that the ownership of the Spanish equivalent is more fragmented and can be differentiated by business strategies, typified by vertical integration (OPAGAC members) or specialisation in fishing (ANABAC members). Along with the French-flagged boats controlled by Cobrecaf and the Kühn-Ballery *et al.* consortium, five Spanish firms – Albacora (a member of OPAGAC) and Inpesca, Atunsa, Echebstar and Pevasa (ANABAC) – were identified as the main seven corporate players fishing in the Western Indian Ocean.

Despite the importance of differentiation at the level of the firm, Chapter 2 also established that the French and Spanish fleets can be categorised as the EU DWF since the mid-1980s because they are active in the same fishing grounds and receive substantially the same supports from the European Union. This chapter is largely about these supporting mechanisms and how flux in the wider international political economy in the 1970s provided

a basis for some of their elements, but also suggests how EU regulatory mechanisms are a historical product of prior practices by, for example, the French state. An additional regulatory mechanism designed to benefit the EU DWF, again established in the 1970s, is the EU tuna trade regime, especially preferential rules of origin for fish products, addressed in the following chapter. In short, Part II of the thesis identifies and analyses the major ‘political’ dimensions of the EU-centred commodity chain and situates them in historical context. This chapter focuses on the regulatory mechanisms of the fishing node (thereby connecting directly to Chapter 2) and Chapter 5 examines trade regulation in the processing node, especially for the ACP (connecting directly to discussion of the international division of labour and industrial organisation of lead firms in Chapter 3).

The next section addresses two components of the international legal governance of tuna fisheries, first the centrality of the Law of the Sea as an institutional condition of resource access which provides coastal states with economic sovereignty over the marine resources in their waters. This historicises this regulatory mechanism and reiterates the centrality of Seychelles as an indispensable strategic location to commercially-viable purse seine fisheries in the WIO (Chapters 2 and 6). The second component is the regulatory mechanism of the relevant regional fisheries management organisation – the Indian Ocean Tuna Commission – and its failure to limit unsustainable fishing activities, especially for yellowfin tuna (connecting back to the discussion of productivity enhancing measures in the WIO fishery in Chapter 2).

Section 4.3 moves from this general account of resource regulation to particular mechanisms designed by the EU under the Common Fisheries Policy (CFP) to support its ‘home’ DWF. It first identifies and assesses CFP payments for vessel construction and modernisation and a price subsidy *specific* to canning-grade tuna fisheries, and then examines EU support in negotiating and, again, subsidising the EU DWF is its resource access strategy with third countries (e.g. Seychelles). These subsidies are important not only because of the EU DWF’s relatively high operating costs compared to non-Japan Asian competitors (see Appendix 2B), but also to its commercial survival in the face of the price-cost squeeze which combines high fuel prices and the role of ‘buyer drivenness’ in pushing down raw material prices (Appendix 2C.3).

## 4.2 International Legal Governance of Tuna Fisheries

Tuna fishing is subject to various forms of international regulation.<sup>1</sup> The regimes of ‘hard’ and ‘soft’ international law that directly and indirectly govern tuna fisheries in particular and marine fisheries in general are complex and multilayered. They include standards protecting seafarers under the International Labour Organisation; International Maritime Organisation conventions on vessel safety and pollution; FAO agreements and codes of conduct on ‘responsible fisheries’ and fishing on the ‘high seas’, as well as on combating illegal, unreported and unregulated (IUU) fishing; and fisheries components of broader United Nations agreements on the environment and ‘sustainable development’ such as Agenda 21 (1992) and the World Summit on Sustainable Development (2002). Two major institutional regimes are focussed on here because of their centrality to the business activities and strategies of tuna fishing firms.

The regulation of *resource access* is a central consideration and takes two main institutional forms. The Law of the Sea delineates economic sovereignty over resources within a given territorial area. We trace the historical emergence of the Law of the Sea and highlight tensions in international law between coastal states (‘resource owners’) and distant water fishing nations (‘resource users’) over access to highly migratory fish stocks, especially tuna. The second form is the attempt to ‘manage’ tuna fisheries on the basis of regional stocks. The most relevant regional fisheries management organisation for this thesis is the Indian Ocean Tuna Commission. It limits fishing in the oceanic area for which it is responsible to vessels that are flagged and registered with member nations (see zones 51 and 57 in Appendix 2A). The following addresses these two institutional forms in turn.

### 4.2.1 The Law of the Sea

Since its development by Hugo Grotius in the early 1600s at the height of Dutch maritime power, the freedom of-the-seas doctrine meant that – apart from a slim strip of coastal waters – the oceans are often typified in international legal practice as ‘a thing common of all’ (*res communis omnium*) to the exclusion of national claims to political control or territorial

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<sup>1</sup> Issues in and debates around fisheries management are not addressed in this thesis.

sovereignty (Lall and Khemchand 1997: 10; Division for Ocean Affairs and the Law of the Sea 1998),<sup>2</sup> except of course where, between equal rights, military force decides. However, as pointed out by Bromley (2008: 9-10) this is better categorised as *res nullius* (nobody's property) as the oceans are an open access resource (see also Pontecorvo 1988: 361). The first declaration against this doctrine was made by the US in 1945 when it extended national jurisdiction 'to all resources on the subsoil and seabed of the continental shelf'; a move that was clearly motivated by access to mineral resources (mainly oil) (Cantorna et al 2009: 373 footnote 35; Hollick 1981). This was closely followed by similar declarations in 1947 by Chile, Ecuador and Peru (Loftas 1981: 232). Two UN conferences on the Law of the Sea in 1958 and 1960 attempted to negotiate the outer limits of territorial waters, but this was not agreed until the third United Nations Convention on the Law of the Sea (UNCLOS).<sup>3</sup>

The UNCLOS negotiation process (1974-1982) was characterised by deep disputes, including, and of most relevance here, contradictory approaches to 'highly migratory' species.<sup>4</sup> On the one hand, distant water fishing nations (DWFNs) argued that because highly migratory species move from one countries' exclusive economic zone (EEZ) to another (as well as into the high seas) they cannot be the property (or responsibility) of any single state. Therefore, access to highly migratory stocks should be open to all, including, of course, to DWFNs. Coastal states, on the other hand, argued that they had the sovereign right over *any* fish while it is in their 200 mile EEZ (Joseph 1977: 280). The negotiated agreement resulted in an uneasy compromise to 'solve' these contradictory positions. From the end of 1982, coastal states were allocated sovereignty over the exploitation and management of all living resources within their EEZs 200 nautical miles from their coasts. Foreign fleets wanting to

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<sup>2</sup> Grotius wrote *Mare liberum* (1608) as a justification for Dutch trade with the East Indies, 'alarmed that a few nations might try to gain control of shipping lanes and restrict the advantageous commerce of his native land' (Bromley 2008: 9; Butler 1990: 210).

<sup>3</sup> United Nations Convention on the Law of the Sea, Montego Bay, 10 December 1982. The assumptions of UNCLOS III in relation to marine fisheries resources were influenced by Hardin's (1968) 'tragedy of the commons': that resources open to all inevitably lead to environmental deterioration, hence the need for their privatisation. Historical and ongoing debates in Marxian, Malthusian, neoliberal institutionalist and 'common property resources' traditions around 'the commons' and their bearing on tropical tuna fisheries (including 'rights based' management) cannot be engaged with here (for a short discussion, see Campling et al. 2012). Questions around the commons, property rights, ground-rent and (capitalist) 'landed-property' in marine fisheries will be the subject of future comparative work on extractive industries. (See Capps (2010) for an exceptional application and development of Marx's category of landed-property to the case of the chieftaincy and extractive industry (platinum mining) in South Africa. See also, Fine's (1994) attempt to establish a general theory of mining.) Havice and Campling (2010) offer an initial attempt to critically engage with new institutionalist economics conceptions of fisheries property rights in relation to the WCPO tuna fishery.

<sup>4</sup> The elongation of the negotiations was due particularly to disputes over a regime for the deep sea bed (and thus access to oil).

access the resource would pay to do so. A ‘development clause’ granted coastal states the ability to (temporarily) block foreign access to their waters in order to develop domestic fishing capacity (UNCLOS, Article 56: 1a).<sup>5</sup> However, in direct tension with the development clause, UNCLOS also mandated that coastal states offer fishing access where they were unable to exploit ‘surplus’ stocks themselves (the so-called ‘use it or lose it’ clause) (UNCLOS, Article 62: 2). It should be noted that it took some years for the sovereignty over tuna access to become a global norm. For example, the United States (a major DWFN) refused to recognise the sovereignty of Pacific island countries over highly migratory species, initiating a ‘tuna war’ (Teiwaki 1987; Tsamenyi 1986). That is until its hand was forced when Soviet fleets were poised to deepen their penetration of the fishery through an expanding network of access agreements, which, in the geo-political context of the ‘second’ Cold War, resulted in US acquiescence and the formation of a multilateral tuna access treaty with the islands.

UNCLOS was negotiated in a period of flux in the world economy and, to an extent, in relative levels of asymmetry in the inter-state system. The 1970s witnessed the apex of ‘Third Worldist’ demands, including the call for a New International Economic Order and assertions of ‘resource nationalism’ (Campling 2006).<sup>6</sup> (See Chapter 5 on the parallel importance of these dynamics to ACP-EU relations around preferential trade rules.) In this context, it was argued that UNCLOS could serve as an institutional mechanism to coordinate a substantial redistribution of resources from DWFN fleets to developing country interests (Copes 1981: 223; Loftas 1981: 229, 232; Ogley (1977) citing Pardo and Borgese (1976); Pontecorvo 1988: 363). In fact, UNCLOS provided a *de jure* legal basis for a *de facto* (albeit partial) legal reality in that it made legal provision for the EEZs already unilaterally declared by scores of coastal countries by 1976.<sup>7</sup> One of the peculiar features of UNCLOS was that its draft terms during negotiation became part of customary international law before the convention itself was concluded. UNCLOS (1982) had two major implications for tuna fisheries. First, countries declared sovereignty over up to 90 percent of the planet’s tuna stocks in what was

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<sup>5</sup> The ‘development clause’ and the following ‘use it or lose it’ clause are open to diverse interpretation in their application in international law.

<sup>6</sup> See Schurman (1998) on the ‘resource nationalism’ of the Pacific islands in regard to tuna fisheries.

<sup>7</sup> The ‘common extension’ of EEZs to 200 miles is usually dated from 1976 (Cantorna et al 2007: 368) or 1977 (Schmidt 2003: 2) when it was introduced by the United States, Canada, the EEC and others. On the EEC extension of its members’ national fishing areas from 12 to 200 miles in 1977, see Churchill (1987: 69-71), Garza-Gil et al (1996: 254) and Lequesne (2004: 23-4).

the largest and most rapid series of state-led enclosures in human history. Second, coastal state resource ‘owners’ had a firmer basis in access negotiations with DWFNs.

Given the context of an uneven international political economy and the importance of tuna resources to industrial fishing fleets and their home states, it is no surprise that optimistic assumptions that UNCLOS would redistribute resources to developing countries turned out to be misplaced. As pointed out by Rachel Schurman in relation to tuna-related development in the Pacific islands, the ‘variables that critically mediate the relationship between property rights and income distribution are economic and political power’ (Schurman 1998: 133). As demonstrated in Chapter 2 and below, the economic and political power of European fishing interests (mediated by the EU) would define the dynamics of the WIO purse seine fishery from its outset.

In addition to the formal creation of EEZs, UNCLOS also included specific mention of the *management* of highly migratory species. It mandated that coastal states and DWFNs:

shall cooperate directly or through appropriate international organizations *with a view* to ensuring conservation and promoting the objective of optimum utilization of such species throughout the region, both within and beyond the exclusive economic zone. In regions for which no appropriate international organization exists, the coastal State and other States whose nationals harvest these species in the region shall cooperate to establish such an organization and participate in its work. (UNCLOS, Article 64. Emphasis added.)

This was a clear recognition of the fallacy of a core assumption behind Grotius’ freedom of-the-seas doctrine as applied to the modern high seas: that, while “[m]ost things become exhausted with promiscuous use”, the sea “can be exhausted neither by fishing nor by navigation” (Grotius as cited by Schneider 1977: 149). Problematically, this fallacy was replaced with another – the ‘tragedy of the commons’ (Hardin 1968);<sup>8</sup> a reactionary neo-Malthusian thesis that has formed the ideological corner-stone of most mainstream analyses of the economics of fisheries ever since.<sup>9</sup> However, as indicated by the added emphasis in the passage from UNCLOS, this was a relatively weak legal commitment, especially for oceanic

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<sup>8</sup> See Bernstein (2010b: 307) and Skladany et al (2005) for critical notes from a Marxist perspective.

<sup>9</sup> Despite Hardin’s ‘false diagnosis’ (Bromley 2008: 1), his article and two other works in neoclassical economic theory on fisheries (Gordon 1954; Scott 1955) remain ‘seminal’ references in the mainstream fisheries economics literature. For a brief summary of the mainstream social science approaches to fisheries, see Salz et al (2007: 47-63), and for a representative selection in fisheries economics see Sumaila et al (2007b).



areas *beyond* the remit of EEZs – the high seas – which total almost 60 percent of the global oceans (Cullis-Suzuki and Pauley 2010: 1036).

An attempt to redress this problem came with the follow-up to UNCLOS, the 1995 UN ‘Fish Stocks’ Agreement.<sup>10</sup> The sole focus of this Agreement was on highly migratory fisheries and those that straddle EEZs and the high seas. Among other things, the Fish Stocks Agreement clarified the UNCLOS mandate on cooperation between coastal states and DWFNs over the management of straddling and highly migratory fish stocks in EEZs and, especially, the high seas. It included the requirement that regional fisheries management organisations (RFMOs) be formed where they did not already exist. The Fish Stocks Agreement ‘thereby significantly strengthened the position of RFMOs as the paradigm through which States are to cooperate in order to achieve and enforce conservation objectives on the high seas and in areas under their jurisdiction’ (Lodge et al 2010: viii; see also Barston 1999). The Agreement put an end to the final vestige of the Grotian doctrine as applied to tuna: the high seas were no longer ‘a thing common of all’. A direct outcome was the formation of a tuna RFMO in the Western and Central Pacific Ocean in 2000, which legally enclosed the high seas areas of the world’s largest principal market tuna fishery.<sup>11</sup>

#### **4.2.2 Regional fisheries management: The case of the Indian Ocean Tuna Commission**

The first regional fisheries management organisation (RFMO) was set up in the Eastern Tropical Pacific in 1950 as an institutional response to the complex international political-economic issues thrown-up by the industrialisation and geographical expansion of tuna fisheries. As the species are ‘highly migratory’<sup>12</sup> and thus outside of the sovereign control of any single EEZ, international cooperation is necessary in any attempt to seriously ‘manage’ (and extract rents from) the fishery. There is limited engagement in this thesis with the

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<sup>10</sup> Its full title is the United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, New York, 4 August 1995, UN Doc A/CONF.164/37 (8 September 1995). It has been in force since 11 December 2001.

<sup>11</sup> The Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean was opened for signature in September 2000 and entered into force on 19 June 2004. This mandated the creation of the Western and Central Pacific Fisheries Commission (WCPFC).

<sup>12</sup> See discussion in Chapter 2.

history, negotiations and regulatory activities of tuna RFMOs. Their widely recognised failures are a major reason for their exclusion from the analysis (i.e. that they have had very limited impacts on levels of extraction).<sup>13</sup> The most important failure has been a general lack of effective limits to unsustainable fishing of certain tuna species,<sup>14</sup> *especially* in the Indian Ocean where only minor regulation has been introduced by IOTC in response to scientific advice (Anonymous 2009: 28-9).<sup>15</sup> The failure of RFMOs to introduce effective resource management interventions, it is argued here, stems predominantly from the political-economic pressures of fishing firms on their home and/or host states (and the competitive contradictions between them) in the context of the widely acknowledged global overcapacity of tuna fleets (Hinton 2007; Joseph 2003, 2004; see also Allen 2010: 30).<sup>16</sup> This may well lend credence to the claim that fisheries biology more generally is duplicitous in its predominant concern ‘with the welfare of the fishing industry’ rather than resource conservation (Pauly 2009: 215). For example, the main institutional objective of IOTC is to ‘promote cooperation among its Members with a view to ensuring, through appropriate management, the *conservation* and *optimum utilization* of stocks’ (IOTC 1993: Article 5(1). Emphases added). Rather a tension-laden task! All the more so given that ‘appropriate management’ has not been attempted and that ‘optimum utilisation’ has not even been properly defined (Anonymous 2009: 29).

The most important *legal* limitation of the IOTC Agreement (concluded in 1993, in force since 1998) is that it has not been revised to take account of major changes in international fisheries law and management best-practice, including, among several others, UN Fish Stocks (signed in 1995, in force since 2001) and the FAO Compliance Agreement (adopted in 1993,

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<sup>13</sup> On the failure of RFMOs to sufficiently regulate tuna fisheries see Allen (2010), Lodge et al (2010), Cullis-Suzuki and Pauley (2010), and, most of all, the tuna RFMO performance reviews published in 2009, available at: <http://www.tuna-org.org/>

<sup>14</sup> Only IATTC has ‘a strict capacity limitation regime in place’, but even there, ‘the limit provided ... for the purse-seine fleet capacity is far above the optimum fleet size’ (Allen 2010: 29).

<sup>15</sup> It should be noted that IOTC recognised the necessity of capacity limits (Joseph 2003, and below), but concrete actions were inadequate.

<sup>16</sup> As pointed out by Symes (1997: 145) in reference to the EU’s Common Fisheries Policy, while it ‘is nominally a science-based policy, when scientific advice has been refracted through the political process, it may appear to shed little light on the final decisions’. While fisheries specialists and industry representatives regularly discuss political-economic relations in private, the literature almost entirely ignores competitive accumulation as a fundamental mediating force on the fisheries ‘management’ potential of RFMOs. For a short development of this argument see Campling and Havice (2010c), which examines the role of competitive accumulation in the failed attempt in 2010 to use CITES to temporarily ban the international trade in Atlantic bluefin. Franchino and Rahming (2003) and Brandt and Svendsen (2009) offer highly formalised game-theoretic accounts of (methodologically individualist) ‘motivations’ of fishers and fisheries managers; for a sophisticated and empirically-rich antidote on similar themes, see Lequesne 2004: ch. 2.

in force since 2003) (Anonymous 2009).<sup>17</sup> These two agreements are particularly important as they are legally-binding on signatories (i.e. so-called ‘hard’ international law), although several IOTC Members have not ratified one or both (Anonymous 2009: 16). Therefore, after only a few years after its conclusion the IOTC Agreement was outdated in terms of international fisheries management standards (e.g. the precautionary approach and ecosystems-based management). More important is the failure of IOTC members to agree multilaterally to any effective limits on fishing either in terms of input (fishing capacity) or output (catch) measures, despite the view of the IOTC Scientific Committee that yellowfin tuna is probably in an overfished state (Table 4.1).

**Table 4.1: IOTC Scientific Committee stock status for principal market tuna, 2009**

Species	Stock status summary
Albacore	Stock size and fishing pressure are considered to be within acceptable limits. Catches, mean weight and catch rates of albacore have been stable for over 20 years.
Bigeye	Stock size and fishing pressure are close to the optimal (MSY) indicating that the stock is fully utilized. Indicators of stock size have shown a gradual decline since 1970s.
Skipjack	Skipjack is a highly productive species and robust to overfishing. Catches have increased with increasing fishing pressure, but the trend of some indicators suggests that the stock status should be closely monitored. Stock size and fishing pressure are considered to be within acceptable limits.
Yellowfin	Stock size is close to or has possibly entered an overfished state recently. Fishing pressure has been too high in recent years resulting in a decline of the population to levels below the optimal. Currently, the population might not be able to sustain the 1992-2002 level of catches. Recommends management measures to control fishing pressure

Source: IOTC 2009: 4

A major justification for the lack of management interventions by IOTC is that the bioeconomics of fishing activities will regulate themselves (IntFS#36). Overfishing will lead to lower CPUE and result in the decline in vessel profitability; in turn this will lead vessels to exit the fishery until stocks have recovered, allowing an eventual return to profitable CPUE. The problem with this logic is that it assumes that firms function in economic equilibrium in conditions of perfect competition. In so doing it ignores both the centrality of fisheries

<sup>17</sup> ‘FAO Compliance Agreement’ is the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas.

subsidies as major economic props to profitable fishing operations (production ‘distortions’ for neoclassical economics)<sup>18</sup> and, in some cases, vertical integration into processing where fishing activities can (at least in principle) be cross-subsidised within the firm in order to ensure strategic supply of raw material (see Chapters 2 and 3). In the more concrete context of threatened yellowfin stocks, IOTC management interventions were inhibited by divisions among members around two contesting hypotheses to explain record catches in 2003-06 – ‘recruitment vs. catchability’.<sup>19</sup> Proponents of the former argued that favourable environmental conditions in 1999-2001 led to increased recruitment (i.e. reproduction) in the yellowfin biomass. As the species matures at 2.8 years (Section 2.2), high catch rates were simply the result of an abundance of yellowfin. This position makes fishing input or output controls unnecessary. It thus supports the status quo of existing fishing interests as well as developing countries with fisheries development aspirations. The second hypothesis explains the record levels of exploitation through the increased productivity of tuna fleets. There was an increase in ‘catchability’ of yellowfin because of high levels of spatial and depth-range concentration of fishing effort, especially on FADs (see Chapter 2). This implies that the 2003-06 boom in catches will result in a reduction in stock size and indicates the necessity of limitations on fishing to facilitate resource sustainability and, in turn, profitable CPUE for existing fleets.<sup>20</sup>

The IOTC Scientific Committee supports the catchability hypothesis, but its (purely advisory) recommendations in 2009 (Table 4.1) were simply sidelined by IOTC members. Similarly, Scientific Committee recommendations in 2007 based on the catchability hypothesis called for yellowfin catch to be reduced to pre-2003 levels and for a freeze on fishing capacity. The only action by IOTC was to limit the number of industrial vessels flagged by members with more than 50 vessels of specific gear types. This had no effect on limiting catch (Allen 2010: 24; Anonymous 2009: 24; see also IOTC Resolution 03/01). However, given the uncertainties

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<sup>18</sup> See below on subsidies available to the EU DWF. See also Surís-Regueiro et al (2002: 118), which, in an analysis of EU subsidies and fleet profitability (albeit using vessels other than the DWF), concludes that, ‘if we consider all the possibilities for public aid and subsidies that exist, the financial return on the investment in the fishing sector can reach reasonable levels, comparable to the return obtained from other alternative investments’.

<sup>19</sup> Catches of yellowfin tuna in the IOTC region averaged 456,000mt per annum in this period compared to the previous record high of 395,000 tonnes in 1993 (IOTC 2009: 92-94; Allen 2010: 24).

<sup>20</sup> This point has long been understood. For example, at the London Overfishing Conference in March 1946, the British government pointed out that, “if fishing is uncontrolled, the level of stocks [in the Northeast Atlantic - LC] will inevitably fall, the catch per unit of effort will diminish progressively and fishing will become unprofitable” (E. S. Russell (1946) as cited by Meuriot 1986: 295). See Economic Assessment of European Fisheries (2004) for estimated net profitability of a wider range of EU fishing fleets in 2004.

of stock estimates in fisheries science in general combined with the specific limits on estimating IOTC stocks because of poor compliance with reporting requirements (especially by artisanal fleets, but also by several DWFs), biomass would have to fall well below maximum sustainable yield (MSY) before scientists could confidently identify this fall (Anonymous 2009: 24). In other words, without the application of a precautionary approach, fisheries science will only be able to *prove* a problem once it has occurred.

### **4.3 The Common Fisheries Policy, Resource Access and the European Purse Seine Fleet**

The profitability of the EU distant water tuna purse seine fleet (DWF) depends upon catch levels and quality, the rate of exploitation on vessels and vertical integration into processing and/or branding, but crucially is also supported via regimes of fisheries subsidies, directly from EU member states and via the European Commission (EC). The issue of fisheries subsidies is as complex as it is contentious. Concern over the environmental and economic effects of subsidies paid to fishing activities has been highlighted since the late 1990s by environmental NGOs (especially WWF and Oceana) and international institutions (i.e. the OECD, UNEP, World Bank and the WTO) (see, for example, OECD (2005); Schorr (2004); UNEP (2008); WWF (1997); WT/CTE/W/51, 1997). WTO members subsequently identified fisheries subsidies as a major contribution to overcapacity and overfishing in global marine fisheries.<sup>21</sup> As a result, a new draft agreement on disciplines for fisheries subsidies is being considered as part of the Doha Round negotiations.<sup>22</sup> Due to limits of space, this thesis cannot engage with debates on the economic assumptions underlying these debates, the validity of the WTO as an institution able to regulate environmental issues, the possible (differential) impacts of proposed rules on fishing operations, or the (differential) developmental implications of proposed disciplines on coastal developing states (for summaries of these

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<sup>21</sup> Recognised as a formal component of the Doha Round with the WTO Ministerial Declaration in 2001, the commitment to negotiating disciplines on fisheries subsidies was heightened and deepened in the Hong Kong Ministerial Declaration in 2005 (WT/MIN(01)/Dec/1, 2001: para 28; WT/MIN(05)/Dec, 2005, Annex D, para 9). Proposed disciplines on fisheries subsidies are one component of the negotiation modalities on 'Rules' in the Doha Round.

<sup>22</sup> The author has acted as trade policy consultant to the Pacific Islands Forum Fisheries Agency (FFA) since November 2007, whose members have very similar interests to the Seychelles. This has included direct representation of the Pacific Islands at the WTO Fisheries Clusters in the NGOR since the beginning of negotiations on the Group Chair's Draft Text in December 2007. He attended the majority of these multilateral meetings (as well as informal bilateral meetings held in parallel) in Geneva until February 2011. For overviews, see *FFA Fisheries Trade News* (various issues) and a draft paper on the political economy of the negotiation process (Campling and Havice 2010a).

debates, see Campling and Havice 2010a; Chang 2003; Grynberg and Tsamenyi 1998; Grynberg and Rochester 2005; Young 2008). What *is* important to the analysis here is the existence of an extensive regime of subsidies made available to the EU fishing fleet, one of the most highly subsidised in the world (Milazzo 1998; PricewaterhouseCoopers 2000; Sumaila and Pauly 2006; WWF 2001).

#### **4.3.1 The Common Fisheries Policy and EU DWF subsidies, 1994-2006**

Three types of *direct* EC subsidies have been identified as particularly important to the ‘competitiveness’ of the EU DWF, each falling under a separate pillar of the Common Fisheries Policy (CFP).<sup>23</sup> The CFP ‘structural policy’ includes payments for vessel construction and modernisation; a second CFP pillar, the ‘common organisation of the markets’, includes a ‘compensatory allowance’ price subsidy scheme specific *solely* to canning-grade tuna; and the third pillar includes subsidised access to coastal developing country EEZs (addressed in Section 4.3.2). The final and fourth pillar of the CFP is its resource conservation policy.<sup>24</sup>

Under European Community law, either individual boat owners or nationally recognised ‘producer organisations’ (see Section 2.5) can qualify for financial support from the Commission (EC 2002: 5). The Financial Instrument for Fisheries Guidance (FIFG) falls under the CFPs ‘structural’ pillar. FIFG funds were often matched by national governments (Sporrong and Bevins 2002: 2). The core strategic objectives of the FIFG (1993-2006) were:<sup>25</sup>

- a) ‘to contribute to achieving a sustainable balance between fishery resources and their exploitation;

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<sup>23</sup> Other sources of *indirect* EC funding to benefit the fishing industry – including to areas with lower levels of economic development (‘Objective 1’ regions) – are regional development and social funds, *de minimis* fuel subsidies, and *ad hoc* aid (Sporrong and Bevins 2002: 1-2, 4; Lequesne 2004: 85). In addition, as noted in Chapter 2 and in Meuriot (1986) and Lequesne (2004: 32-37, 89), sub-national and national-level subsidies were also critically important to the development of the French and Spanish industrial fleets.

<sup>24</sup> For a range of analytical overviews of the policies, practice and impacts of the CFP see Boude *et al.* (2001), Borg (2009), Hatcher (2000), Lequesne (2004, 2005), Surís-Regueiro *et al.* (2003), Symes (1997), Villasante (2010), and Villasante and Sumaila (2010)

<sup>25</sup> A major stated objective of the FIFG replacement – the European Fisheries Fund (2007-2013) – was also to ‘strengthen the competitiveness of the operating structures and the development of economically viable enterprises in the fisheries sector’, among several other objectives around ‘sustainable development’, gender equality, and so on. Council Regulation (EC) No 1198/2006, Article 4(d).

- b) to strengthen the competitiveness of structures and the development of economically viable enterprises in the sector;
- c) to improve market supply and the value added to fishery and aquaculture products;
- d) to contribute to revitalising areas dependent on fisheries and aquaculture.’ (Council Regulation (EC) No 1263/1999, Article 1(2))<sup>26</sup>

Together these objectives clearly justify subsidies for the expansion of EU fishing fleets. Vessel construction and vessel modernisation subsidies paid under the FIFG to the entire EU fishing fleet totalled €1.6 billion over the period 1994-2006 (Mulvad and Thurston 2009: 5).<sup>27</sup> According to available data, the EU distant water tuna purse seine fleet received around three percent of these payments, valued at €55 million (Table 4.2).<sup>28</sup> Given that the total EU fleet consists of 88,236 commercial fishing vessels and that the EU flagged DWF totals only 56 boats,<sup>29</sup> three percent of FIFG vessel construction and modernisation subsidies were channelled to only 0.06 percent of the total number of boats in the EU fishing fleet. However, the EU DWF consists exclusively of very large industrial-scale vessels and in terms of fleet *capacity* it constitutes six percent of the total gross tonnage (GT) of the EU fleet, and three percent of total EU fleet power (measured in kW).<sup>30</sup> On this basis, the EU DWF receives a relatively equal proportion of FIFG vessel construction and modernisation subsidies compared to the aggregated GT and kW of the total commercial fleet. (The relative weights of fleet gross tonnage and power also serve to reiterate how highly capitalised the DWF is compared to the majority of EU fishing vessels.)

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<sup>26</sup> Note that a major finding of the official ex-post evaluation of the FIFG was that its strategic objectives did not take account of the need to limit fishing effort (Ernest & Young 2010a: 160; also, SEC(2010)428 final). A shadow evaluation was far more critical of the failure of FIFG to address fishing capacity and effort problems (Poseidon 2010).

<sup>27</sup> These authors (writing for EU Transparency) refer to subsidies paid under the CFP rather than the more specific instrument of the FIFG. However, their data is based solely on EC payments under the FIFG.

<sup>28</sup> Mulvad and Thurston (2009: 13) report a total of only €28 million in subsidies paid under the CFP for vessel construction and modernisation of an (unspecified) ‘EU tuna fleet’. I used a list of known EU purse seine vessels (Oceanic Développement 2008) – cross-checked with DG MARE’s vessel registry (<http://ec.europa.eu/fisheries/fleet>) – which I then used to extract data from Mulvad and Thurston’s own database to come to the totals in Table 4.2.

<sup>29</sup> COM(2008) 902/final 2

<sup>30</sup> Total EU fleet capacity: 1,835,174 GT; and total EU fleet power: 6,572,007 kW (both at 31 Dec 2007) (COM(2008) 902/final 2, p.7). EU DWF capacity: 117,564 GT; and fleet power: 178,671 kW (Oceanic Développement 2008).

**Table 4.2: Vessel construction and vessel modernisation subsidies paid to EU distant water tuna purse seine fleet under FIFG, 1994-2006**

Item	Coverage*	Value
Total payments to Spanish DWF	88% of fleet (29 of 33 vessels)	€52,096,220
Average per Spanish purse seiner	--	€1,796,421.38
Total payments to French DWF	64% of fleet (14 of 22 vessels)	€2,898,211
Average per French purse seiner	--	€207,015
<b>Total</b>	--	<b>€55,149,677*</b>

\* Only includes vessels with an entry in EU Transparency database.

\*\* Includes one Italian flagged purse seine

Source: List of EU purse seine vessels extracted from Oceanic Développement (2008). Raw subsidy data extracted from EU Transparency <http://fishsubsidy.org>. Full workings itemised by vessel are available in spreadsheet format upon request.

If the EU Transparency data is broadly reliable,<sup>31</sup> there are important differences between France and Spain in the reported take-up of FIFG vessel construction and modernisation subsidies (Table 4.2). The Spanish DWF received 94 percent of total vessel construction and modernisation subsidies paid to the *entire* EU DWF under the FIFG.<sup>32</sup> This disproportionate flow is consistent with reports that Spain received 47 percent of payments to *all* vessels under the FIFG in the period 1994-2006, equivalent to € 27,528 for each Spanish catching sector employee (Mulvad and Thurston 2009: 9; Poseidon 2010: 56).<sup>33</sup>

<sup>31</sup> There are large acknowledged gaps in the database such as poor levels of reporting (see Alfter 2009), while national payments by EU member states and EC access payments to third countries are completely excluded (the latter is discussed below). In terms of unacknowledged data gaps, two new French purse seiners were built in 2000, but there is no record of a vessel subsidy (which is unlikely) and there is also at least one known EU purse seine vessel not included in the database: the Spanish-flagged vessel *Txori Gorri*, owned by Inpesca, licenced in the Seychelles EEZ and on the DG MARE vessel registry (accessed December 2009).

<sup>32</sup> See Ernest & Young (2010b) for a break-down of *total* FIFG (2001-2006) payments to France and Spain for 'adjustment of fishing effort, fleet renewal and modernisation'. A shadow evaluation of the FIFG (2000-06) commissioned by the Pew Environment Group found that Spain received 46 percent of *all* FIFG funding – Mulvad and Thurston (2009) estimate this at 47 percent – and that 'four times as much funding has gone on measures identified as having potentially negative environmental impacts compared to those with the potential for positive impacts' (Poseidon 2010: ii, 30).

<sup>33</sup> See Cantorna (2007) on the history of subsidies by the Spanish state to the fishing industry. Direct subsidies from the European Commission for vessel construction ended in 2004.



The EU's compensatory allowance for tuna is, essentially, a price subsidy. It is paid under the regulation on the common organisation of the EU market in fishery products,<sup>34</sup> the second pillar of the Common Fisheries Policy. Payments are made to the EU DWF when average prices of tuna for canning in the EU market fall below an annually pre-negotiated threshold (EC August 2005; European Scrutiny Committee 2004: 56-58; Lequesne 2004: 91-2; Mongruel 2002; Oceanic Development et al 2005: 82-84; Guillotreau 2008: 4).<sup>35</sup> While the compensatory allowance is not consistently utilised because of the threshold mechanism, it does provide an important strategic advantage to capital investment in the EU DWF by 'help[ing to] support producers' incomes' (Council Regulation (EC) No 104/2000). If tuna prices fall to negotiated levels (such as during the 1999-2000 price collapse, see below and Appendix 2C.3), then European vessel owners are provided with a guaranteed minimum revenue when supplying EU-based processors (European Scrutiny Committee 2004: 13.1).<sup>36</sup> The scheme is thus a significant competitive advantage for the EU DWF over boat owners without such a prop. A strategic advantage is also provided to canneries in the EU as the DWF will have an incentive to supply them in periods when prices are low internationally, and processors may benefit from the ability to pay even lower prices knowing that boat owners will be compensated by the EU. It is important to note that *only* tuna for canning uses a Community producer price in the allocation of compensation allowances; all other fish and fish products use a guide price (Council Regulation (EC) No 104/2000).

#### **4.3.2 EU fisheries access arrangements, 1983-2009: From 'cash for access' to Fisheries Partnership Agreements**

Since the common extension of EEZs in 1976 and their subsequent institutionalisation in international law with UNCLOS six years later, coastal states and distant water fishing

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<sup>34</sup> First established in 1970 with Council Regulation (EEC) No 2142/70. For a review, see Ernest & Young (2008). It was '[d]irectly modelled' on the Common Agricultural Policy (Lequesne 2004: 17).

<sup>35</sup> 'The compensatory allowance is granted when both the average quarterly price of tuna on the EU market and the import price are simultaneously less than 87 % of the EU producer price. That combination is the threshold that triggers the aid mechanism.' (EC 2001: 14). On contractual fixed price policy in France before its entry into the Common Market, see Le Roy (2008: 135-6), and its role as inspiration for the compensatory allowance scheme, see Lequesne (2004: 91).

<sup>36</sup> For details of payments, see Commission Regulation (EC) No 80/2001; Commission Regulation (EC) No 585/2001; Commission Regulation (EC) No 2496/2001; European Parliament 2004; COM(2004)715 final; Commission Regulation (EC) No 1343/2005.

interests have been locked into ongoing struggles over fishing access arrangements,<sup>37</sup> particularly around three issues: levels of financial compensation (a form of ground rent paid to coastal states<sup>38</sup>), various legal and regulatory terms and conditions, and contributions to tuna-related domestic development in coastal states. A large literature reflects on these issues in relation to the Pacific island countries from a range of disciplinary and political perspectives,<sup>39</sup> but there is a dearth of analysis on tuna access arrangements in the WIO.<sup>40</sup> In parallel (and partly in response) to the common extension of EEZs, in 1976 EEC member states transferred sovereignty for ‘foreign policy in the fisheries sector’ to the European Commission.<sup>41</sup> Foreign policy in fisheries was to be conducted by the Directorate-General for Fisheries (DG Fish),<sup>42</sup> created in 1977 and subject to annual direction by the Council of Ministers.

DG Fish is institutionally responsible for multilateral agreements on fisheries management (such as UNCLOS or IOTC), aspects of fisheries trade policies (see Chapter 5), and ‘above all’ bilateral resource access agreements with third countries (Lequesne 2004: 18).<sup>43</sup> The EU maintains two types of access arrangement with third countries: so-called ‘Northern’ agreements that tend to be based on reciprocal resource access and without financial components; and, non-reciprocal ‘Southern’ agreements, which are held exclusively with ACP coastal states (see Figure 4.1) and based on a complex set of financial payments by the EU and boat-owners.<sup>44</sup> Southern agreements fall into two sub-categories – ‘mixed species’

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<sup>37</sup> For discussion on contemporary tuna fisheries access and its relationship to the political economy of development, see Havice and Campling (2010), Mbithi Mwikya (2006) and Mfodwo (2008).

<sup>38</sup> See footnote above on future research directions on this issue.

<sup>39</sup> Aqorau and Bergin 1997; Barclay with Cartwright 2007; Campbell 1996, 2000; Douman 1987a, 1987b; Duncan 2006; Gillett and Lightfoot 2001; Gillett, R. and G. van Santen 2008; Hanich et al 2010; Havice 2007, 2010; Havice and Campling 2010; Hannesson 2008; Herrick et al 1997; Lewis 2005; Mfodwo 2009; Parris and Grafton 2006; Petersen 2001; Petersen 2003; Petersen 2006; Pretes and Petersen 2004; Ridings 1983; Schurman 1998; Tarte 2004; Teiwaki 1987; Tiller 2005.

<sup>40</sup> Chapter 6 provides a discussion of purse seine access arrangements with the Seychelles.

<sup>41</sup> Under the terms of the Hague resolution, November 1976, that created the Common Fisheries Policy (Lequesne 2004: 18, 136-7). (See Chapter 5 on a similar transfer of sovereignty over the conducting of trade policy to DG TRADE.)

<sup>42</sup> In March 2008 it became the Directorate-General for Maritime Affairs and Fisheries (DG MARE). In the interests of clarity and style, the thesis refers only to DG Fish, even when discussing periods after the change in name.

<sup>43</sup> The Council (‘Hague’) Resolution of 3 November 1976 “‘agrees ... on the need to ensure ... that Community fishermen obtain fishing rights in the waters of third countries and that the existing rights are retained. To this end, ... it (Council) instructs the Commission to start negotiations forthwith with the third countries concerned” (cited in DG Fish 2001: 4).

<sup>44</sup> The first EU access agreement was with the US in 1977 (Ifremer 1999: 4). The first ‘Southern’ agreement quickly followed in 1979, with Senegal (Earle 2006: 233; Walmsley et al 2007: 5). Smidt (2001) dates this at 1977.

and ‘tropical tuna’ agreements – and almost exclusively function in the interests of Spanish and French distant water fleets (Ifremer 1999: 8-10; Lequesne 2004: 136-9, 141-144).

In light of this, and the disproportionately high levels of CFP structural funds channelled to Spain discussed above, it is no coincidence that key personnel at DG Fish have historically been Spanish nationals (including from Galicia, one of its main fishing regions) (Lequesne 2004: 36-7). It is a widely held perception among those who regularly work with this Directorate-General that ‘Spanish’ interests often take precedence in its activities, albeit within limits and not without its frustrations and unintended consequences.<sup>45</sup> The sphere of Spain’s relative institutional influence in DG Fish is normally explained in relation to the wider horse-trading within and between EU member states over degrees of control over the day-to-day functioning of EU’s directorate-generals (EUGvt#2; #9; Int#15).

Unlike French and Spanish tuna fishing in colonial and post-colonial West African waters, the conditions of production in the WIO fishery were mediated from its outset by formal access arrangements with coastal states, with Seychelles EEZ as the most important strategic consideration (see Chapter 2, Figure 4.1 and Chapter 6). With the institutionalisation of EEZs, two broad approaches to fisheries access emerged:<sup>46</sup>

- 1) ‘First generation’ arrangements involve the allocation of fishing access in return for a financial payment. Various methods are used to calculate the financial component and the agreements are normally regulated by a complex set of requirements relating to fisheries management, monitoring, control and surveillance (MCS), and enforcement. There are three main types of first generation access agreements: government-to-government (the approach used by the European Union), industry association-to-government (the approach used by fleets flagged by Japan and Taiwan, among others), and company-to-government (used by the Spanish-owned Seychelles-flagged fleet).<sup>47</sup> The first two types can also be accompanied by additional payments made by the fleet’s home state; this can be done *directly* through the legal terms of the

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<sup>45</sup> There is no such thing as a fully coherent ‘Spanish’ fisheries interest with third countries as multiple sites of tension and contradiction exist among players, whether between types of fishing fleets, within fishing fleet segments (e.g. between ANABAC and OPAGAC members), or between regions (e.g. between Galicia and the Basque Country, with the latter not benefitting from EU Objective 1 funding).

<sup>46</sup> This two-part typology is used widely in the literature. The contribution of the following is to more precisely define its contours based upon multiple interviews in 2006 and 2009, supplemented with analysis of dozens of public and confidential access agreements.

<sup>47</sup> Note that this typology applies to *all* known first generation tuna access agreements between distant water fishing interests and developing countries.

agreement (e.g. EU access arrangements, see below and Chapter 6, and the US multilateral tuna treaty in the Pacific, see Havice (2007, 2010)) or *indirectly* through decoupled ‘aid’ mechanisms (e.g. in the case of Japan).

- 2) ‘Second generation’ access arrangements involve one or a combination of two broad mechanisms: the allocation of access in return for the vessels registering locally and agreeing to use local goods and services through transshipment and/or landing of the fish domestically; and/or, onshore investment in processing facilities in return for fishing access (controversially, this can involve the provision of more fishing potential than required to supply the capacity of the processing facility<sup>48</sup>). The latter can take the form of joint-venture enterprises, often dressed-up in the development-friendly discourse of ‘technology transfer’.<sup>49</sup>

While the terms and conditions of EU access agreements in the Western Indian Ocean (and elsewhere) have changed over time, they consistently fall under the government-to-government type for French and Spanish flagged vessels. Terms and conditions shifted from the initial exploratory agreements in the early 1980s and the formalised ‘cash for access’ agreements from 1983 to 2001, through to the more ‘sustainability’-focussed Fisheries Partnership Agreements with the 2002 reform of the Common Fisheries Policy.<sup>50</sup> Despite these changes, the core objective of DG Fish remains the same: to ‘[m]aintain and safeguard traditional fisheries activities of the Community fleets, including activities of the long-distance fleets’ (DG MARE 2008: 22).

In 2009 Fisheries Partnership Agreements (FPAs) were in place across three of the world’s four major tropical tuna fisheries, as illustrated in Figure 4.1. The figure also illustrates the interlocking nature of Pacific island country EEZs in the Western and Central Pacific Ocean. Tropical tuna in this oceanic region migrate predominantly in the waters of eight of these fourteen countries. This territorial configuration permits relatively effective levels of collective inter-state power through South-South cooperation,<sup>51</sup> albeit peppered with

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<sup>48</sup> As was the case with at least two onshore investments in Papua New Guinea (multiple interviews and personal communications, 2006-2010).

<sup>49</sup> On Spanish joint ventures in the fishing sector see Cantorna *et al.* (2009: 370).

<sup>50</sup> Among other things, FPAs impose greater conditionalities on coastal states over the utilisation of EU payments. See Campling *et al.* (2009), Gorez (2005) and Walmsley *et al.* (2007) for detailed coverage of the policies associated with contemporary FPAs.

<sup>51</sup> This was coordinated by the Pacific Islands Forum Fisheries Agency (FFA) since 1979. This was partly fragmented by the creation of the ‘PNA’ Secretariat in 2010, which is made-up of the eight island countries where tropical tuna fisheries are most prevalent (*FFA Fisheries Trade News*, various issues).

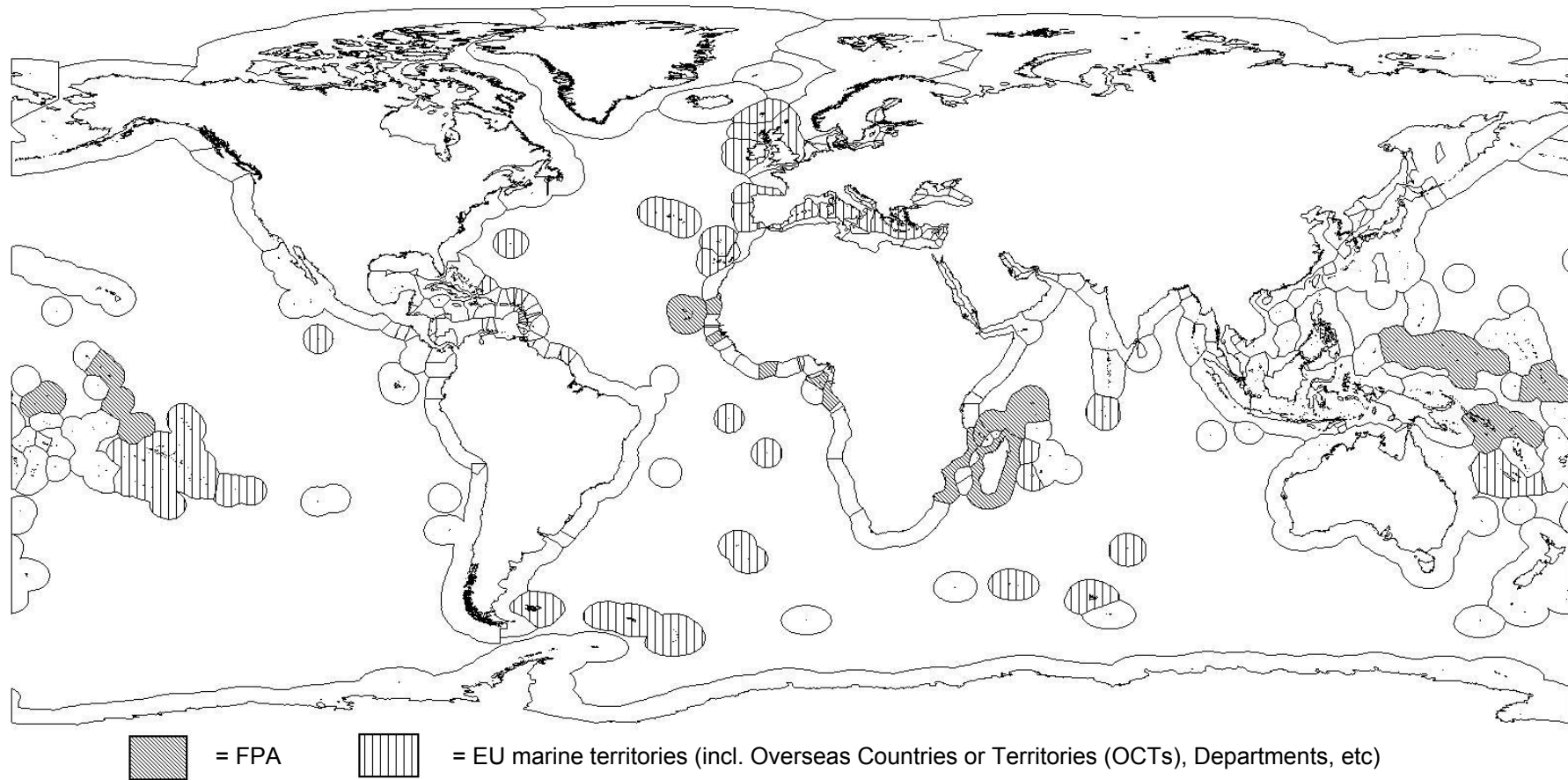
contradictions within and between countries and industry (see for example, Havice and Campling 2010). And, as detailed in Chapter 2, access to the Seychelles EEZ is an essential component to any purse seine fleet's commercial survival in the WIO, but the figure makes clear that the configuration of EEZs – interspersed with large areas of high seas – limits the potential for South-South cooperation to maximise domestic benefits.<sup>52</sup>

Yet it is important to emphasise that Figure 4.1 offers only a static moment in a complex historical story. By tracing capital flows over time we are left with a distinct pattern of a search for new commodity frontiers when the productivity of the EU DWF grew and biomass could not (profitably) sustain the intensification of extraction. As detailed in Chapter 2, before the early 1980s, EU DWF access agreements were solely with African states on the Eastern Atlantic, parts of this fishing capacity then moved to (and expanded in) the newly created fishery in the WIO, and partly shifted again – although far less successfully – to the WCPO in 1999, where US, Philippine and East Asian purse seine fleets were already firmly established. Spanish capital also penetrated the Eastern Tropical Pacific in the 1970s onwards with the transfer of purse seine vessels and direct investment (second generation access), but these boats do not qualify for FPAs. In sum, by the 2000s the EU DWF was active in each of the world's main tropical tuna fisheries.

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<sup>52</sup> See Chapter 6 for an overview of a failed attempt by independent coastal states to adopt the 'FFA model' in the WIO in the late 1980s.

**Figure 4.1: Network of EU marine territories and Fisheries Partnership Agreements in 2009**



Sources: Flanders Marine Institute for line map; DG MARE website for location of access arrangements.  
[http://ec.europa.eu/fisheries/cfp/external\\_relations/bilateral\\_agreements\\_en.htm](http://ec.europa.eu/fisheries/cfp/external_relations/bilateral_agreements_en.htm) (accessed 12 December 2009)

Direct payments by DG Fish to coastal states to facilitate EU DWF resource access is a major subsidy of the Common Fisheries Policy; and in 1998 totalled around five percent of allocations for the EU's *entire* external operations (Ifremer 1999: 4) making fisheries access an important component of the EU's international relations. The DG Fish budget for 'cash for access' agreements increased from 5 million Euros in 1981 to 38 million in 1987; a rise that incorporated both the first full access agreement with the Seychelles in 1983 (on behalf of the French DWF) and the activities of the Spanish fleet when this country acceded to the EEC in 1986. The budget rose again to €163 million in 1990, before reaching €300 million in 1997. These flows constitute very significant subsidies to the EU DWF. In the period 1993-97 the financial contribution of boat-owners to 'Southern agreements' was an average of only 18 percent of the total paid to ACP coastal states (Ifremer 1999: 4). In 2004, the ratio of industry payment to EU subsidy in total payments under FPAs had increased to between 25 and 35 percent (Walmsley et al. 2007). Given the intensity of competition over tuna access, the very high subsidy component of EU Southern agreements places its DWF at a distinct commercial advantage vis-à-vis other DWFs. Apart from the US Multilateral Tuna Treaty with the Pacific island countries,<sup>53</sup> the financial returns to coastal states are significantly lower in access arrangements with other DWFs. Access agreements in the Pacific islands with East Asian DWFs are typically based on a small flat fee plus a 5-6 percent 'top-up' based on the ex-vessel value of the catch (Campling et al. 2009: 192-3),<sup>54</sup> while FPAs are generally 'valued' at 13 percent of the value of the catch (Walmsley et al. 2007). (Chapter 6 provides a more detailed account of access payments to the Seychelles government.)

One cannot properly estimate access payments without the full legal texts and associated protocols of access agreements, or disaggregated data on reported catch and ex-vessel reference prices (the basis of 'top-up' payments) and decoupled development aid, but all three sets of information are incredibly difficult to obtain.<sup>55</sup> The 'valuing' of access is complicated further by the leveraging of negotiations with bribes to politicians and/or senior government officials (normally in fisheries departments), and the under-reporting of catch

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<sup>53</sup> Which also provides a high level of subsidy, albeit more carefully legally configured as 'development aid' (Havice 2007, 2010), designed to make it GATT/WTO compatible.

<sup>54</sup> Range based on a comparison of thirteen confidential tuna access agreements.

<sup>55</sup> Aside from EU bilateral access agreements and the US multilateral one which are publically available, the legal texts of all other agreements are considered to be commercially highly sensitive and are strictly confidential. One international fisheries specialist noted in 2006 that these agreements are like the 'holy grail' for researchers working on the political economy of tuna fisheries (Int#15).

volumes by fishing firms – a practice incentivised when access payments are based on a percentage of catch value.<sup>56</sup>

Government-to-government access payments have been a major target for reform by developed and developing country governments and NGOs in WTO negotiations on fisheries subsidies disciplines since the late 1990s. The importance of the contribution of FPA payments to several ACP government budgets explains why, despite intense opposition, the ACP is so keen to include a caveat allowing the continuation of government-to-government transfers for fisheries access at the WTO.<sup>57</sup> It is also widely argued that the ‘development aid’ component of FPAs should be decoupled from considerations associated with commercial resource access and that *all* payments should be publically available. Aside from the financial dimension, the political dimensions of FPAs have been the subject of dozens of critical investigations, including on the unequal negotiation process (facilitated by the multifaceted political and economic power of the EU), eventual legal terms and conditions in principle, and environmental and political-economic impacts in practice, especially in reference to the West African context (Acheampong 1997; European Parliament 2001; Kaczynski and Fluharty 2002; Lankester et al. 2001; Tarte 2002). The new FPAs were established in part as a response to this criticism (COM(2002) 637 final; Smidt 2001), but this reform was more effective in form and principle than in content and practice (ACP 2003; Bartels et al. 2007; Campling et al. 2009; Earle 2006; Gorez and O’Riordan 2003; SEC (2009) 1137 final; COM(2009) 461 final; Society for Nature Conservation 2010; Walmsley et al. 2007).

#### 4.4 Chapter Summary

This chapter has identified and briefly summarised the most important institutional aspects of resource regulation in the EU-centred commodity chain in canned tuna. The specificity of the

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<sup>56</sup> For serious attempts at analysing corruption in fisheries access arrangements see Tsamenyi and Hanich (2008) and Hanich and Tsamenyi (2009) on the Pacific, and Standing (2008; 2011) on Africa.

<sup>57</sup> *FFA Fisheries Trade News* (various issues). As a result of intensive lobbying by the ACP and the EU, the NGOR Chair’s Draft Text on fisheries subsidies disciplines (2007) included a specifically designed loophole to allow government-to-government access payments (see TN/RL/W/213; see also the Chair’s 2008 ‘Roadmap’, TN/RL/W/236). On the importance of FPA payments to total revenue in several ACP governments, see Vallée and Guillotreau (2008: 2). However, for some ACP countries the *indirect* developmental benefits of FPAs can be considerably more important than the ‘compensation’ payments. The most important of these stem from the onshore economic interactions of EU DWFs, as examined in Chapter 6 on Seychelles. See also Stilwell et al. (2010).



environmental conditions of tuna production, especially the species' highly migratory flows, means that the international legal governance of the resource is laden with tensions. These tensions were apparent from the period of negotiation of UNCLOS between coastal state resource 'owners' and DWFN 'users' and through interpretations of the final legal text, such as the 'development' and the 'use it or lose it' clauses. The subsequent UN Fish Stocks Agreement attempted to better regulate high seas fisheries for highly migratory and straddling fish stocks, but did not resolve tensions between owners and users over sovereignty when stocks are in EEZs (e.g. Havice and Campling 2010), and also meant that regional fisheries management organisations created before this Agreement were subsequently out-of-date in terms of international standards on fisheries management (e.g. IOTC). Through debates at IOTC in the late 2000s over the sustainability of purse seine fisheries for yellowfin, we also saw how tensions between different interests override scientific consensus and result in failures to regulate the fishery effectively.

This discussion and that of the EU's CFP also directly connect with the analysis in Chapter 2 of how the firms of the EU DWF have dominated the WIO purse seine sector since the emergence of the fishery from the beginning of the 1980s. For the period 1984-2007, a total of 92 percent of catch in the entire WIO purse seine fishery was by European-owned boats. With relatively high cost operations (see Appendix 2B for comparative analysis) and the downward pressure of branded-firms and supermarkets on ex-vessel prices (Chapter 3), how does the EU DWF survive commercially as the leading supplier of tuna raw material to the EU-centred commodity chain? The short answer is that the interests of firms in the EU DWF are mediated by the political and economic power of the European Union. The most obvious component here is the extensive regime of fisheries subsidies which appear to be important to the formation and ongoing commercial survival of the fleet. The EU DWF also dominated the purse seine fishery in Seychelles EEZ with 93 percent of all catch between 1984 and 2007, enjoying resource access that was mediated by the EU through the negotiation and majority payment of access fees. This is not only an important subsidy, but it also introduces an important geo-political element as fiscally-squeezed and politically weak developing coastal states 'negotiate' with the collective might of the European Union, the largest economic entity on the planet. This complex of subsidies and resource access, combined with the sheer economic size and productivity of the EU DWF (as detailed in Chapter 2), contribute to explaining the relative stability of the EU DWF's position in the Atlantic and Western Indian oceans. This stability must also be seen in relation to other actual and potential competitors.

Despite attempts to expand into the fishery (e.g. by the Japanese interests noted in Chapter 2) or to develop a domestic fleet (e.g. by the Seychelles state, Chapter 6), the role of subsidised access agreements and other subsidies seems to have made capital flows from other oceans and local investment non-competitive vis-à-vis the EU DWF. In short, these institutional dynamics directly enhance the competitive accumulation of the EU DWF.

In sum, we have seen how legal governance of resource regulation and the role of EU subsidies combine the three interventions of this thesis in the commodity studies literature: the determining influence of environmental conditions of production in extractive industries, the importance of a historical understanding of the formation of mechanisms regulating the commodity chain, and how unequal political power – in this case between developing coastal states and the EU and its ‘home’ firms – results in dominant players mediating their interests through rule formation and enforcement, albeit with some countervailing tendencies, such as the role of developing coastal states in negotiating UNCLOS.

## **Chapter Five**

### **The Politics of International Trade Relations and the Production of Canned Tuna: ACP Preferential Access to EU Markets**

#### **5.1 Introduction**

Tariff policy has played an integral role in the formation and shaping of the general conditions of competitiveness of several global commodity chains (e.g. Gibbon and Ponte 2005), including canned tuna. This chapter turns to the second set of regulatory mechanisms of the EU-centred commodity chain, those concerning negotiation and enforcement of trade policy. As we saw in Chapter 3, the EU ‘tuna trade regime’ plays a central role in the territoriality of the commodity chain, i.e. the geography and relative concentration of production of canned tuna and tuna loins. ACP governments and firms in the EU-centred commodity chain responded in different ways over time to the competitive advantage offered by EU trade preferences. The central analytical advance is how to identify and examine key elements in the negotiation and formation of international trade regulation as an arena of inter-capitalist competition: in this case, investment locations of canned tuna production and regulatory mechanism, and how they connect. Two themes of the thesis – the importance of historicising the formation and contemporary functioning of chains, and the role of unequal political power in this process – are addressed throughout this chapter.

First we discuss debates between ‘pessimists’ and ‘optimists’ on the role of trade preferences as a mechanism for development. We then examine the specifics of the Lomé/Cotonou trade preference for canned tuna and its role in industrial upgrading in several ACP countries. This section also presents a specific ‘moment’ of negotiation at the WTO over the EU tuna trade regime and the commercial effects of its regulatory intervention.

We saw in Chapter 2 how the biology and flows of tuna populations in the Western Indian Ocean determine the activities and business strategies of the EU DWF. The institutional context of these environmental conditions of production was detailed in Chapter 4 in relation to the Law of the Sea, EU fisheries subsidies and resource access strategies, and nascent attempts to regulate extraction of tuna resources through the Indian Ocean Tuna Commission. Section 5.4 investigates another institutional layer connected to the environmental conditions of production: the role of EU preferential rules of origin for tuna raw material, introduced in Chapter 2. This discussion emphasises the importance of the commercial interests of the EU DWF in the design of rules of origin by the European Union and, in turn, how uneven interstate power between the EU and the ACP perpetuated these rules, despite their limitations on tuna-related domestic development in many, but not all, ACP production locations.

The theme of unequal interstate power is further investigated in the penultimate section. This traces EU-ACP negotiations between 2004 and 2007 over the design and formation of WTO-compatible Economic Partnership Agreements. Particular emphasis is placed on the reform of the EU tuna trade regime and the responses of tuna-dependent ACP states. Finally, Section 5.6 pulls together these various elements with relevant aspects of the Common Fisheries Policy (CFP) discussed in Chapter 4 to demonstrate the interlocking nature of the political economy of the EU tuna trade regime. A summary completes the chapter.

Our analysis of this set of institutional relations is based upon substantial primary research. This includes interviews with trade negotiators, other government officials and representatives of industry, and extensive participant observation in ACP trade negotiations with the EU between October 2005 and December 2007 on behalf of the Pacific Island countries (PICs) and the Indian Ocean island states of the East and Southern African (ESA) grouping of the ACP.

Supplementary information and description is provided in the appendices to this chapter. Appendix 5A sketches the historical formation of EU-ACP trade relations, with particular

emphasis on French colonial and post-colonial relations with West Africa as this formed the basis for the institutional design of the EU tuna trade regime. In doing so, we highlight the importance of longitudinal study in the assessment of continuity and change in the organisation, governance and regulation of commodity chains. We then show how the wider global regulation of international economic relations by the World Trade Organisation shaped the reform of this preference regime. Appendix 5B provides a sketch of ACP tuna canneries and tuna loining plants in mid-2000s. And Appendix 5C offers an account of the importance of the EU trade preference to canned tuna production in the ACP through a discussion of changing macro-regional market share.

## **5.2 Trade Preferences and Development**

There is a vast literature on the trade effects of the non-reciprocal Lomé Conventions (1975-1999), and an emerging critical literature on the preparatory phase of the Cotonou Agreement (2000-2007) which laid the basis for the EU to negotiate reciprocal Economic Partnership Agreements with the ACP (see below and Appendix 3A). Unsurprisingly, this literature contains multiple perspectives, opinions, and methodologies. In summary form though, there are two broad positions of particular relevance to this thesis: those that claim that EU trade preferences did not help the development of ACP economies ('the pessimists'), and, those that argue that EU trade preferences played an important developmental role for certain ACP exports ('the optimists').

### ***Preference Pessimists***

Preference pessimism is by far the most dominant in mainstream development circles.<sup>1</sup> Empirical assessments from this perspective almost exclusively use highly aggregated data and, based upon this, generally conclude that Lomé/Cotonou preferences were not successful in the development of industry in ACP countries (Davenport et al. 1995: 5; Moss and Ravenhill 1987: 112). A common statistic cited in support of this view was the

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<sup>1</sup> For example, interviews in 2006 with trade and development specialists and officials from the EU, FAO, and New Zealand and US governments all expressed a clear position as 'preference pessimists'.

decline in the share of ACP countries' goods within total EU imports from 13.3 percent in 1976 to 3.7 percent in 2000 (Yu and Jensen 2005). Perhaps more importantly, in general, the ACP economies did not diversify and their export portfolios remained dominated by unprocessed primary commodities and some low value added agricultural products. For example, in 1999, only 9 products constituted 57 percent of total ACP exports to the EU, and, of a total of 77 ACP countries, 61 percent of total exports came from only 10 African economies (EC 2002: 3). From the theoretical perspective of neo-classical economics, preferences work against the opportunity costs of comparative advantage, thereby constraining the most efficient allocation of resources and actually *discourage* economies from diversifying because of dependence on preferences (Davenport 1992; Davenport et al. 1995). Importantly, the EU itself was one of the leaders of the 'preference pessimist' position, stating that:

trade preferences have neither halted the increasing marginalisation of the ACP region in world trade nor in their trade with the EU. Nor have they overcome the high dependence of the ACP on a few commodities. (EC 2002: 2)

Of course, this is an accurate generalisation, but of greater interest and contention is its explanation.

Based on highly aggregated trade statistics, the EU's statement obscures some important underlying dynamics in both the world economy and the internal conditions of the (highly differentiated) ACP, which help to explain the relative decline in ACP share of trade with the EU. First, the rise (and rise) of the East Asian newly industrialised countries (NICs) and economies in Southeast Asia resulted in their export of cheaper goods in direct competition with (current and former) ACP industries, while externally imposed structural adjustment programmes throughout the ACP from the 1980s onwards negated these countries using policy mechanisms deployed by their Asian competitors.<sup>2</sup> Second, if petroleum exports are removed from the last set of aggregated statistics cited above, the economic diversification of the ACP becomes more pronounced and the

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<sup>2</sup> See Stevens and Weston (1984: 60) on the displacement of ACP exports by NIC competition. For more detailed discussion on these points see Appendix 3A.

proportion of the ten countries' share of ACP exports becomes far less significant (McQueen et al. 1998). Third, several ACP countries experienced severe political, social and/ or military conflicts, and/ or were subjected to deeply corrupt regimes, which clearly had a negative effect on economic diversification and trade flows. This point was actually acknowledged by the EU in a 1996 Green Paper: 'the economic marginalisation of some ACP countries has gone hand in hand with social disintegration, mounting violence and a proliferation of armed conflicts' (COM (1996) 570).<sup>3</sup>

In sum, the 'pessimists', and even some more sympathetic analysts, tended to pose trade preferences as a perceived end-in-themselves and did not consider the context and conditions of these preferences, ranging from the objective commercial value of the preference to price and quality factors of demand, and from market growth and global competition to non-tariff barriers such as rules of origin.<sup>4</sup> It should also be noted that without EU trade preferences, ACP exports may have performed even more poorly, but this counterfactual is difficult for either perspective to prove or refute.

### ***Preference Optimists***

In contrast, 'preference optimists' tend to use disaggregated data (by country and product type) to conclude that Lomé/ Cotonou preferences provided an important competitive advantage for *some* countries, for *some* products and at certain historical moments.<sup>5</sup>

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<sup>3</sup> But it did not influence its 'pessimist' position on ACP preferences.

<sup>4</sup> For example, as 'sympathetic analysts', Babarinde and Faber state that 'Lomé was unable to catapult even a majority of the ACP countries to the community of middle-income countries after 25 years of privileged concessions' (2005: 5). This argument over-determines the developmental potential of external policy regimes as it fails to take account of the need to consider the wider context of the world system or the domestic political-economy of individual ACP countries (and the relations between these two aspects).

<sup>5</sup> Extending from points made by McQueen (et al. 1998: 35). For example, in their assessment of Lomé I, Stevens and Weston point out that – despite the context of the downturn in the world economy during the period of the first Convention which 'swamped' the 'stimulus' provided by preferences – the exports of the 36 ACP states 'most likely to have diversified [excluding recent entrants and 'hopeless cases'] reveals some encouraging results'. This included an expansion in the value of exports to the EEC of several 'non-traditional' products between 1975 and 1980, including 89 percent growth for men's clothes, 77 percent for knitted clothes, 75 percent for canned tuna, 55 percent for cotton fabric, and, among other items, growth in cut flowers, instant coffee, leather products and furniture (1984: 30, 32 and 34-5, author's calculations based on Stevens and Weston's data; see also, Babarinde and Faber 2004: 34). It is worth pointing out that, apart from clothing and apparel, canned tuna was the major growth item here, and with the phasing out of the Multi-Fibre Arrangement (MFA) by 2005, much of the ACP were less able to compete in commodity

While the total volume of ACP exports to the EU increased by only 3.6 percent between 1988-1997 (compared to 76 percent growth for non-ACP developing countries trading under the EU's GSP regime or no preference scheme), a meeting of ACP Parliamentarians argued that there was an *effective* competitive advantage under Lomé preferences when the tariff preference was greater than three percent. In this case the increase in ACP trade volumes with the EU in the period 1988-1997 was 61.9 percent (as cited by Commonwealth Secretariat 2004: 183). While a three percent margin of preference would not generally be considered to be commercially significant, the fact that this baseline radically increases the pessimists' estimates demonstrates the importance of disaggregated analysis in assessing the benefits of trade preferences. Along these lines, the majority of ACP exports had a very low or zero EU MFN tariff or the EU GSP regime provided a margin of preference which equalled that available to the ACP, generating an additional source of direct competition (Stevens and Weston 1984; McQueen and Stevens 1989; McQueen et al. 1998). In fact, by the time of Lomé IV (bis) only seven percent of ACP exports received a 'significant' margin of preference (of five percent or above) vis-à-vis other sites of production (Davenport et al. 1995: 67),<sup>6</sup> but others have pointed out that even a five percent margin is 'trivial' (McQueen et al. 1998: 40). In other words, in order for a tariff preference to have a stimulating effect on the development of export-orientated production it must provide a commercially significant preference relative to major competitors. In short, the commercial value of a preference to competitive accumulation can only be assessed on a product-by-product basis.

In addition, the declining ACP share of EU markets for many of its major exports was a result of the 'fallacy of composition' (i.e. the simultaneous expansion of exports of the same product by several countries, which tends to have a downward effect on price).<sup>7</sup> Therefore, the failure of the ACP to capitalise on the competitive advantage of certain EU tariff preferences was not solely or even necessarily the result of flaws in ACP policy (as

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chains in clothing and apparel (e.g. Gibbon 2008; an outcome that was predicted by McQueen et al 1998: 49).

<sup>6</sup> The cut-off point of 5 percent for a preference to be of commercial value was confirmed by Manchin who found that ACP firms did not utilise preferences unless the margin was 4.5 percent above the MFN rate (2006: 1255).

<sup>7</sup> On the effect of the fallacy of composition on EU- and US-centred commodity chains in canned tuna see Chapter 3.



the EU argued), but was also influenced by trends and dynamics in the world economy. Moreover, by the start of Lomé IV over 90 percent of total imports of *manufactures* entered the EU duty free under MFN treatment or the GSP regime (if rules of origin were met) (Grilli 1993: 166), the largest exceptions were textiles and clothing and processed fish (especially canned tuna). However, while many of the Lomé/Cotonou rules of origin were not particularly onerous, those ‘deemed to be particularly restrictive’ were applied to these very sectors, further constraining the economic benefits of preferences (Naumann 2005: 8; see also Grilli 1993: 167).

In sum, using the methodological approach of the preference optimists, canned tuna exports represented one of the few success stories of industrial ‘upgrading’ in the ACP under Lomé (McQueen and Stevens 1989), as sketched in detail in the next section. An additional aspect of the optimists’ argument is that one reason why the preferences did not work as well as they could have done is that associated rules of origin were too strict (Stevens and Weston 1984: 27; Ravenhill 1985: 170), addressed in detail below. However, even though the argument advanced here is broadly supportive of the methodological approach of the preference optimists, it remains very difficult to disentangle the effects of preferences from the wide range of other factors affecting sites of production (Grilli 1993: 160). The purpose of the following examination of the EU tuna preference is to demonstrate empirically that it was a necessary, but not sufficient, element in the industrial upgrading of several ACP sites of production. Chapter 6 presents specificities of the history and political economy of regulation in Seychelles, which, in turn, is supplemented by an understanding of the ecology of the resource, technological change and the dynamics of competitive accumulation in the global commodity chain as a whole, which were assessed in Chapters 2 and 3. This approach – an effort to capture the totality of the core elements of the EU-centred commodity chain – allows the commercial value of preferences to be considered alongside the other factors necessary for successful industrial tuna production.

## **5.3 The Lomé/Cotonou Preference and Upgrading: The ACP Canned Tuna Industry**

### **5.3.1 What is the Lomé/Cotonou tuna preference?**

The Lomé/Cotonou tuna preference provides a competitive advantage of 24 percent on import duties compared to most other countries. Table 5.1 provides a simplified version of the contemporary EU tariff regime for tuna and tuna products. As well as the product description, the table provides the coding system at the four-digit level to identify product lines: for example, the specific tariff lines for canned tuna and tuna loins (i.e. 1604) under Chapter 16 of the Harmonised System of tariff classification ('HS Code' for short).<sup>8</sup> The table provides tariff lines for beneficiaries of the Cotonou Agreement – interim Economic Partnership Agreements since 2008 – ('ACP') and all three pillars of the EU GSP regime. The core element here is that ACP exports are duty free compared to a 20.5 to 24 percent range for most other developing countries, including the main competing sites of production in Southeast Asia.

The EU GSP was reformed in mid-2005 and a new regime came into force on 1 January 2006. The outcome was three schemes:

- A 'standard' GSP scheme ('GSP' in Table 5.1) that was very similar to the pre-reform scheme and excluded only a handful of developing countries. The major difference in terms of tariffs on tuna products was that, instead of being equivalent to MFN treatment (the case for decades before), the 2005 reform provided all tuna products with a 3.5 percent preference relative to the MFN tariff. All tuna exporting firms based in Southeast Asia fell under this scheme, but only if they met the associated rules of origin.
- The Everything But Arms Initiative (EBA) provided duty-free and quota-free market access to all countries categorised by the UN as LDCs. The only

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<sup>8</sup> This is the international standard for the classification of commodities for customs purposes, including for the application of tariffs. Each commodity is uniquely categorised by its own (at a minimum) eight-digit number. The EU TARIC system uses this classification. However, in the interests of parsimony, only the first four digits of the TARIC code are used in Table 5.1.

significant tuna exporting LDC that utilised the EBA preference was the Maldives. However, those ACP LDCs that did not sign interim Economic Partnership Agreements (see below) switched their tuna (and other) exports to the EBA in 2008 when the Cotonou preference scheme ended.

- The new ‘GSP+’ was available to countries that had signed and ratified a set of 27 international conventions on labour and human rights and on environmental and good governance.<sup>9</sup> On top of this, a country had to be categorised as ‘vulnerable’ according to its level of export-orientated economic diversification.<sup>10</sup> Importantly, the GSP+ scheme offered Cotonou-equivalent treatment and pitted several Latin American countries (especially Ecuador) against ACP-based firms.

These three schemes were initially scheduled to run until end-2008, but were likely to continue until 2015, subject to regular review at three-year intervals (EC July 2004).

**Table 5.1: Simplified EU tariff structure for tuna and tuna products**

HS Code/ Description	ACP	GSP+	EBA	GSP	MFN
<i>Chapter 3</i>					
0302 and 0303 Fresh chilled <u>or</u> frozen tuna <u>for production under 1604</u>	0%	0%	0%	0%	0%
0302 and 0303 Fresh chilled <u>or</u> frozen tuna <u>for uses other than production</u>	0%	0%	0%	18.5%	22%
<i>Chapter 16</i>					
1604 Tuna loins <u>to be processed</u>	0%	0%	0%	20.5%	24%
1604 Canned tuna products, with oil or water and others (all species)	0%	0%	0%	20.5%	24%

Source: EU TARIC

Key: ACP: Cotonou Agreement preference; GSP+: Generalised System of Preferences Plus; EBA: Everything But Arms initiative; GSP: ‘standard’ GSP.

<sup>9</sup> The GSP+ combined three prior GSP regimes: A system tied to combating the production of coca and traffic in cocaine, which was available to certain Andean countries, all Central American countries and Pakistan (commonly known as the ‘Drugs Arrangement’), and two GSP schemes aimed at promoting labour rights and environmental standards respectively.

<sup>10</sup> Council Regulation (EC) No 980/2005 *Applying a Scheme of Generalised Tariff Preferences* [2005] OJ L169/48.

As Chapter 3 noted, the MFN tariff of 24 percent for canned tuna provides a degree of protection (a ‘tariff peak’) to EU-based industry – especially that based in Spain – from imports from low cost producers, mainly those based in Southeast Asia. This is unsurprising given that tariff policy is generally used to protect the interests of domestically-based firms. The ACP preference itself has historical roots in investments by French tuna fishing and processing firms in francophone West Africa in the 1950s (Chapter 2; IDDRA 2004), that were assured duty-free market access into the EU with the Treaty of Rome and subsequent Yaoundé Conventions.

Imports of whole fresh chilled or frozen tuna into the EU to be processed into canned product by EU producers (‘for production under 1604’) received duty free treatment *regardless* of the country of origin (compare the first and second rows of Table 5.1). This was a clear case of ‘tariff escalation’: keeping raw material input costs low for EU-based processors and providing them with maximum flexibility for sourcing inputs at the lowest price on international markets. Importantly, ACP-based processors did not benefit from this flexibility as they could only utilise the Cotonou preference if they processed fish caught by vessels owned by firms based in the EU or ACP.<sup>11</sup>

Around 80 percent of labour in the processing branch of canned tuna production is applied in the activities of cooking, cleaning and loining the fish, which shapes the ‘logic of loining’ in the international division of labour (Chapter 3). As a result, there was a growing market in the EU for tuna loins (classified in Table 5.1 as ‘for further processing under 1604’) from preference receiving countries as they could be imported duty free. However, in the mid-2000s onwards, EU-based processors encountered difficulties in securing sufficient supply of duty-free loins.<sup>12</sup>

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<sup>11</sup> Under these EU rules of origin, fish were deemed ‘originating’ if they were caught by vessels with certain ownership, crew, flagging and registration requirements. See below for detail.

<sup>12</sup> See below on the response of EU processors to this situation.

### 5.3.2 The Lomé/Cotonou tuna preference and industrial upgrading in the ACP

This section identifies and analyses shifts in the share of EU markets from Southeast Asia to the ACP from the late 1970s onwards with the implementation of – and eventual commercial response to – the Lomé preference.<sup>13</sup> The following evidence suggests that the Lomé/Cotonou trade preference was an integral competitive advantage in the establishment of industrial tuna processing plant in several coastal and island states in Africa and the Pacific. In aggregate terms, the ACP share of world production of canned tuna grew from 5 percent to 12 percent between 1976 and 2003 (Oceanic Développement 2005: 114), supporting the position that ‘the Lomé Convention was in a key sense the midwife in the creation of the ... ACP canning industry’ (Grynberg and White 1998: 68).<sup>14</sup> This is not to claim that the preference was the sole determinant in this process, but simply that it was an integral aspect of a set of necessary factors.<sup>15</sup>

The competitive advantage of the 24 percent tariff preference acted as a major motivation for investment in tuna processing capacity in the ACP. Figure 5.1 illustrates this trend for eight ACP countries (see also Chapters 2 and 3). Prior to the Lomé Conventions, francophone states in West Africa benefited from preferential access to the EEC under the Yaoundé Conventions (1963-1975). This explains pre-existing levels of production in Côte d’Ivoire and Senegal in Figure 5.1, as capital from French and Spanish fishing interests flowed there to take advantage of close access to tuna resources, cheap labour and, as noted, the benefits of the Yaoundé tariff preference.<sup>16</sup> In addition, Mauritius signed-up to Yaoundé II in 1972 (the only Commonwealth country to do so) (Stevens and

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<sup>13</sup> Data on international canned tuna production is already presented Chapter 3.

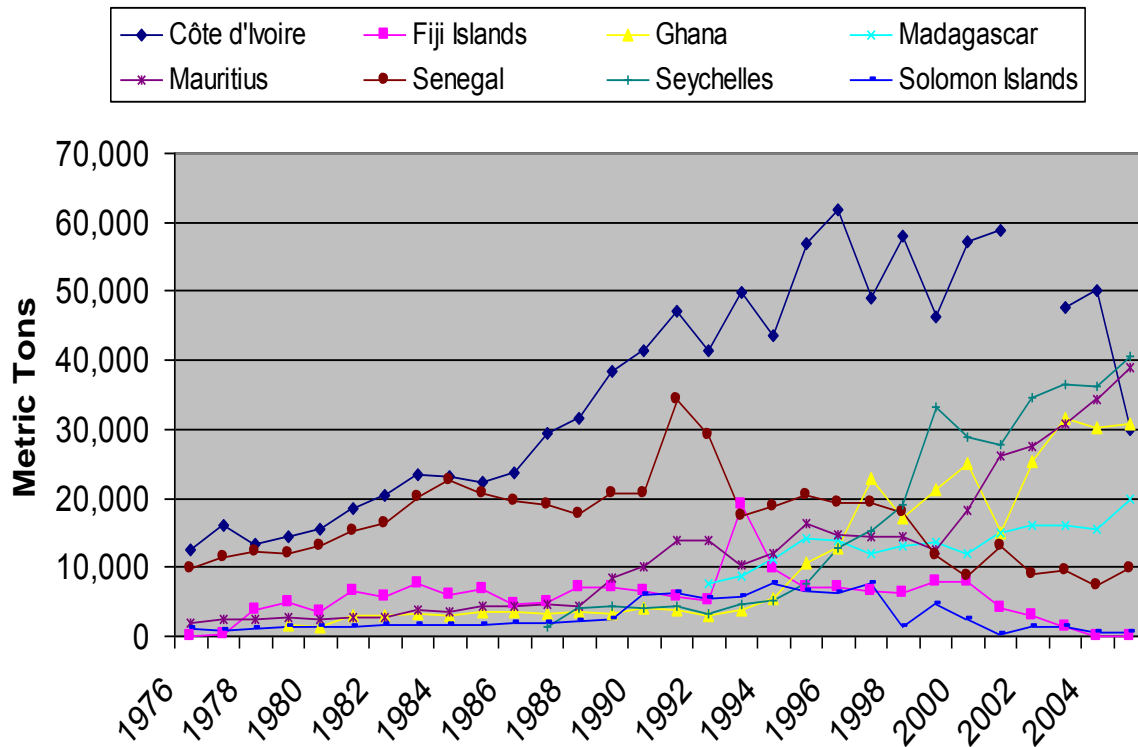
<sup>14</sup> Drawing upon their analysis of trade data to mid-Lomé IV, Davenport *et al.* found that fish was the most important non-oil ACP export to the EU and was ‘one of the most successful cases of processing in the ACP countries’ (1995: 20; see also McQueen *et al.* 1998: 48), referring to fish fillets, frozen prawns and shrimp, as well as tuna products.

<sup>15</sup> Appendix 5C offers a more quantitative account of the importance of the EU trade preference to canned tuna production in the ACP.

<sup>16</sup> In effect, the only market access gains made by these countries under Lomé were those accompanying the accession of Denmark, Ireland and the UK. See Chapters 2 and 3 and Stevens and Weston (1984: 53) on the role of *ownership* by French firms of tuna canneries in Côte d’Ivoire in shaping the latter’s export outlets in the EEC.

Weston 1984: 39),<sup>17</sup> which explains why it entered the period of the Lomé Conventions with an existing record of canned tuna exports.

**Figure 5.1: ACP Production of Canned Tuna 1976-2005 (in metric tons)**



Source: FAO Fishstat Plus

The trends in Figure 5.1 combined with the analyses in Chapter 3 and Appendices 5B and 5C illustrate shifts in production *within* the ACP and demonstrate that country- and firm-level responses to the preference were far from uniform over time. On one hand, historic sites of canned tuna production in francophone West Africa declined in the ten years since 1996. On the other hand, production in the Western Indian Ocean (Mauritius and the Seychelles in particular) registered consistent growth. Similarly, there is a clear shift in EU-orientated sites of production in the Pacific islands, from Fiji (Pafco) and Solomon

<sup>17</sup> Stevens and Weston also note that ‘foreign investors’ perceptions of the competitive advantage provided by the preferences was a factor in stimulating growth of the Mauritian EPZ [export processing zone]’ (1984: 47).

Islands (Soltau) – which downgraded (Chapter 3) – to Papua New Guinea (RD Tuna Cannery).

### **5.3.3 The WTO and the EU-ACP tuna preference: The Cotonou waiver and other tariff quotas**

This sub-section first demonstrates that the Lomé/Cotonou tuna preference was not static: the terms of the relationship changed over time (albeit in relatively minor ways) to reflect the shifting interests of branches of EU capital as well as the emergence of the regulatory regime of the WTO and its use by third parties opposed to the preference. It also identifies important implications of these shifts for ACP interests.

The granting of a tariff quota to Southeast Asian countries for canned tuna in 2003 was a major source of contention for ACP governments and tuna exporting firms as it partially ate into the ACP's competitive advantage (i.e. it was a form of preference erosion). This concession to Southeast Asian exporters was because the Cotonou Agreement contravened the WTO MFN principle (Appendix 3A). The preparatory phase of Cotonou was a non-reciprocal trade arrangement and discriminated between developing countries without objective criteria for doing so, thus it did not comply with the GATT Enabling Clause and could not be categorised as a GSP regime (which allows non-reciprocal trade). Under direct pressure from domestic canned tuna exporters, the Thai government objected to this discriminatory practice as it directly affected opportunities for market access. This point was re-emphasised some years later by the chair of the Tuna Packers' Group of the Thai Food Processors Association in 2006: 'The 24 percent doesn't represent fairness to us, there'll be an open negotiation under WTO rules'.<sup>18</sup> Thailand used the WTO Ministerial meeting in Doha in 2001 as a strategic forum to block consensus on the granting of a waiver for the Cotonou Agreement (which was necessary for the continuation of WTO non-compatible ACP-EU trade) unless the EU agreed to

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<sup>18</sup> Speech by Chanintr Chalisarapong at the INFOFISH Tuna 2006 conference, Bangkok. In addition, at the Cancun Ministerial in 2003, in reference to EU tuna tariffs, the Thai ambassador made the point that the EC 'was taking from the poor and giving to the poor' (cited in Jawara and Kwa 2004: 99).

address specific Southeast Asian interests regarding improved access for canned tuna. The ‘Cotonou waiver’ was granted and the meetings in Doha concluded, but on condition that the EU agreed to consult with the Southeast Asian countries on market access for their canned tuna exports (ICTSD November 2001). They met in December 2001 and April 2002, but the Southeast Asian countries were not satisfied with EU offers and requested WTO mediation in the dispute, which culminated in the allocation in early 2003 of a quota of 25,000mt of canned tuna and 4,000mt of tuna loins at 12 percent duty to Thailand, Philippines and Indonesia (the ‘Cotonou compromise’ quota).<sup>19</sup>

This compromise did not stop representatives of the tuna processing industry in Indonesia, the Philippines and Thailand from continuing to lobby against the discriminatory nature of EU tariff peaks, supported by their respective governments. Lobbying by Thailand contributed to an additional tariff quota for canned tuna at 0 percent duty from March 2006 as compensation for the compulsory tariff increases of the 10 new EU member states when they joined on 1 May 2004 (the ‘EU enlargement’ quota) (Delegation of the European Commission to Thailand 2006; TInd#5–#7). The Philippines and Indonesia were excluded from this new quota for unknown reasons and the Philippines actively protested against it (Atuna 2006a). It is worth noting that the Thai industry has taken a consistently aggressive approach to access to the EU market. The chair of the Thai Tuna Packers’ Group claimed that Thai exports did not represent a threat to EU-based industry (which was unlikely), but at the same time emphasised that Thai industry intended to increase its EU market share.<sup>20</sup> The only logical conclusion of his point was that Thai firms intended to capture ACP (and perhaps GSP+) market share.

Another source of lobby power for tariff quotas was EU-based processing firms. They pushed for an annual tariff quota for 10,000mt of tuna loins at 6 percent for the period 2007-2009 that was not country-specific (EC COM (2007) 289 final, 4 June 2007). In

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<sup>19</sup> The quota provides a quantitative allocation of canned tuna (25,000mt) and tuna loins (4,000mt) at half MFN-duty, based upon historical levels of exports to the EU from Thailand (52%), the Philippines (36%) and Indonesia (11%). Council Regulation (EC) No 975/2003. On the perspective of ACP governments and industry see ACP (2003a; 2003b; see also Josupeit 2007). On the EU-Thai dispute at the WTO that led to the Cotonou compromise see Xuto (2005).

<sup>20</sup> Speech by Chanintr Chalissarapong (Chairman, Tuna Packers’ Group, Thai Food Processors Association) at the INFOFISH Tuna 2006 conference. A point he had made previously: Chalissarapong (2004: 47).



light of the increased demand for tuna loins for processing among EU-based canneries (see Chapter 3) and the inability of ACP and GSP+ countries to fully meet this demand, loin imports from Thailand and the Philippines expanded rapidly (Campling 2008a). However, only 61 percent of EU imports in 2006 from the three Southeast Asian countries were covered by the Cotonou compromise tariff quota, making the remaining imports more expensive to EU processors who had to pay between 20.5 and 24 percent duty, depending upon whether or not the exporter was able to meet GSP rules of origin (Appendix 5C). As a result of this, EU processors succeeded in reaching a compromise with the EU DWF within the European Commission to set this new tariff quota (the ‘loin quota’) (EUInd#10; #17–#20).<sup>21</sup>

Why does all of this matter? According to interviews with EU and Thai tuna industry representatives, the Cotonou compromise quota at 12 percent and the EU enlargement quota at 0 percent were filled within *days* (i.e. the product was warehoused prior to the opening of the quota and pushed through customs on the day it commenced) (TInd#5–#7; see also Josupeit 2007). For example, according to one Thai industry representative: ‘There’s no business in the EU for Central American countries during the Thai quota period because our imports take over’ (TInd#8). A similar trend was echoed by a tuna magnate in the Philippines: ‘The 9,000 ton quota given to the Philippines is only good for two weeks. We can do better than that.’<sup>22</sup> The absolute growth of canned tuna and tuna loin exports to the EU by Thailand and the Philippines can be explained by the Cotonou compromise and (for Thailand only) EU enlargement quotas despite the high tariff peaks on these products.

The important implication here is that buyers within the EU preferred to purchase Southeast Asian canned product at a 12 percent tariff under the ‘Cotonou compromise’ quota. This meant that if the EU tariff was eroded to that (or a lower) level, canneries located in Cotonou, EBA and GSP+ preference receiving countries would not be able to

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<sup>21</sup> As detailed below, the EU DWF benefits from the status quo of the EU tuna tariff regime, hence the need to reach a compromise with the processing branch of the EU-based commodity chain.

<sup>22</sup> Rudy Rivera, director of the General Santos-based Socsargen Federation of Fishing and Allied Industries Inc as cited by Atuna 2006b

compete. Importantly, exports under this tariff quota were not subject to EU rules of origin for fish; thereby allowing processors to source the lowest priced tuna on the international market and increase the profitability of the final product. Therefore, despite the EU policy of tariff peaks, in the 2000s both Thailand and the Philippines experienced expanded penetration of the EU market in value terms for both canned tuna and tuna loins (Chapter 3).

## **5.4 Preference Conditionalities: EU Rules of Origin for Fish and Fish Products**

### **5.4.1 What are EU preferential rules of origin for fish?**

Preferential rules of origin (RoO) were the ‘ticket of entry’ for ACP produced canned tuna to the EU market and accordingly a central conditionality for ACP-based firms, monitored by governments to ensure compliance. This section outlines these rules and demonstrates how their legal form reflects the mercantilist motivations of particular branches of EU capital. It demonstrates why the majority of ACP exporting states contested RoO for fish and fish products (hereon ‘fish’) since Lomé I (Cosgrove Twitchett 1981: 111).

All preferential trade agreements contain RoO. These rules govern whether or not a product is eligible for the tariff preferences contained in a given trade agreement (Hoekman 1993). The main official objective of preferential RoO is to ensure that the economic benefits from trade preferences are granted *only* to the countries that signed the trade agreement. In other words, RoO are designed to ensure that a trade preference ‘stimulates the development of industries’ in partner countries, but does not promote the formation of ‘mere trading houses’ that, for example, simply repackage imported goods produced in non-preference receiving countries (Weston et al. 1980: 58; see also OECD 1983: 25; Ravenhill 1985: 163-4; Cosgrove Twitchett 1981: 47). In *principle*, RoO are thus designed to avoid trade deflection. In terms specific to the tuna trade between the EU and the ACP:

Both the EU and ACP have an incentive to ensure tuna caught by foreign owned vessels in ACP EEZs and manufactured by these same countries do not receive EU trade preferences. This could happen for example with foreign owned factory ships operating within ACP EEZ's. This clearly constitutes trade deflection and as such the RoO should protect against it. (Block and Grynberg 2004: 10)

However, the following analysis of the specifics of EU RoO for fish demonstrates several important motivations behind the legal design of RoO that went beyond the sole objective of countering trade deflection, but first a brief outline of these RoO is necessary.

There were two core over-arching conditionalities within EU RoO for fish under the Cotonou Agreement.<sup>23</sup> The first was in relation to the fish itself, which had to be 'wholly obtained' (CPA, Protocol I, Article 3). This was determined by the EU's definition of 'qualifying vessels' (i.e. only such vessels can catch wholly obtained fish). The vessel had to be flagged and registered by a state that is a party to the agreement, 50 percent of the crew were to be nationals of parties to the agreement, and the vessel had to be 50 percent owned by nationals or companies of parties to the agreement.<sup>24</sup> In light of the high capital costs involved in industrial fisheries, 'the most practicable method of exploiting marine resources for many ACP states is to lease fishing vessels' (Ravenhill 1985: 167). In this context, the ACP was permitted to lease or charter vessels which would be considered as qualifying. However, there were several strings attached to this 'concession', the most important of which was that the ACP state first had to offer the

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<sup>23</sup> The following draws upon the Cotonou Agreement, 'Protocol 1 Concerning the Definition of the Concept of "Originating Products" and Methods of Administrative Cooperation', which is supplemented by multiple interviews and electronic communications with ACP and EU officials, and representatives of industry based in the ESA region, EU and PICs in 2005, 2006 and 2007; as well as participant observation in several meetings on ACP-EU fisheries trade (including RoO) in 2006 and 2007 at the ACP Secretariat (Brussels) and in Mauritius and Vanuatu (see Appendix 1A).

<sup>24</sup> There are additional technicalities and legal detail within the ownership criteria, but these are not important for the purpose of this thesis. For detailed technical analyses of EU RoO for fish, see Block and Grynberg (2004), Campling et al. (2007), Campling (2008b), and Rampa (2004). The rationale for requiring the firm owning the vessel to be both incorporated in a party to the agreement *and* having its headquarters or main place of business there stems from the Treaty of Rome (Article 58), which included the second requirement to account for the incorporation of firms for purposes of tax avoidance (Hoekman 1993: 88).

EU the opportunity to negotiate a fisheries access agreement that the EU did not accept,<sup>25</sup> thereby providing an additional inroad for the EU DWF to gain access to a country's EEZ (see Chapter 4). The only other major exception to the 'wholly obtained' conditionality was if fish were caught within the territorial waters of a party to the agreement (i.e. the 12 nautical mile zone). In this case the fish were wholly obtained regardless of the legal status or ownership of the vessel; as long as it met EU SPS measures.

The second conditionality was that manufactured fish products had to meet the EU definition of 'sufficiently worked or processed products' (CPA, Protocol I, Article 4). In short, fish products (such as canned tuna) could use *any* inputs from *any* countries except that the fish itself had to be 'wholly obtained'. Thus the export of ACP fish products to the EU under the Lomé/Cotonou preference was tied to the exporters' ability to source fish from 'qualifying vessels'. There were, however, three sets of partial exemptions to this rule applicable to fish products:

- 1) 'Cumulation' allowed a preference receiving country to use fish from other *specified* countries, which would then be considered as locally sourced when establishing the 'originating' status of the final product. There were three sub-types of cumulation, but the only one of additional practical relevance under Lomé/Cotonou RoO for fish was 'diagonal cumulation'.<sup>26</sup> This permitted the use of fish from 'neighbouring developing countries'.<sup>27</sup> For the sub-Saharan African ACP this included North Africa, for the Caribbean ACP it included much of Central America, but for the Pacific it added only Nauru (until it too became a member of the ACP group). Despite a declaration by the EU's DG Development that this diagonal cumulation rule 'breaks new ground' (Directorate General for Development 1996: 7), the EU built-in a tuna-specific caveat wherein the

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<sup>25</sup> The other two conditions were that 50 percent of the crew had to be nationals of parties to the agreement and that the arrangement had been accepted by the ACP-EC Customs Cooperation Committee as providing adequate opportunities for developing the fishing capacity of the ACP State and that that ACP State was responsible for the nautical and commercial management of the vessel (CPA, Protocol 1, Article 3.3)

<sup>26</sup> The other two types were 'bilateral cumulation' which meant that ACP producers could use inputs from the EU, and 'full cumulation' which allowed an ACP producer to utilise materials from other ACP countries. However, because 'wholly obtained' fish could already be sourced from any EU or ACP vessel that met the qualifying conditions, these cumulative options were irrelevant to this situation.

<sup>27</sup> This rule was introduced under Lomé IV (bis) (ACP-EC 1996: 85).

- exemption ‘shall not apply to tuna products classified under Harmonised System Chapters 3 or 16’ (CPA, Annex V, Protocol I, Article 6.11). This amounted to almost all tuna products and was thus a clear indication of the sensitivity of the EU tuna industry to foreign competition.
- 2) ‘Derogation’ allowed for a pre-specified quantity of a country’s product to qualify as ‘originating’ even if it was not wholly obtained. Derogations were employed in the Cotonou Agreement in situations where promoting ‘the development of existing industries or the creation of new industries justifies them’ (CPA, Annex X, Protocol 1, Title V, Art. 38:1). The EU offered two types of derogation under the Cotonou Agreement, but the only one of practical use to the ACP tuna industry was an ‘automatic derogation’,<sup>28</sup> which allocated a total annual quota of 8,000mt of canned tuna and 2,000mt of tuna loins to the ACP (CPA Annex V, Protocol 1, Title V, Art. 38:8),<sup>29</sup> which was then distributed among the beneficiaries via negotiation between ACP governments representing the interests of domestically-based firms. Automatic derogation was first provided from 1993 onwards, perhaps in response to long-standing ACP arguments that the specific derogation did not provide the certainty required to attract capital to investment in production (Davenport et al. 1995: 33; Ravenhill 1985: 171).
  - 3) Finally, the ‘value tolerance’ exemption allowed for 15 percent of the ex-works (post-processing) value of a consignment of product to be non-originating (CPA Annex V, Protocol I, Article 4, Paragraph 2; Block and Grynberg 2004; Rampa 2004).<sup>30</sup>

The next step is to identify and assess what EU RoO for fish means in *practice*.

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<sup>28</sup> The other type was the request-based ‘specific derogation’. This was rarely used by the ACP under the Lomé Conventions. This was because the application process was administratively cumbersome, slow moving and disappointing in terms of the quantity eventually offered by the EU. See Cotonou Agreement, Annex V, Protocol 1, Title V, Art. 38:9; Cosgrove Twitchett (1981: 48); Stevens and Weston (1984: 56); Ravenhill (1985: 169); and Wallace (2005: 52).

<sup>29</sup> Under Lomé IV the automatic derogation for canned tuna was 1,500mt in 1992, which was increased to 2,500mt in 1993 (Davenport et al 1995: 19), and to 4,000mt along with 500mt of tuna loins in 1995 under Lomé IV (bis) (ACP-EC 1996: 85). The volume allocated under Lomé IV (bis) was half of what the ACP had requested (Davenport et al. 1995: 61).

<sup>30</sup> This percentage had increased from 10 to 15 percent under Lomé IV (bis) (ACP-EC 1996: 85), although the ACP had pushed for an increase to 20 percent (Davenport et al 1995: 60).

#### 5.4.2 Commercial policy or development anomaly?

Discussion here is ordered by drawing out qualitative ‘costs’ and ‘benefits’: starting with the general benefits of the rules for the ACP before moving to the costs. It will then assess benefits and costs to EU and, finally, provides an overall assessment of the relative ‘balance’ of these costs and benefits, with an explanation of which interests the legal form of the RoO represents.

The most significant benefit was that the RoO provided an additional (albeit not primary) incentive for the EU DWF to base itself locally because vessel owners had a captive market unless the ACP state had an alternative supply of RoO-compliant tuna (see below). On a related point, the vessel ownership requirement encouraged foreign investors to transfer ownership (at 50 percent or above) to ACP governments or local entrepreneurs. For example, it is argued that this was the rationale for Taiyō Gyogyō’s provision of 51 percent ownership of Solomon Taiyo to the government of the Solomon Islands (Grynberg 1995: 82; Appendix 5B). Vessel ownership requirements encouraged several governments in Africa and the Pacific to invest in state-owned tuna fleets. While these were generally unsuccessful in terms of profitability (e.g. Schurman 1998), they were a fundamental education for an entire generation of tuna fishers in Fiji, Ghana and the Solomon Islands (Int#15; IntFS#3; #5; PIC#10; USInd#22). The automatic derogation allowed ACP-based processors to export relatively small quantities of non-qualifying product during periods of reduced supply of RoO-compliant tuna, such as periods of known seasonal fluctuation. Finally, the value tolerance provision was consistently utilised by only one ACP cannery: the Princes factory in Mauritius, which – because of the sheer complexity of the rule (see below) – was only able to make use of a maximum of eight percent of the total 15 percent allowable ‘tolerance’ (EU#34–36).

Almost certainly the most important ‘cost’ of the RoO to most of the actual (and potential) tuna processing ACP was that it acted as a structural barrier to the development and/ or expansion of processing plant and associated firm-level economies of scale to

even have a chance of competing with Thailand.<sup>31</sup> This was because few ACP interests had the capital to invest in industrial tuna purse seine fleets to meet the strict conditions of the RoO (one purse seine vessel costs a minimum of US\$ 20 million), hence there was a limited availability of RoO-compliant fish to supply factories (Davenport et al. 1995: 33).<sup>32</sup> In some cases, the Pacific ACP in particular, the supply of RoO-compliant tuna was very tight because there was no ACP-owned purse seine fleet and there was insufficient supply of tuna caught by the EU DWF Ravenhill (1985: 167). For example, the EU DWF was, in effect, barely operating in the WCPO throughout the period of the Lomé Convention, and even after signing access agreements with Federated States of Micronesia, Kiribati and Solomon Islands from 1999 onwards there was only very minor availability of EU-caught fish to Pacific processors throughout the preparatory period of the Cotonou Agreement (Campling et al. 2007; Hamilton et al. 2011).

The other possible source of supply for the Pacific ACP – the transshipment of RoO-compliant fish from other oceanic regions – was of limited commercial value because of, first, the absolute global limitation of RoO- and SPS-compliant tuna, and, second, the high freight costs (including deadheading) involved in sending reefer carriers to geographically isolated Pacific island countries.<sup>33</sup> In sum, in the absence of trade preferences, firm- and cluster-level economies of scale are imperatives to international competitiveness and profitability in the canned tuna industry because of its high volume/low profit structure (see Chapter 3), but the RoO often did not provide sufficient flexibility of tuna supply with which to fuel profitable plant expansion and develop productive economies of scale. Following on from this, albeit on a speculative note, it is likely that the onerous nature of the RoO acted as a deterrent to potential investment by foreign capital in ACP tuna processing capacity because of associated structural constraints on supply (e.g. Stevens and Weston 1984: 55).

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<sup>31</sup> For a general argument along these lines see Davenport et al. (1995: 35).

<sup>32</sup> In the Indian Ocean, EU RoO benefited certain ACP coastal states (i.e. Madagascar, Mauritius and Seychelles) to different degrees at different times because of the provision of goods and services to the EU DWF, which came into port to sell originating fish direct to canneries and/or to tranship and/or for repairs. For Seychelles, see Chapter 6.

<sup>33</sup> On the importance of freight differentials to tuna canning firms see Campling and Doherty (2007).

The requirement for wholly obtained fish led to costly investments by ACP governments in state-owned tuna fleets, which was another ‘cost’ (to governments) of the RoO. Two prominent examples here were IKA in Fiji and National Fisheries Development (NFD) in Solomon Islands. Both fleets operated at a loss and were a strain on government revenue but were commercially imperative in order to supply ‘originating’ fish to their respective canneries (EUInd#53; #57; IntFS#5; PICInd#30; Grynberg 1995: 51-52). Both were subsequently privatised and NFD was reportedly operating successfully under the management of Tri Marine (one of the ‘big three’ tuna trading firms). Similarly, there was a series of short-lived state interventions in industrial tuna fisheries in the Indian Ocean ACP, including in Seychelles (Chapter 6). This response to the rules represented a state subsidy to capital that fiscally squeezed ACP governments could ill afford. On a related point, the vessel ownership criteria had negative implications for ACP food security and the sustainability of coastal fish stocks. Tuna vessels that did not meet the conditionalities of ‘qualifying vessels’ were compelled to fish within the 12 mile zone – which qualified automatically – if they intended to supply RoO-compliant fish to local factories. However, contrary to stated EU policy aims on poverty alleviation and the promotion of environmental sustainability, this aspect of the RoO put local artisanal and small-scale fishers in direct competition with industrial tuna fleets, with negative impacts on shared target (and other) stocks. This phenomenon was most common in West Africa, but was also reported in the Pacific islands.<sup>34</sup>

Several other negative impacts (or ‘costs’) to the ACP were apparent. EU demands on ACP governments for administration of the rules were very demanding, perhaps due in part to prior cases of RoO fraud by ACP-based processors.<sup>35</sup> The associated administrative costs of monitoring compliance and verifying certificates of origin were very high for under-resourced ACP customs authorities as well as for exporting firms.<sup>36</sup>

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<sup>34</sup> On the conflict between the EU DWF fleet and local fishers in West Africa in general, see Bartels et al. (2008), and in Senegal in particular, see Iossa et al. (2008).

<sup>35</sup> The European Anti-Fraud Office had issued a number of reports on this issue. See, for example, OLAF (2006).

<sup>36</sup> For example, a processing plant supplying local and other non-EU markets with non-originating product as well as EU markets had to ensure that the fish are not mixed. This led to additional plant-level compliance costs and reduced productive economies of scale. See also Block and Grynberg (2004). In



The costs of compliance were so high that even a US MNC – with the associated financial and technical resources – cited insurmountable difficulties in meeting EU requirements for preferential access for its cannery in Ecuador: ‘they found that the costs of compliance and all the additional legal work and things that you had to do didn’t make it work’ (USInd#16). These types of difficulties have led prominent mainstream analysts of RoO to argue that the costs of RoO compliance should be commensurate to the risk of trade deflection taking place (Brenton and Manchin 2002). Similarly, as noted above, the value tolerance rule was only ever used by *two* ACP firms because of its complexity, which rendered this ‘concession’ commercially almost meaningless.<sup>37</sup> Another ‘concession’, the option to lease or charter a vessel, was subject to important conditionalities (see above). In effect, the EU would only allow leasing or chartering if the EU DWF did not have a commercial interest in that ACP fishery, despite the fact, as noted above, that leasing/chartering was by-far the most realistic and affordable strategy for ACP capital to enter into industrial fisheries (see further below). The automatic derogation for canned tuna and tuna loins *was* a useful (albeit small) exemption to the wholly obtained rule. However, it did not provide the stability of market access that ACP firms would have preferred because, when other eligible countries (or firms within existing countries) started exporting processed tuna, there were conflicts in deciding over the re-distribution of the quota (ACP 2003b).<sup>38</sup>

EU RoO for fish provided two major commercial benefits to the EU DWF. Of course, EU vessels owners are aware of the preference offered to ACP canneries and were also cognisant of the related high demand for ‘wholly obtained’ fish, which EU-owned vessels

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general terms, RoO often required relatively ‘sophisticated and expensive accounting procedures’, which were normal for European firms but a barrier to entry for ACP firms (Brenton and Manchin 2003: 763).

<sup>37</sup> It required the exporter to apply the rule on a single species, single consignment and single consignee basis, and the only EU customs authority that accepted imports under this rule was the UK. This outline of the practical application of this rule is based upon interviews and personal communications with ACP, EU and Thai industry representatives and ESA government officials, 2006 and 2007.

<sup>38</sup> In terms of the distribution *within* countries, for example, it resulted in domestic contestation in PNG over the allocation of the national derogation between RD Tuna Cannery (est. 1998) and more recently established processing plants, that is, SSTC (est. 2003) and Frabelle (est. 2006) (see Appendix 5B for company overviews).

were well-placed to provide.<sup>39</sup> This captive market allowed the EU distant water tuna fleet to charge a price premium on ‘originating fish’ sold to ACP processors,<sup>40</sup> which, in turn, meant that EU DWF owners were capturing a share of the ‘value’ of the preference. The bargaining power of the EU DWF was relatively strong because, if an ACP processor refused their higher prices, they could sell their catch at a premium to other (sub)regions requiring EU RoO compliant tuna (i.e. ACP and GSP+ countries). However, this point should not be overstated as the EU DWF also benefited from quick assured sales to ACP canneries so bargaining was not entirely uneven.<sup>41</sup> A second point stems from the leasing/chartering ‘concession’ which provided the EU DWF with an additional means to expand resource access opportunities (see also Davenport et al. 1995: 18; Block and Grynberg 2004), which has already been discussed. Moving downstream in the commodity chain, tuna processors in the EU were partly insulated from competition from ACP canneries as the policy of tariff peaks meant that there were no limitations on the procurement of whole frozen tuna by EU-based processors (i.e. it received a zero percent tariff if it was ‘to be processed’ in the EU, Table 5.1 above). In addition, as detailed above, EU-based processors had a wide range of sources of supply of zero or reduced duty tuna loins under the GSP regime, Lomé/Cotonou, and tuna tariff quotas. ACP canneries were not afforded this level of flexibility of supply.<sup>42</sup> Further downstream, EU buyers utilised Thai price as their benchmark and because ACP tuna processors had to match the Thai price as closely as possible (despite operating with higher production and other costs), buyers consequently received indirect commercial benefits from the preference. In other words, it appears that a portion of the preference was absorbed by

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<sup>39</sup> This was confirmed in multiple interviews in 2006 and 2007 with representatives of the EU tuna industry with interests in purse seining.

<sup>40</sup> This phenomenon has been noted in several reports (e.g. Block and Grynberg 2004: 14; Rampa 2004: 17) and confirmed in multiple interviews in Belgium, Fiji, France, PNG, Solomon Islands, Thailand and the US in 2005, 2006 and 2007. The range US\$ 20-50 per tonne was cited as a normal premium. In fact, only *one* (US) industry interviewee thought that it made no difference to factory gate price. In addition, the author has confidential price data from a cannery in Africa that documents a higher fob price paid to EU vessels than for non-originating tuna shipped (cif) from the WCPO; however, this may be the result of quality differentials (Appendix 2C.1).

<sup>41</sup> As detailed in Chapters 2 and 6 turnaround time is a core dynamic of competitive accumulation in the tuna purse seine industry so as to maximise fishing days and the rate of return on the capital investment.

<sup>42</sup> This point builds on Rampa (2004: 17).

retailers via a reduction in the potential profitability of ACP canneries (Rampa 2004:16).<sup>43</sup>

The only major ‘cost’ to the EU was the need for customs officials in member states to monitor and implement a range of differing preferential RoO which represented an administrative burden (EUGvt#47). This was especially true in cases of false accusation against ACP governments of RoO fraud because EU authorities would have to bear the legal costs, but if fraud was proven the costs were borne by the preference receiving government, as occurred with Fiji in 1991 (Grynberg 1995).

This analysis of the relative costs and benefits of Lomé /Cotonou RoO makes clear that ‘Rules of origin are not a neutral instrument’, as candidly pointed out by an EU official (EUGvt#47). While the RoO contributed to a small minority of the ACP benefiting from the relatively stable provision of goods and services to the EU DWF because of the latter’s captive market, for the majority the demonstrable costs far outweighed the limited benefits. Most important, the structural constraint of the availability of RoO-compliant tuna contradicted the fundamental stated rationale for the trade preference: to facilitate the development of infant industry in the ACP until it reached sufficiently competitive economies of scale so as to compete without a preference. In the context of highly globalised networks of supply and production in contemporary capitalism (including in tuna commodity chains), it is a developmental anomaly that EU preferential RoO still demand ‘wholly originating’ fish based upon a conceptualisation of ‘national’ ownership. This was neatly summarised in an interview with an ACP official: ‘The economics of trade nowadays don’t justify stringent, strict rules of origin’ (Int#9).<sup>44</sup> The failure of EU RoO to reflect the realities of the globalisation of production systems was also recognised by the EU. In a communication on RoO it points out that they ‘were drawn up at a time

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<sup>43</sup> This point was confirmed in relation to a different tariff preference, the ‘Cotonou compromise’ tariff quota. In his speech at the INFOFISH Tuna 2006 conference, Francisco Tui-Laurel Jr, (President of Frabelle Fishing Corporation, Philippines) stated that: ‘Buyers benefited from EU tariff-quota, *not* Philippines’.

<sup>44</sup> Similarly, the World Bank’s expert on RoO argues that: ‘Strict rules of origin act to constrain the ability of firms to integrate into ... global and regional production networks and in effect act to dampen the location of any value-added activities’. (Brenton 2003: 10)

when the international economy was very different from that of today and when goods were produced in a very different way' (EC COM(2005) 100final: 8).

As an aside on the proximate concept of 'national' production systems raised in Chapters 2 and 3, it is also worth noting that, considering the EU emphasis on the importance of RoO to ensure the flow of developmental benefits to the ACP, 'there is nothing in the RoO that prevents firms from third countries from owning processing facilities'. It therefore appears that 'the EU is willing to see investment deflection for the canneries but not the capture fishery' (Block and Grynberg 2004: 13). Paradoxically, by making it more difficult to benefit from preferences if the firm was not vertically integrated (i.e. through the ownership of industrial tuna vessels as well as processing plant), these RoO were a *disincentive* for domestic investment. In fact, many of the canneries that operated in ACP states were owned by neither ACP nor EU capital (see Appendix 5B). The preference and the associated RoO were thus structured so that benefits from canning, which provide the bulk of the 'value addition', do not always accrue to ACP or EU interests (Block and Grynberg 2004: 13). This outcome is primarily an unintended effect of the preference because (as discussed above) it was initially designed to benefit French investments in West Africa.

The fact that EU interests received significant benefits but only one (minor) administrative cost under the RoO regime is hardly surprising given that it writes the rules. In short, the legal form of RoO reflects the political clout of EU-based capital, particularly the EU DWF. In relation to ACP demands for the simplification of RoO, during a group interview of DG Fish officials they agreed that:

We don't see any need to go down that road. In DG Fish we're very cautious of rules of origin reform (despite accusations of rules of origin, TBT and SPS as protectionism). Once we give preferences, rules of origin provide guarantees that the preference is helping who it was meant to help (EUGvt#3-#6).

A DG Fish official went on to explain that the 'most important aspect' of fisheries RoO was the vessel flag: 'We want to have a guarantee that at least someone is in control of

what's going on' (EUGvt#3-#6). This is a reasonable position, but begs the question of why there were such strict *ownership* criteria? Contrary to the position of DG Fish, it is worth citing EU officials from another DG: 'The feeling is that they're [RoO] *hindering* development, ... the beneficial impacts are at least as much on the side of EC operators as they are on the side of the ACP' (EUGvt#1-#2).

To sum-up, it is worth pointing out that this assessment of the EU RoO regime is neither new nor particularly controversial. For example, a UK Select Committee of the House of Commons in the early years of the Lomé preference concluded that the system “seems to bias choices of industrial development and technology transfer in favour of the EEC” (UK Select Committee of the House of Commons on Overseas Development as cited by Ravenhill 1985: 169). Moving on two decades, the critique could be reiterated: the Report of the UK Commission for Africa stated that EU RoO can be ‘applied in a deliberately obstructive manner’ and are ‘taken to ludicrous extremes – to the extent that fish are ruled ineligible if the boat they are caught from is Ghanaian but the master of the vessel is South African’ (Commission for Africa 2005: 55-56). Even the EU’s DG Trade acknowledged an element of the developmental anomaly at the heart of the argument surveyed here: ‘The ROO creates a bias between *sources* of investment in ACP States, providing an incentive for ACP States to grant EU access to their EEZ over other countries’ (DG Trade, July 2007: 10-11).

## **5.5 Market Access for Canned Tuna in ACP-EU Economic Partnership Agreement Negotiations**

ACP-EU Economic Partnership Agreements (EPAs) were intended to replace trade arrangements under the Cotonou Agreement with a set of WTO-compatible agreements by the end of 2007. We trace their negotiation with a particular focus on the interests of the non-least developed country (non-LDC) ACP – which includes Seychelles – because of the threat posed to their preferential access to EU markets if they failed to conclude

EPA negotiations on time.<sup>45</sup> The central argument here is that several ACP non-LDCs were pressured into EPAs in order to avoid the potential collapse of their tuna processing industries.<sup>46</sup> The historical coverage here runs from the initial formal opening of negotiations in 2002 to the initialling of interim EPAs by certain ACP states in end-2007.

EPAs were intended to govern ACP-EU preferential trade relations. Other relationships such as aid flows, technical assistance and other forms of cooperation fell under the Cotonou Agreement, which would expire in 2020. The driver behind the negotiation of EPAs was to make ACP-EU preferential trade compatible with the WTO (Appendix 5A).<sup>47</sup> In particular, non-GSP preferential trade arrangements were required to comply with Article XXIV of GATT(1994). This provided three options to the EU in its trade relations with the ACP post-2007: offer the same tariff treatment to *all* WTO members (the MFN principal), which would have immediately eroded the ACP preference and tariff protection to EU industry (an unacceptable outcome for all parties); change the terms of the arrangement so as to fulfil the legal requirements of the Enabling Clause of the GSP (which the EU was not willing to do, see below);<sup>48</sup> or enter into an arrangement of reciprocal free trade areas framed under the terms of Article XXIV,<sup>49</sup> which required legal commitments by parties to eventually liberalise ‘substantially all trade’ between them. The last option had been decided at the Cotonou negotiations (Appendix 5A), so that, unlike Lomé and the preparatory phase of the Cotonou Agreement, the ACP were to offer reciprocal market access for EU exports (much like the prior Yaoundé

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<sup>45</sup> Along with the sub-regional division of initial EPA configurations (four in Africa and one for the Caribbean and Pacific respectively), the ‘ACP’ is differentiated in this chapter by those countries that are categorised as LDCs or not. This does not entail an acceptance of LDC status as a legitimate *analytical* category, instead it is a recognition of the differential treatment of LDCs in international trade law.

<sup>46</sup> The author was closely involved in this process on behalf of the Pacific ACP EPA grouping and, to a lesser extent, the East and Southern Africa (ESA) grouping (which loosely consisted of COMESA members). This involved the production of several consultancy reports on the fisheries aspects of these negotiations, attendance at multiple meetings, and general day-to-day contact with negotiators while based in Fiji, in the Seychelles and via email and subsequent visits to these sub-regions upon return to Britain.

<sup>47</sup> The EU’s other stated objective in the promotion of EPAs is to encourage the ACP ‘to base their integration into the world economy on regional economic integration’ (Directorate-General for Trade & Directorate-General for Development 2002: 5). In other words, the EU was arguing that the ACP try to address their lack of productive economies of scale by mirroring developments in regionalism in Europe since World War Two.

<sup>48</sup> It was however, an option. See Bilal and Rampa (2006); (Stevens 2005).

<sup>49</sup> Even if an ACP country was not a member of the WTO, such as the Seychelles, trade still had to be WTO-compatible because the EU is a WTO member.

Conventions). While the extent and timing of reciprocity was a central controversy of the EPA negotiations, the details of eventual ACP market access offers are beyond the scope of this thesis. Instead, the focus here is on the objective of certain ACP governments to maintain duty-free market access for canned tuna and tuna loins, for which a brief sketch of the institutional and procedural dimensions of proposed EPAs provides necessary context.

On the EU side, negotiations were led by the Directorate-General for Trade (DG Trade). With the 1957 Treaty of Rome, DG Trade was granted full competence to negotiate the vast majority of external trade policy on behalf of all EU members.<sup>50</sup> This is not to suggest that DG Trade had full sovereignty in negotiations.<sup>51</sup> Its remit was initially set by the EU Council of Ministers and, upon eventually reaching an agreement with an EPA grouping, the text would first be discussed by all other relevant Directorate-Generals and, when consensus was reached, it would be presented to the Council of Ministers, wherein member governments could exert influence.<sup>52</sup>

As noted above, the stated rationale of the EU in promoting negotiation modalities with sub-regional groupings of the ACP was not *solely* to facilitate compliance with GATT(1994) Article XXIV, but also to encourage regional integration within the ACP along the lines of the ‘model’ of regionalism of the EU. As such, the configuration of EPAs loosely reflected existing regional integration organisations within the ACP. Figure 5.2 illustrates the institutional appearance of this shift, but it does not demonstrate the inherent tensions, overlaps and contradictions of these sub-groupings (especially in the African context), which not only resulted in some African states being torn by their dual membership of two integration organisations (especially COMESA and SADC) but

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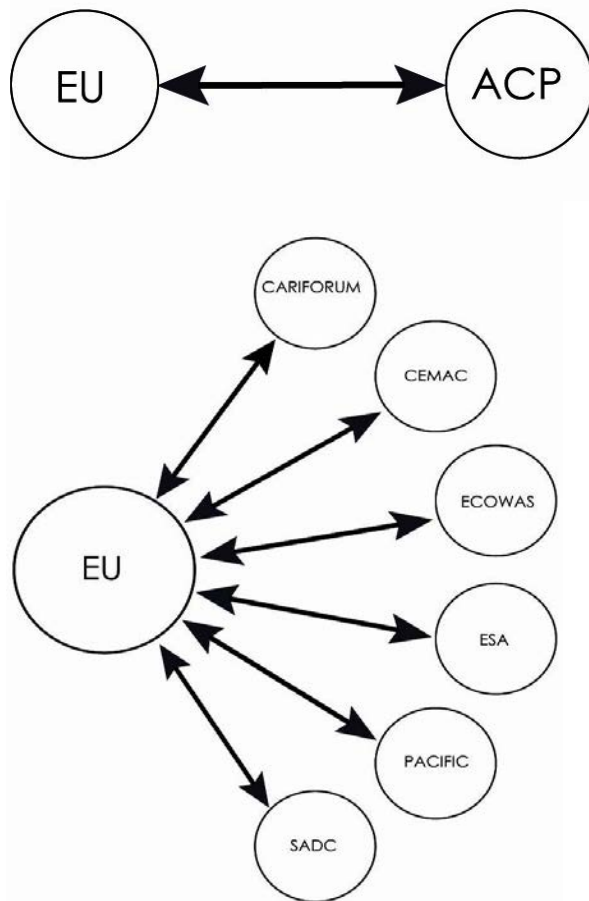
<sup>50</sup> The major exceptions to this rule were issues such as public procurement, which were a combination of EU and national competence (Woolcock 2005: 379).

<sup>51</sup> The following draws on interviews with multiple EU officials in 2005 and 2006; see also Wallace (2005).

<sup>52</sup> Prior to the 2009 Lisbon Treaty the European Parliament could only offer very limited scrutiny of proposals. It is worth noting that the formal responsibility for EU trade relations with the ACP used to be held by the Directorate-General for Development. Reforms within the European Commission since 1997 shifted this portfolio to DG Trade (Page and Hewitt 2002: 94). This institutional realignment may have had an influence on the extent to which EPA negotiations maintained a development dimension, which was a core critique by the ACP as developmental components were largely absent from the texts of eventual interim EPAs.

eventually led to splits within EPA groupings (in particular the ESA group, where a second grouping emerged, consisting of members of the East African Community, to negotiate a separate interim EPA).

**Figure 5.2: The changing institutional structure of EU-ACP trade relations**



**Notes**

CARIFORM: Members of the Caribbean Forum

CEMAC: Members of the Central African Economic and Monetary Community *plus* São Tomé.

ECOWAS: Members of the Economic Community of West African States *plus* Mauritania.

ESA: Eastern and Southern Africa, majority membership of COMESA (Common Market for Eastern and Southern Africa)

Pacific: Pacific Forum Island Countries

SADC: Southern African Development Community is leading the negotiations, but the EPA will consist of members of the Southern African Customs Union (SACU) *minus* South Africa, *plus* Angola, Mozambique and Tanzania.

Initially, the negotiations were designed to take place in two phases. first an ‘all-ACP’ phase where ‘guidelines’ on the general modalities would be developed and cross-cutting issues in six thematic areas of the negotiations would be decided with the EU. The strategic motivation was that the ACP would be able draw on the perceived improved collective bargaining power of this larger group. The second phase was to consist of the EPA sub-regions negotiating specific interests (Wright 2005: 74). Due to pressure of the end-2007 deadline and the fact that phase one was far from its September 2003 deadline,



the EU required that first and second phase negotiations were to continue in parallel (Gasiorek and Winters 2004: 1336-7). The first phase, in effect, collapsed and, to the extent that they were developed, the guidelines were barely used.

The strategic motivation for the ‘all ACP’ phase was probably misplaced because ACP bargaining power had never recovered from the heights of the mid-1970s when Lomé I was negotiated (Appendix 5A); processes of ‘all ACP’ negotiations platforms had subsequently been complex and, in turn, very weak, not least because of the highly differentiated political-economic interests and ideological perspectives of these former European colonies. The outcome was that the second phase led to some EPA groupings vying against others in order to get ‘better’ concessions from the EU,<sup>53</sup> including tactics of trying to negotiate as quickly as possible so as to receive improved levels of EU patronage (e.g. CEMAC) through to deliberately delaying negotiations so that particular concessions might be gained that the EU might not be willing to provide to all EPA regions (e.g. Pacific). On one hand, the swift move to phase two negotiations and the subsequent tensions between (and within) EPA groupings resulted in accusations that the EU was pursuing a policy of ‘divide and rule’; for example, one ACP representative maintained that ‘it’s not written but you can just see it!’ (Int#9). On the other hand, a less conspiratorial explanation was that this was the simple logic of institutional behaviour: the EU was merely trying to find actors to do business with (Int#15).

In order to maintain Cotonou-equivalent market access for tuna (and other) products, ACP LDCs were able to fall-back on the EU’s Everything But Arms initiative. Therefore, tuna exporting LDCs (i.e. Madagascar, Senegal and the Solomon Islands) were generally under significantly less pressure to initial EPAs by the end-2007 deadline as they would suffer only marginal disruption of their preferential trade flows due to slightly stricter RoO under the GSP regime.<sup>54</sup> In fact, they had a *disincentive* for entering into EPAs as,

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<sup>53</sup> Multiple interviews with ESA and PIC negotiators, international trade specialists and EU officials, 2005, 2006 and 2007; direct observation in ESA and PIC technical meetings in 2006 and 2007.

<sup>54</sup> RoO for fish under the EU’s GSP regime (of which EBA was a component) are slightly stricter than under Cotonou (and subsequent EPAs) and were non-negotiable (i.e. unilaterally applied by the EU). For a detailed comparison of GSP and Cotonou RoO for fish see Campling et al. (2007), and of Cotonou and EPA RoO see Campling (2008b).

by definition, such an agreement required committing to a timetable for eventual preferential market access for EU goods and services, with negative implications for government revenue through a decline in import tariffs and deepened competition for locally-based firms. Non-LDCs however, only had the option of the EU's 'standard GSP' which meant the erosion of the tuna preference to a 20.5 percent duty, thereby putting non-LDC ACP exporters on a par with far more competitive sites of production in Southeast Asia and placing them at a direct disadvantage in relation to exporters using the EBA or GSP+ schemes. In effect, the non-negotiation of EPAs would almost certainly have resulted in the overnight collapse of non-LDC exports of canned tuna and tuna loins to the EU (i.e. from Côte d'Ivoire, Fiji, Ghana, Kenya, Mauritius, Papua New Guinea and Seychelles). To illustrate this point, recall that product from Thailand was preferred by EU buyers at 12 percent duty under the 'Cotonou compromise' quota, implying that ACP product would not have been purchased if it carried a 20.5 percent duty. This loss of preferential market access would probably have also led to the closure of the associated ACP plant. According to one EU industry representative: 'we have canneries around the world and if customs protections were removed and the 25 percent [*sic*: 24 percent] disappeared, the canneries would also disappear' (EUInd#1). New markets might have been an option, but as discussed above, the preference appeared to be a determining competitive advantage for ACP-based processors and central to their commercial survival.<sup>55</sup>

In this context, a set of important controversies surrounded the situation of the non-LDCs. Under the terms of the Cotonou Agreement, the EU had committed to 'assess the situation of the non-LDCs' in 2004 if they reported to the Community that they were not able to enter into EPAs. In this case, 'all alternative possibilities' would be examined 'in order to provide these countries with a new framework for trade which is equivalent to their existing situation and in conformity with WTO rules' (CPA Article 37.6). This links to the second negotiation option available to the EU noted above – the formation of a

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<sup>55</sup> As detailed in Chapter 3, the tuna cannery in Fiji was the only ACP plant to shift from being centred on the EU canned tuna chain to the US-centred one, but this involved a process of downgrading from producing canned tuna to tuna loins. Moreover, the US loin market consisted of supply to only one cannery, negating the possibility of additional, profitable supply.

Cotonou-equivalent GSP regime. Aside from problems of the modalities for resolving this issue – the criteria for ‘alternatives’ and their assessment by the EU were not specified in Article 37.6 (Alavi et al. 2007: 13) – there were two other issues: first, no ACP non-LDC had opted out of EPA negotiations by end-2004, and thus the EU was not legally committed to offer equivalent alternatives (Alavi et al. 2007: 9). Second, when they realised that EPAs might not be concluded in time, several non-LDCs (including PNG and the Seychelles) enquired about the possibility of utilising the GSP+ regime to avoid the downgrading of tuna exports to the standard GSP.<sup>56</sup> In response to these enquiries, the EU declared that it would not open this ‘closed list’ to new applicant countries until 2009, thereby effectively blocking ACP non-LDCs applying for GSP+ treatment as an alternative. While the EU argued that this decision was simply in conformity to its own rules, the ‘closed list’ was incompatible with the GATT Enabling Clause, including two specific WTO Appellate Body rulings in favour of India in 2003 and 2004 against the EU’s prior GSP ‘Drugs Arrangement’, among other reasons because it used a closed list! (Bartels 2007; EC April 2004). This case clearly demonstrates the hypocrisy of the ‘developmental’ scope of EU trade policy: on one hand, its stated objective of full compliance with WTO rules compelled the ACP to enter into EPAs to maintain market access, while on the other, it failed to offer an already-existing EPA alternative to non-LDCs because it would break internal EU regulations, despite the fact that these very regulations contravened the WTO.

In sum, the combination of the time constraint of the end-2007 deadline (imposed by the end of the Cotonou Waiver at the WTO) and the lack of alternative Cotonou-equivalent market access opportunities (imposed by the EU’s unwillingness to provide one), meant that tuna exporting ACP non-LDCs were compelled to enter into EPAs or lose preferential treatment. Given the fact that not one of the regions was ready to sign full EPAs by early 2007, a two-stage solution was developed. *Interim* EPAs would be signed by end-2007 which would meet the basic requirements of GATT Article XXIV by committing to the reciprocal (but asymmetrical) liberalisation of the trade in *goods* and

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<sup>56</sup> Multiple person. comm., ESA and PIC negotiators, 2006 and 2007; direct observation in ESA and PIC technical EPA meetings in 2006 and 2007.

thus allow the continuation of uninterrupted preferential market access for the ACP. This was to be followed by a commitment to negotiate *comprehensive* EPAs in a range of time frames from 2008 (including agreements on trade in services, investment rules, etc). By the end of 2007, only around 35 of the 79 ACP countries had initialled interim EPAs. Continuing market access for tuna products was a *central* reason for doing so by PNG and Seychelles, and as part of several other preferential items for Côte d'Ivoire, Fiji, Ghana and Mauritius.<sup>57</sup>

## 5.6 The Political Economy of the EU Tuna Trade Regime

Grilli (1993) is probably correct to argue that EU trade policy towards the ACP and other developing countries was not a consistently coherent strategy of imperialist divide and rule. Instead it was shaped by colonial relations in the first instance (Appendix 5A), and subsequently by a series of ad hoc responses to emerging circumstances (albeit responses that reflected the hierarchies of the inter-state system).<sup>58</sup> Moreover, the objective of this policy was to defend and extend European economic interests, whether general or sectoral, and to maintain the post-colonial world order that had propped-up capitalist development in Western Europe since World War Two (Grilli 1993: 152). To this we might add the ideology, policy measures and broad regime of accumulation associated with neoliberalism, at least where it benefited EU interests, including the 're-designing' and 'locking-in' of the ACP into the neoliberal world order with the conditionalities attached to Lomé IV, Cotonou and the subsequent system of EPAs (Nunn and Price 2004). What mechanisms did capital involved in the fishing and EU-based processing nodes of the commodity chain use to achieve its particular interests?

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<sup>57</sup> Albeit spurred on by high pressure negotiation tactics by the EU such as linking the EPA to EDF funding. Multiple pers. comm., ESA and PIC negotiators and international trade specialists, 2006 and 2007; direct observation in ESA and PIC technical EPA meetings in 2006 and 2007.

<sup>58</sup> For example, even by the early 1980s the commercial motivations behind EU RoO for fish under Lomé were clear. First, 'to help maintain the dominant position of certain member states, most notably France [Spain was not a member of the EEC during Ravenhill's period of analysis], in the exploitation of the fishery resources of West Africa', and second, 'to prevent competitors of European fleets from gaining access to the domestic Community market' (Ravenhill 1985: 167-68).

While minor in terms of their economic weight in the EU as a whole, tuna fisheries are of great political and social importance.<sup>59</sup> It appears that policy decisions were based on a diverse range of interests at the national and even local level. In fact, it was at the local level, through close-knit regionally-*framed* identities, that the interests of capital made its (economically relatively very small) voice heard in national and EU political fora, such as those who claimed Breton or Basque heritage or who come from Cornwall, Scotland, Galicia or Vigo (Lequesne 2005: 353-4 and 358-9). The EU DWF was able to punch above its economic weight in terms of its lobby power vis-à-vis the EU because of the political sensitivities of the historical-geographical roots of tuna fleet ownership. The formal representation of these interests at the level of the EU was mediated through Europeche and Eurothon, the former the lobby group for the EU-wide fishing industry as a whole and the latter representing EU tuna fishing and processing associations as well as their overseas interests (particularly in the ACP and GSP+ countries). Eurothon actively lobbied to maintain the status quo of the EU tuna regime, including the maintenance of the system of preferential RoO and tariff protection in EPA negotiations and at the WTO (Eurothon 2006a; 2006b; 2007a; 2007b). A major benefit to EU industry lobby power was strategic alliances with ACP governments, which clearly also had an interest in maintaining the status quo of the EU tuna tariff regime.<sup>60</sup> This allowed EU tuna firms to apply a ‘developmental sheen’ to their commercial interests. For example, a media release by Eurothon stressed the importance of the tariff regime to the development of ACP countries, whereas the commercial interests of Eurothon’s membership were far less prominently highlighted (Eurothon 2006a).

The impact of this lobby power is difficult to isolate analytically. However, EU officials were found to effectively represent the economic arguments forwarded by Eurothon and its members. For example, one official laid out the logic of the ‘three pillars’ of EU tuna policy – access agreements, tariff structure and RoO – and that ‘if one collapses the

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<sup>59</sup> For example, of the total EU DWF operating under access agreements with developing countries (of which a high percentage are tuna vessels) around 13,000 fish workers were EU nationals. Indirect annual employment resulting from these agreements was estimated at almost 19,000 people, of which 18 percent were in the canning industry (IFREMER 1999).

<sup>60</sup> For example, in 2006 a Eurothon representative travelled to several ACP sites of production to encourage governments to join Eurothon opposition to reform of RoO (EUInd#10; SGvt#43; SInd#9).

others are weaker both for us *and* for the coastal state' (EUGvt#3–#6). In fact, there are five 'pillars' (illustrated in Figure 5.3); to the three listed must be added the wide range of fisheries subsidies integral to the commercial survival of the EU DWF (Chapter 4) and SPS measures that constitute an additional limitation on potential competition from non-EU interests. Nonetheless, the commercial logic of the interlocking nature of the EU tuna regime and the apparent symbiosis with ACP-based interests was also recognised by ACP policy makers and advisors. There were two aspects to this argument, one general to all ACP tuna exporters and the other to particular countries. First, if the ACP was successful in its pursuit of reform of the EU tuna regime and that this reform negatively affected the political-economic pillars propping-up the survival of the EU DWF, then the commercial logic (and associated lobby power) for maintaining tariff peaks would decline with it (EUGvt#1; #2; #9; Pearson 2007a). The outcome might have been an end to the tariff preference because there would have been little justification within the EU for maintaining tariffs peaks, especially given the assumption dominant in most EU policy circles that high tariffs have negative effects on consumer prices. In practice, this argument significantly tempered tuna-specific demands among most ACP states in EPA negotiations, particularly in the ESA region.

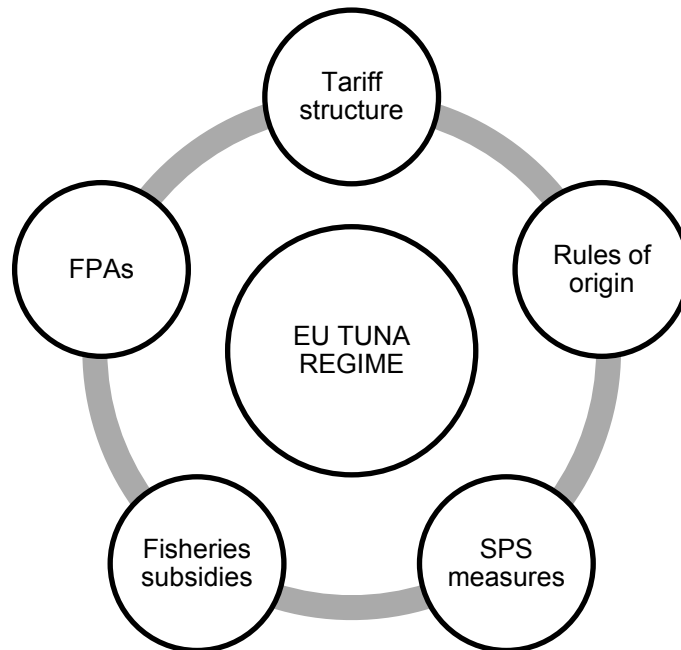
Second, for those ACP states that benefited from the EU DWF using their ports as a local base, reform of RoO was seen to have negative economic and social implications as it might lead to a decline in DWF activities (Int#15; SGvt#14; #15; Pearson 2007b; 2007c). The most important example of this position was Seychelles. It benefits from status quo RoO because of the huge domestic availability of EU caught fish and the economic activities of these boats when in Port Victoria (Chapter 6). Conversely, other ESA group members wanted fish to be deemed originating when caught in their EEZs *regardless* of vessel flag and ownership, thereby reflecting economic sovereignty over resources in their waters.<sup>61</sup> The outcome of the ESA IEPA in late 2007 was an automatic derogation from RoO of 8,000mt of canned tuna and 2,000mt of tuna loins. This was perceived as a gain as it gave the three tuna processing ESA countries (Madagascar, Mauritius and

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<sup>61</sup> Namibia in the SADC IEPA and the Caribbean EPA made similar demands (Campling 2008b).

Seychelles) an identical potential volume of non-originating supply as that previously shared among the entire ACP group (Campling 2008b).

**Figure 5.3: The five pillars of the EU tuna regime<sup>62</sup>**



While reciprocal trade had been dropped with the shift from the Yaoundé to the Lomé Conventions, the effect of cumulation in RoO for EU capital was ‘to reintroduce the principle of reverse [reciprocal] preferences through the back door’ (Ravenhill 1985: 168). The restrictiveness of rules of origin served to skew the developmental framing of EU preferential trade policy towards EU capital in terms of the flow of industrial development and technology transfer to the ACP (Select Committee of the House of Commons on Overseas Development as cited by Ravenhill 1985: 169; see also, Davenport et al. 1995: 33). In other words, the cumulative scope of the RoO was an example of mercantilist commercial policy because it allowed EU capital preferential access to EU markets via ACP-based processing. In effect, the RoO both protected processors based in the EU from the potential capacity of ACP production and it

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<sup>62</sup> As noted in Chapter 1, the role of public and private standards is excluded from this thesis.

supported the EU DWF in terms of its sale of fish to a captive market.<sup>63</sup> EU RoO for fish was so successful a tool of commercial policy that Japan and the US mirrored their design in their own FTAs.<sup>64</sup>

However, this set of commercial policies also had either unintended effects or were, to an extent, genuinely designed with the intention of providing an incentive to capital to invest in industrial development in the ACP.<sup>65</sup> The commercial benefits to EU capital were far from always apparent in relation to the ownership of ACP-based tuna factories. Indeed, foreign companies competing with EU firms frequently made use of the preference to gain access to EU markets (Appendix 5B).<sup>66</sup> This seemed to represent either a concession on the part of the EU to non-EU capital or an unavoidable outcome of the benefits available to EU firms that had invested in other ACP states. In terms of tuna processing interests, this evidence makes a directly causal relationship between EU trade policy and the interests of its ‘national’ capitals empirically fuzzy. Nonetheless, the evidence presented above does demonstrate that, while the initial commercial rationale for the trade preference was to benefit primarily French processing firms, the wider and more strategic beneficiary was the EU DWF through RoO.

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<sup>63</sup> It is worth noting that mechanisms of protection were applied by certain EU members against certain ACP exporters. In particular, by the early 1990s, France continued to apply quantitative restrictions on the flow of canned tuna exports from Fiji and Mauritius (as well as Thailand) to the French market. The rationale was to protect canneries in France and French-owned factories in francophone Africa (Davenport with Page 1991: 36-41).

<sup>64</sup> The US International Trade Commission *explicitly* recommended EU-style RoO for canned tuna exports under the Andean Trade Preferences Act (ATPA), stating that such a ‘restriction would be *similar* to one that has long been in place in the EU version of ATPA, which has *provided benefits mainly to the Spanish tuna industry*’. (USITC July 2002: 10. Emphases added.)

<sup>65</sup> Several EU officials were genuinely concerned about the negative effects of RoO on ACP tuna development and the potential loss of market access if EPA negotiations collapsed. These concerns were either raised off-the-record in their personal capacity or in relation to their institutional role as development officials (EUGvt#1; #2; #7; #9; #15).

<sup>66</sup> For example, the Japanese fisheries MNC Maruha (formerly Taiyō Gyogyō) invested in Solomon Islands, the major Japanese trading company Itochou (formerly C. Itoh) in Fiji, and the US MNC Heinz in canneries in Ghana and Seychelles (later taken over by Lehman Brothers).



## 5.7 Summary

This chapter has provided evidence of the importance of the EU tuna preference to several interests. Contrary to the methodologically flawed arguments of the preference pessimists, the competitive advantage afforded by the EU tuna preference served as a major incentive for capital to invest in several ACP coastal and island states. The genesis of this non-reciprocal preferential treatment under Lomé I was a consequence of the world-historic context within which it was negotiated (Appendix 5A). The argument was advanced that very few tuna-related gains were achieved in future agreements,<sup>67</sup> and that this was a reflection of the growing inequality of political power in EU-ACP relations.

The chapter also demonstrated the complexity and interconnectedness of the EU tuna trade regime, including the role of industry lobbies (i.e. firm-to-state political power). It argued that the tuna preference was not designed as an incentive for development in the ACP, but is a historically-emergent tool of commercial policy to support the competitive accumulation of EU capital, in particular the EU DWF. However, this argument is qualified by several (seemingly) unintended effects apparent in the evidence, including benefits to non-ACP and non-EU firms. Further, we saw how the EU tuna preference impacted on (and was impacted by) international trade regulation and the accumulation strategies of firms over time, including through examples of a tuna-related dispute at the WTO and the shifting interests of EU-based tuna processors through the loin quota.

The rules of origin associated with the EU preference were outlined and assessed from the perspective of different interests. Rules of origin determine the extent to which a trade preference can be commercially utilised or not, and EU RoO for fish (especially in relation to tuna) were a source of contention in ACP-EU trade relations since the 1970s. The evidence firmly suggests that EU RoO for fish were designed and enforced as a commercial support for the EU DWF. The EU was able to negotiate these asymmetrical terms because of the ACP's unequal political power, even at its relative height during the

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<sup>67</sup> Minor gains from RoO reform included the allocation of the automatic derogation in 1993, its incremental increase, and improved derogations under IEPAs.

negotiation of Lomé I. The evidence also suggests that analyses of the ‘ACP’ must be differentiated as, for example, some states appeared to benefit from the RoO (e.g. Seychelles), while others were significantly disadvantaged by them.

The main thrust of the argument is that the tuna preference was not developed as a tool of development policy but was instead a historically contingent and ad hoc commercial arrangement advanced to support the interests of French firms in its colonies and, from the first Yaoundé Convention, its former colonies. EU branded and non-branded firms were able to procure product from a range of sources while maintaining protection for their processing interests in the EU. This supports the argument made in Chapter 1 that historical accounts of the formation of commodity chains, including regulatory mechanisms, can contribute to understanding contemporary dynamics. However, the evidence also contests any simplistic argument that the EU acted ‘purely’ as a mediator for the interests of ‘national’ EU capital: ACP countries benefited from employment generation and spin-off benefits, and beneficiary firms based in ACP sites of production were often not owned by ‘EU’ or ‘ACP’ capital. Nonetheless, the deepening neoliberalisation of EU trade policy with the ACP resulted in huge pressure on ACP non-LDCs to sign-up to interim EPAs, including to avoid the probable collapse of their tuna processing industries, such as Seychelles, to which we turn in the next chapter.

**PART III**  
**UPGRADING**

## **Chapter Six**

### **The Canned Tuna Commodity Chain and Upgrading in Seychelles**

#### **6.1 Introduction**

This chapter investigates how Seychelles' integration with and 'upgrading' in the commodity chain in canned tuna is historically and politically constituted. We identify how government policies were deployed over time in various attempts to upgrade Seychelles' interactions with the chain (sometimes successfully, sometimes not) and present research on the socio-economic effects of this upgrading in the late 2000s. We also examine the political economy of government relations with the firms that undertake tuna fishing and canning activities, supported by their home state the EU, including how firms negotiated the institutional conditions for their investments. Connecting back to the discussion of territorial and social embeddedness in Section 1.1.2 (under the rubric 'institutional context'), the chapter shows how upgrading in the commodity chain impacted social relations in Seychelles and how, at the same time, economic and political dynamics in Seychelles generated different degrees of 'anchoring' among firms in the fishing and manufacturing nodes of the chain.

The chapter does not proceed through a strict historical narrative, although the historical trajectory is a complex one. The focus is on the emergence of the commodity chain in the WIO from the late 1970s to 2009. After offering a brief overview of the historical emergence of industrial fisheries policy in Seychelles, it identifies and explains the set of policy interventions deployed by the Seychelles government in the late 1970s onwards to establish the necessary domestic conditions for upgrading in the fishing and canning nodes of the commodity chain (Section 6.2.1). These conditions include domestic fisheries development policy, the legal regulation of foreign fishing, physical infrastructure for boats and the canning factory, vessel services, and investment

incentives for the factory. The following two sub-sections then lay out the institutional relationships between the Seychelles government and the EU DWF/ the European Commission since 1983 (6.2.2) and investors in the cannery since 1987 (6.2.3). This discussion makes clear that government policy was an essential ingredient in establishing Seychelles upgrading. The final sub-section (6.2.4) identifies and summarises the main developmental *effects* of Seychelles upgrading in the commodity chain. The emphasis here is on extending the scale of the concern with upgrading in the GCC literature away from the firm to the broader terrain of employment and government revenue.

Sections 6.3 and 6.4 look at unequal *political* relations in Seychelles interactions with and upgrading in the canned tuna chain, identified in Chapter 1 as a lacuna in the commodity studies literature. It draws out unequal state-state and firm-state relations between Seychelles and the European Commission and EU DWF in the fishing node (6.3) and unequal firm-state relations in the manufacturing node (6.4). This discussion also serves to identify an elite of local players in Seychelles domestic politics, connecting to the discussion in Section 1.1.2 of the need for ‘institutional context’ to include consideration of domestic political economy. This is followed by a summary of the chapter.

One important caveat must be highlighted. Interventions by the Seychelles state should be understood in the context of wider domestic dynamics of social change, which were, in turn, influenced by dynamics and processes in the global political economy. Due to the confines of space, these cannot be detailed here beyond a cursory sketch. Necessary analysis of this important context is provided elsewhere (Campling et al. 2011: especially pp. 3-46).

## **6.2 Seychelles Interactions with the Canned Tuna Commodity Chain: Policy Interventions, Institutional Relations and Upgrading**

### **6.2.1 Domestic policy interventions and Seychelles upgrading in the commodity chain, 1977-1995**

Before moving to the major domestic policy interventions by the Seychelles government between 1977 and 1995, it is useful to contextualise post-independence fisheries development policy.<sup>1</sup> People living in Seychelles have relied on fishing as a source of animal protein and essential micro-nutrients since the settlement of the islands in 1770. The first known advocate for developing *industrial* fishing and canning capacity was Joachim Arissol (a leading member of the Creole population) in the mid-1940s as part of a wider proposed programme of socio-economic and political development supporting the majority population. However, under risk-adverse and fiscally conservative British colonial rule, industrial fisheries development was largely seen as the exclusive domain of the private sector resulting in very limited public investment in capitalisation and necessary physical infrastructure.

The leader of the pro-independence Seychelles Peoples United Party (SPUP), France Albert René, was influenced by Arissol's promotion of an industrial fishing and canning industry and called for public investment in the sector as a new pillar of the economy to compliment (declining) copra exports. René continued this drive in opposition and it was one of the centre pieces of his party's economic policy upon seizing power in a coup d'état in 1977, one year after independence from Britain. The renamed Seychelles People's Progressive Front (SPPF) established a one-party left populist regime, typified by state intervention in the economy such as through the creation of monopoly parastatals, including in the fisheries sector (see below). In parallel to the emergence of the WIO purse seine fishery from 1978 onwards (Chapter 2), the SPPF regime


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<sup>1</sup> The density and complexity of the history of the politics of fishing and canning in Seychelles cannot be fully presented here. The following is based on a more detailed overview of the historical evolution of industrial fisheries development policy in Seychelles from the late colonial period (1945-1976) through the period of one-party rule by the Seychelles Peoples Progressive Front (SPPF, 1977-1991), which will be published at a later date.

established a range of legal and regulatory mechanisms to govern foreign fishing in its waters (below). It also part-financed two deeply flawed attempts to establish a domestically-owned industrial tuna fleet: a highly asymmetrical joint venture with a French firm to construct and operate pole and line vessels in 1979, and a state-owned fleet of small purse seiners in 1986 (Figure 6.1). This negative experience of state-led upgrading in the fishing node further bolstered the parallel aim of establishing a domestically-based canned tuna factory (see below).

The explicit objective of the SPPF regime was ‘to create the conditions and the facilities so that Victoria becomes the primary tuna port in the Indian Ocean’ (René 1984: 29), which, as we shall see, it indisputably achieved by the late 1980s. The regime did not view this ‘upgrading’ as an end in itself. The associated generation of government revenue and economic activity was used, along with tourism (the primary pillar of the economy since the 1970s), to finance a progressive programme of social development, an extensive programme of import-substitution (much of which was doomed economically given the tiny domestic market), and an apparatus of oppression (the army, militia, police force, and the Party itself) (Campling et al. 2011; van Nieuwkerk 2003).

**Figure 6.1: Timeline of Seychelles industrial fisheries development policy, 1945-1995**



mid-1940s	Joachim Arissol (former member of the Seychelles Taxpayers and Landowners Association) calls for development of export-orientated fishing and canning industry as part of wider socio-economic reforms to support Creole population
late-1940s	Colonial governor introduces progressive ten-year development plan which includes minor expenditure on fisheries
1947	Colonial Development Corporation funds flawed industrial fishing scheme by private British interests (collapses in 1952)
1952	Japanese tuna longline fleets start fishing in Indian Ocean (Taiwan from 1954 and South Korea from 1966)
1959	Colonial government downplays potential of export-orientated fisheries development, fisheries receive only 2 to 3.1% of development policy financing
1963	Leader of Seychelles Peoples United Party (SPUP), France Albert René, writes to Colonial Office calling for independence under universal suffrage, as well as immediate development of fishing and canning industries
1976	At independence, President Mancham of Seychelles Democratic Party adopts René's emphasis on fisheries development
1977	SPUP coup. New regime establishes Seychelles EEZ
1978	Industrial fisheries development a major component in the (renamed) Seychelles People's Progressive Front's (SPPF) first National Development Plan (1978-82). WIO purse seine fishery pioneered by Japan
1979	State-owned fleet of four pole and line vessels rolled out with French financing. Collapses after nine months of operation.
1980	Experimental fishing in WIO by French purse seiner
1982	National Development Plan (1982-86) allocates 42% of investment in productive sector to fisheries. French purse seine fishing under a special access agreement in Seychelles EEZ is a commercial success.
1983	Seychelles Fishing Authority (SFA) set up. First purely commercial purse seine access arrangement agreed with the EEC (representing the French fleet)
1984	First commercial access arrangement with Spanish government
1985	Work commences on new industrial fishing port. Parastatal Seychelles Petroleum Company (SEPEC) incorporated
1986	Government purchases fleet of small purse seiners. Project quickly fails.
1987	Conserveries de l'Océan Indien tuna cannery established in joint venture between government and Pêcheurs de France
1995	Indian Ocean Tuna Ltd (IOT) joint venture between government and H. J. Heinz

Sources: Colony of Seychelles 1959; EIU 1983, 1984; FAO/AfDB 1983; Fisheries Development 1978; Franda 1982; Harris 1988; Gabbay and Ghosh 1992; McAteer 2008; Michaud 1986, 1990; Ministry of Planning and External Relations 1981; Miyake *et al.* 2004; Nageon de Lestang 1986, 1988a; NEDECO, Arup and Ascon 1981; NORPLAN 1981; Payne and Savini 1978; René 1981a, 1982, 1984, 1985; Rowe 1959; Savini with Dubner 1979; Scarr 2000



Having established that industrial fisheries development was a central objective of the SPPF regime, this section identifies a set of domestic policy interventions that laid the necessary conditions for Seychelles' integration with the fishing and manufacturing nodes of the EU-centred commodity chain in canned tuna. Five main policy interventions are highlighted in their chronological order which, in combination, contributed to upgrading Port Victoria to become a tuna transshipment port of global significance and as host to one of the largest canneries in the world.<sup>2</sup> The strategic responses of the post-colonial Seychelles state to the emerging tuna fishery in the WIO and the growing EU market for canned tuna demonstrate the importance both of a historical understanding of the contingencies of chain formation and of government policy in facilitating domestic 'upgrading'.

The first policy intervention was establishing the legal and other regulatory mechanisms to govern the new exclusive economic zone (EEZs). Seychelles independence in 1976 fell in the same year as the extension of state territory to 200 nautical mile EEZs across the planet (Chapter 4). A flurry of legislation was enacted by the SPPF upon taking power, including a declaration of national sovereignty over the EEZ and laying part of the necessary foundations for legal relations with foreign fleets in its EEZ (Savini with Dubner 1979). The Seychelles Fishing Authority (SFA) was created in 1983 and legally incorporated in the following year. The rationale was to have 'one powerful organisation ... devoted fully and exclusively to the Fishing Industry – both pelagic and demersal' acting as 'the executive arm of the Government in all matters concerned with fishing' (René 1983: 2 and 27). In short, the Authority was the premier institution in the negotiation, regulation and enforcement of Seychelles external fisheries relations, as well as in the development of a domestic fishing industry. SFA was chaired by Glenny Savy, the step-son of President René.<sup>3</sup> This move, combined with the Authority's executive

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<sup>2</sup> Of course, all of these domestic conditions for Seychelles upgrading must be set in the wider context of the biological and environmental basis of tuna flows through and close to Seychelles waters and the associated capital flows of the EU DWF to exploit this new commodity frontier, as detailed in Chapter 2; expanding canned tuna consumption in principal EU markets (Chapter 3); and the preferential trade regime which benefitted several coastal ACP countries, including Seychelles (Chapter 5).

<sup>3</sup> His other two stepsons, David and Francis, would go on to head the most important parastatals in the tourism industry, Air Seychelles and the (then) Seychelles Tourism Marketing Authority. The first SFA chair was Maxime Fayon.

power, is widely credited as giving SFA significant relative institutional autonomy in domestic politics and in negotiations with external parties (see below).

The second intervention was the creation of new port infrastructure to house the boats in the emerging purse seine fishery. In 1981 the deep-water quay in Port Victoria was highly congested and was expected to reach its technical capacity by 1983 (NEDECO, Arup and Ascon 1981: 6, 11 and 17), the same year as the emergence of commercial purse seine fishing by French boats in the EEZ. Given the central importance of turn-around time in-port for the maximisation of fishing days (Chapter 2), the competitive accumulation strategy of the EU DWF demanded investment in port development. In order for Seychelles ‘to establish itself firmly as one of the most important fishing ports of the Indian Ocean’, the SPPF regime took on public debt to embark on an extensive programme of infrastructure development called the East Coast Project (René 1983: 15-16). This included the construction of a new fishing port at an estimated cost of Rs.162.2 million (René 1984: 21; EIU 1986: 43; NORPLAN 1981).

The third policy intervention (and the final one in the *fishing* node of the chain) was the creation of necessary services for the EU DWF and other foreign tuna fleets. Domestic vessel services were identified as insufficient at the emergence of the fishery, (NORPLAN 1981: 16). In the context of the SPPF regime’s wider objective of state investment to boost the economy (Campling et al. 2011) and more specific aim of upgrading interactions with the industrial tuna fishery, parastatals were established to fulfil these functions. Three specialised parastatals were set-up in the first half of the 1980s:

- 1) Union Lighterage Company Ltd (ULC) was provided with a monopoly for stevedoring, shorehandling, ship chandlery and shipping agency functions, which had previously been carried out by private firms (Chaudron 1992: 10; René 1983: 22).
- 2) Naval Services Ltd was established to provide vessel maintenance and repair. Its turnover doubled in 1985 compared to the previous year, ‘mainly due to services rendered to the tuna fishing fleet’ (René 1986: 46).

- 3) Seychelles Petroleum Company (SEPEC) was given national monopoly control over the acquisition and distribution of all petroleum products, including bunkering for fishing boats (René 1986: 47; Parker 1986).

Most parastatals providing vessel services had been privatised by the mid-1990s as a result of the SPPF regime's first, partial wave of privatisation (Driesen 1995; Sparks 2007; Gabbay and Ghosh 1998). Stevedoring activities was liberalised in 1993 and ULC was broken up into smaller companies in 1994 (Boullé 1995: 7; SFA 1996: 2). ULC's stevedoring activities were largely absorbed by Landmarine and its ship agency business by a firm called Aquarius, although both were now controlled by private individuals associated with the ruling elite. However, SEPEC remained a parastatal, even after an IMF adjustment programme in late 2008, and is widely recognised as one of the few success stories of parastatal development in Seychelles

The fourth and fifth interventions are oriented on the domestic manufacture of canned tuna and involve, respectively, the government's role in the establishment of a joint-venture cannery in 1987 with one of the 'big three' French manufacturers and the creation of a free trade (export processing) zone in 1995 as a condition for investment by Heinz in enhancing this canning capacity. In the context of the failure of state investment in joint-ventures and state-owned enterprise in industrial tuna *fisheries* (Figure 2.1), it is perhaps unsurprising that the government now focussed on upgrading in the *canning* node of the commodity chain (René 1986: 49; Nageon de Lestang 1986: 18). This fourth intervention saw public investment in the construction of a small canning factory and a cold store as part of the in the East Coast Project (Nageon de Lestang 1988a:183, 185). This was part of a joint venture with Pêcheurs de France which created Conserveries de l'Océan Indien in 1987 (see below for more on this). The government had taken on a significant aspect of the risk by contributing the physical infrastructure component, funded with loans from the French state. Just eight years later, as part of its expansion into the UK-centred canned tuna market (see Chapter 3), Heinz took over Pêcheurs de France's control of this cannery. But it seems to have had a major condition – the creation of the Seychelles International Trade Zone (SITZ) in 1995. The zone was the government's fifth intervention and provided commercially significant legal exemptions

innational law, as opposed to the prior ad hoc incentives given to the Conserveries de l'Océan Indien investment. The SITZ provided several exemptions for investors based there, including on business tax, trades tax and imports of capital equipment, and payment of Gainful Occupation Permit fees for expatriate workers. It also allowed for foreign exchange bank accounts, which was of particular importance given a fixed exchange rate and government control of foreign exchange movements across the rest of the economy. We now turn to discussion of the institutional aspects of the EU DWF's access arrangements with the Seychelles government, which focuses on the financial elements. This establishes the institutional bases for the analysis of the politics of the fishery in Section 6.3.

## **6.2.2 EU-Seychelles access arrangements, 1983-2009**

Seychelles has two major assets in relation to the capture of economic rent from the WIO purse seine fishery: 1) control over access rights to fishing in its EEZ, which, enshrined in the United Nations Convention on the Law of the Sea (1982), is not a Seychelles-specific factor as it applies to all coastal states (Chapter 4); and, 2) the strategic location of Port Victoria on the main island of Mahé, which is in close proximity to purse seine fishing activities through the majority of the year. As detailed in Chapter 2, the use of Port Victoria is of major geographical and operational importance to the business strategies of the EU DWF in terms of maximising fishing days and minimizing steaming days. To summarise the point through the words of one EU official:

The bottom line for boats is to maintain an average catch per day of a minimum of 30 tons, so you don't want to lose days going elsewhere. Victoria gives a saving of one-and-a-half days on fuel, crew, etc, which is a big saving. (EUGvt#15)

We also saw in Chapter 4 how the contemporary EU DWF benefits from a network of Fisheries Partnership Agreements (FPAs) in the Atlantic, Indian and Pacific Oceans, which are negotiated and heavily subsidised by the European Union. The following focuses on EU-Seychelles government-to-government agreements (culminating in FPAs)

and private company-to-government arrangements by Spanish firms who use the Seychelles flag, and thus combines an analytical concern with the relationship between regulatory mechanisms, territorial embeddedness and upgrading outlined in Chapter 1.

The two primary objectives of the Seychelles state for the licensing of fishing vessels were to regulate the number of fishing vessels active in the Seychelles EEZ and raise government revenue (Ministry of Planning and External Relations 1981: 27; Nageon de Lestang 1986: 18; Saint Ange 1988: 2). The economic benefits included freely convertible currencies in the form of license fees and other access revenue (see Table 6.1) as well as the projected provision of goods and services to purse seine vessels. These were essential inflows in the context of the new SPPF regime's extensive programme of social development, ever deepening state involvement in the economy and the domestic economic recession of the early 1980s (Campling *et al.* 2011). By the end of 1982, the success of experimental purse seine fishing was clear (Chapter 2). In light of this and the failure of its pole-and-line joint-venture (Figure 6.1), the Seychelles government had identified foreign purse seining as the most viable option for the immediate commercial development of the fishery. Following the line of argument of an FAO consultant that 'Seychelles should take advantage of the present fishing bonanza' (Cooklin 1984: 40), in 1983 all tuna fishing agreements moved from being on a concessionary research and experimental basis to being 'purely commercial' (Nageon de Lestang 1988a: 178).

### ***EU-Seychelles access arrangements***

In the early 1980s, purse seiner captains and owners did not have detailed data on tuna population movements, but they did know the results of experimental purse seining carried out in and around the Seychelles EEZ. In the context of this and the government's objective of generating rent from the fishery, Seychelles' first 'purely commercial' purse seine access agreements were agreed with the EEC (representing the French fleet) in 1983 and the government of Spain in 1984. As noted, SFA was the primary agency for

negotiating, monitoring and enforcing access agreements.<sup>4</sup> The EEC agreement allowed access for up to 18 French seiners, while the government-to-government agreement with Spain provided for 15 Spanish vessels. Additional company-to-government agreements were signed in 1984 with firms from France (nine purse seiners), Spain (two) and Ivory Coast (five) (Nageon de Lestang and Lablache 1989: 3; René 1984: 28).<sup>5</sup> By the mid-1980s, the Seychelles government had entered into ‘cash for access’ agreements under all three of the categories of ‘first generation’ arrangements outlined in Chapter 4.<sup>6</sup>

We saw in Chapter 4 that ‘Southern’ tuna access agreements have been negotiated by DG Fish at the European Commission since the late 1970s (the first being with Senegal in 1979). After the first short-term commercial arrangement with the EEC in 1983, Seychelles consistently signed medium-term framework agreements and protocols, following a three year cycle between 1984 and 2002, as detailed in Table 6.1. With the accession of Spain to the European Communities in 1986, the EEC access agreement (1987-1990) provided for double the number of purse seine vessels (Table 6.1; Nageon de Lestang and Lablache 1989: 3). Financial payments in these agreements consist of two components: the majority is paid by the EU and the remaining by the vessel owners. Within the EU payment, the major element that changed over time was the rising proportion and changing allocation of ‘additional funds’, including for scientific and technical programmes, establishment of a satellite-based vessel monitoring system (VMS), and development of a domestic fleet of semi-industrial long-liners.<sup>7</sup> Aside from direct licence fee payments, the vessel-owner contribution also includes a top-up payment to be made if the EU DWF catches more than the annual quota of tuna paid for up-front by the EU. As can be seen from Table 6.1, this top-up payment did not move with

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<sup>4</sup> In fact, SFA staff negotiated the EEC agreement in the year before the Authority was legally incorporated (René 1984: 28). Prior to this, fisheries access negotiations with tuna longline fleets were led by the Ministry of Planning and External Relations (Ministry of Planning and External Relations 1981: 44).

<sup>5</sup> The ‘Ivory Coast’ vessels were owned by French firms and sold their catch through the French trading firm SOVETCO (Marcille 1987: 45; see also Chapters 2 and 3).

<sup>6</sup> That is, government-to-government, -to-industry association, and -to-company. Government-to-industry association is the standard model for Seychelles access agreements with East Asian longline fleets which are beyond the scope of this thesis because they supply distinct tuna commodity chains in sashimi.

<sup>7</sup> These vessels were introduced to supply domestic export-orientated processors of fresh-chilled tuna ‘steaks’ and related products, primarily to EU markets. See Campling et al. (2009: 16-17, 25, 260-4) on these Seychelles firms, and Campling et al. (2008) on the EU-centred commodity chains for chilled and frozen tuna ‘steaks’ and related products.

inflation, remaining at a static ECU 20 per ton between 1984 and 1999 devaluing returns to the Seychelles government. There was only one increase, to 25 euros per ton from 1999 onwards. Moreover, this top-up fee is identical across FPAs and thus does not reflect the commercial importance of the higher proportion of yellowfin to skipjack caught in the WIO compared to the other two regions where the EU maintains FPAs (the Atlantic and WCPO).

The 2002-2005 agreement was a transition arrangement to maintain access while negotiations were ongoing within the EU over reform of the Common Fisheries Policy, which was finalised in 2002. The outcome of CFP reform in terms of Southern access agreements was much lauded by the EU as being a shift to ‘sustainability’ and ‘partnership’, but as we saw in Chapter 4, critics saw this as mainly a change in form rather than content. Three major changes were apparent though. First, the EU-Seychelles FPA (2005-2011) ran for double the time period as prior ‘cash for access’ agreements, thereby giving the EU DWF even greater stability of resource access. Second, FPAs required an increased allocation to conditional funds for domestic fisheries management. Third, there was a small shift in the proportion of total payments made by boat owners, slightly reducing the direct EU subsidy.

The major ‘gains’ in the 2005-11 FPA were that it provided for a larger maximum tonnage from 46,000 per annum (which had been in place since 1990) to 55,000mt, which meant that the basic EU financial compensation per ton grew from €75 to €90; and if Seychellois crew were not employed (which they largely had not been since 1983) boat owners would pay a daily fee of US\$20 for two crew while in Seychelles waters. These two changes were touted as a negotiating victory by government (*The Nation*, 27 September 2006).

**Table 6.1: Financial components of EU-Seychelles access agreements, 1984-2011**

<b>Period</b>	<b>EU financial compensation</b>	<b>Purse seine vessel-owner contribution</b>	<b>Additional Funds</b>	<b>Max number of vessels</b>
1984 – 1987	Ceiling of ECU 3,000,000 for period of agreement. Minimum annual payment of ECU 300,000 for up to 6,000 tons of tuna caught in EEZ	ECU 120,000 advance payment by vessel owners per annum and ECU 20/ton of tuna caught in EEZ	ECU 250,000 for scientific and technical programmes	18 purse seiners. Provision for other types of vessels
1987 – 1990	Minimum of ECU 6,000,000 for period of agreement for catch up to 40,000 tons of tuna per annum Annual ceiling of ECU 2,200,000	ECU 20/ton of tuna caught in EEZ and ECU 5,000 advance payment per vessel licence per year (equivalent to fees for catch of 250 tons)  Each vessel shall employ at least 2 Seychellois crew	ECU 750,000 for scientific and technical programmes	40 purse seiners. (22 French and 18 Spanish) Provision for other types of vessels.
1990 – 1993	Fixed ECU 6,900,000 for period of agreement for catch up to 46,000 tons of tuna per annum	ECU 20/ton of tuna and ECU 10,000 advance payment per vessel licence per year (equivalent to fees for catch of 500 tons)  Each vessel shall employ at least 2 Seychellois crew	ECU 2,700,000 for scientific and technical programmes ECU 300,000 study grant and attendance at international meetings	40 purse seiners Provision for other types of vessels
1993 – 1996	Fixed ECU 6,900,000 for period of agreement for catch up to 46,000 tons per annum	ECU 20/ton of tuna and ECU 5,000 advance payment per vessel licence per year (equivalent to fees for catch of 250 tons)  Each vessel shall employ at least 2 Seychellois crew	ECU 2,700,000 for scientific and technical programmes ECU 300,000 study grant and attendance at international meetings	40 purse seiners Provision for tuna trollers and surface longliners not exceeding 18m
1996 – 1999	Fixed ECU 6,900,000 for period of agreement for catch up to 46,000 tons per annum	ECU 20/ton of tuna and ECU 7,500 advance payment per vessel licence per year (equivalent to fees for catch of 375 tons)  Each vessel shall employ at least 2 Seychellois crew	ECU 2,700,000 for scientific and technical programmes ECU 300,000 study grant and attendance at international meetings	42 purse seiners 15 surface longliners not exceeding 37m
1999 – 2002	Fixed EUR 6,900,000 for period of agreement for catch up to 46,000 tons of tuna per annum	EUR 25/ton of tuna and EUR 7,500 advance payment per vessel licence per year (equivalent to 300 tons of tuna)	EUR 1,950,000 for scientific and technical programmes EUR 300,000 for study grant and attendance at international meetings. EUR 450,000 setting up of VMS/Satellite tracking system EUR 750,000 development fund for local long-line fleet	47 purse seiners 32 surface longliners not exceeding 37m



**Table 6.1 [cont.]: Financial components of EU-Seychelles access agreements, 1984-2011**

Period	EU financial compensation	Purse seine vessel-owner contribution	Additional Funds	Max number of vessels
2002 – 2005	Fixed EUR 3,460,000 per annum for period of agreement for catch up to 46,000 tons of tuna per annum. Of which EUR 2,300,000 as ‘financial compensation’, balance is conditional (column 3)	EUR 25/ton of tuna and EUR 10,000 advance payment per vessel licence per year (equivalent to 400 tons of tuna)  Each vessel shall employ at least 2 Seychellois crew	33.5% of funds conditional financing (total of EUR 3,480,000 over period of agreement): (a) EUR 1,230,000 for the development of local fisheries; (b) EUR 1,000,000 for the setting up and development of a monitoring control and surveillance (MCS) system (c) EUR 950,000 for scientific and technical programmes aiming at greater knowledge of fish stocks; (d) EUR 300,000 for training courses in the various scientific, technical and economic fields linked to fishing and for attending international meetings.	40 purse seiners 27 longliners
2005 – 2011	Fixed contribution of EUR 24,750,000 for term of agreement (average 4,950,000 per annum) for catch up to 55,000 tons of tuna per annum. EUR 75/ton paid for catch above this volume	EUR 25/ton of tuna and EUR 15,000 advance payment per vessel licence per year (equivalent to 600 tons of tuna)  Each vessel shall employ at least 2 Seychellois crew. If no crew employed, \$20 per day of vessel operating in Seychelles waters to be paid to government for purpose of training fisherman.	36% of funds are conditional on financing ‘towards defining and implementing a sectoral fisheries policy in Seychelles with a view to promoting responsible fishing and sustainable fisheries in its waters’	40 purse seiners 12 surface longliners

Sources: EEC-Seychelles 1984; 1987; 1990; EC-Seychelles 1993; 1996; 1999; 2002; 2005.

The financial commitments detailed in Table 6.1 give an indication of *direct* revenue generation from EU DWF access to the Seychelles EEZ. Access payments might be considered a component of the development *effects* of ‘upgrading’ in that the conditional funds are channelled to domestic fisheries development and the unconditional (non-hypothecated) payments are channelled directly to the Ministry of Finance for government spending priorities. However, given that the EU and other fleets maintain

fishing access arrangements with various countries, the basic extraction of economic rent from resource access payments cannot be considered to be a form of ‘upgrading’ because it is universally available to – and extracted by – all governments that control fisheries abundant EEZs. Furthermore, calculating *actual* financial benefits to Seychelles from EU agreements is fraught with difficulty. While the central financial terms of the agreements have been public since the early 1990s,<sup>8</sup> as noted in Chapter 4, the actual weighted value of payments for DWF in-EEZ catch is treated confidentially (Boullé 1995: 9). This is partly because disaggregated in-EEZ catch is not made publically available.

A study commissioned by SFA included full access to catch and financial data, but the data and findings are confidential (Campling et al. 2009). Averaged over four years (2003-06) total payments (including vessel licences, EU compensation and additional tonnage payments) were equivalent to a ‘rate of return’ on the landed value of the catch of 7 percent. This was a reasonable rate of return compared to agreements by other fleets in other locations. For example, access to tuna-rich Pacific Island country EEZs by East Asian purse seine fleets was generally based on a rate of return of 5 to 6 percent of the landed value of the catch (Campling et al. 2009: 192). This corroborates the widely held perception of officials in coastal developing country governments that EU FPAs are more lucrative than access arrangements by most other fishing interests. It also indicates that SFA personnel have been effective in their negotiations with the EU. Senior Seychelles government officials have explicitly recognised the strategic role of the EEZ to the commercial reproduction of the EU DWF, and used this form of ‘territorial embeddedness’ (based on the environmental conditions of production) to their advantage (see Section 6.3 below). The relative success of Seychelles negotiators is recognised by officials from other coastal states who claim that they look to the terms of the most recent Seychelles-EU FPAs as a basis for their own positions on FPAs (IntFS#3; #4; SGvt#5).

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<sup>8</sup> The EU is the only government agency that makes the contracts of its fisheries access agreements with third countries public, although they did so only after pressure from NGOs and EU parliamentarians (Standing 2011).

### *Access arrangements for the ‘Seychelles’ purse seine fleet*

EU flagged vessels are highly regulated by the European Commission, ranging from labour standards to complex environmental requirements. The regulatory requirements associated with flags of convenience are less stringent and thus less costly to meet (Chapter 2). In addition, the European Commission allocates the EU DWF with a limited quota of vessel capacity (based on horse power/kw of engine) and a set amount of licences to boats under FPAs. The use of flags of convenience allows firms in the EU DWF to by-pass this quota to invest in additional capacity (SGvt#14).

In 1997 onwards, several Spanish firms became registered under the Seychelles flag.<sup>9</sup> Aside from overcoming EU regulatory constraints, these boats accrued a number of additional benefits. The most important of these is discounted fishing licences (EUInd#40). The annual average ‘rate of return’ from licence fees paid by the Seychelles-flagged, Spanish-owned purse seine fleet was 6 percent, also between 2003 and 2006 (Campling et al. 2009: 192). In other words, the government captured 1 per cent less of the landed value of the catch compared to the French and Spanish-flagged EU DWF *despite* that these Spanish firms receive enhanced benefits from their Seychelles flag status. However, as these boats were not receiving subsidised access under an EU FPA, it is better to compare them with non-EU purse seiners. But even here the Seychelles-flagged boats received a 33 percent discount compared to considerably *smaller* purse seiners flagged by Thailand. In addition, despite being based locally, firms in the Seychelles-flagged fleet do not pay import or business taxes because they are incorporated in the SITZ (EUInd#51; #52).

How can we explain the discounting of licences to Seychelles-flagged purse seiners? Two main points bear consideration. First, the major benefit to Seychelles is if the Indian Ocean Tuna Commission shifts to a quota based system in the allocation of fishing rights based upon historical catch volumes. This approach is used by other regional fisheries management organisations (RFMOs) such as the Western Central Pacific Fisheries Commission (WCPFC). If IOTC shifts to this system, Seychelles-flagged purse seiners

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<sup>9</sup> See Section 2.5 and Appendix 2D for details on the firms that use it.

(and East Asian-owned longliners flagged by Seychelles) will provide a substantial quota allocation to Seychelles based on catch by ‘home’ flagged vessels. Second, once a vessel has taken on a non-EU flag it is more difficult to re-flag back to the EU (EUGvt#15; SGvt#43). This means that Seychelles-flagged vessels are, at least temporarily, ‘captive’ to the WIO and thus a steadier source of licence revenue and, moreover, purchaser of domestic goods and services in Port Victoria (see below).<sup>10</sup>

### **6.2.3 From Conserveries de l’Océan Indien to Indian Ocean Tuna Ltd, 1987-2009**

Chapter 3 detailed the international division of labour in the EU-centred commodity chain in canned tuna, including the historical importance of relatively low cost production in West Africa in supplying the French market from the 1950s. Chapter 5 demonstrated that ACP trade preferences (and French colonial policy before it) were an important competitive advantage for tuna processing firms based in several coastal ACP states. Trade preferences appear to play an even more crucial role in the competitiveness of tuna processing in small island developing states because of their comparatively high cost structures (Campling 2008a; Campling and Doherty 2007; Campling and Havice 2007; Winters and Martin 2004). In this context, this section describes Seychelles industrial upgrading into canned tuna processing from 1987 to the late 2000s. Seychelles has only ever hosted one tuna cannery, but it went from being a small, globally insignificant plant to the second largest in the world. This section identifies changes over time in terms of the main players, their types and levels of investment, the role of Seychelles government policy, and different export strategies by firms.

#### ***Conserveries de l’Océan Indien (COI), 1987-1995***

The small manufacturing sector in the Seychelles was historically focused on the tiny domestic market. In the mid-1980s, observers found it ‘difficult to imagine penetration of

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<sup>10</sup> Similarly, in order to fish in the jurisdiction of a different RFMO than IOTC, the vessel must, in principle, fly the flag of a Member of the RFMO in question. In this context, changing flag can be a costly and time consuming process and is thus a disincentive to Seychelles-flagged vessels for leaving the WIO.

external markets in the foreseeable future’; not least because of the large increase in the minimum wage in 1979 and revaluation of the rupee (by 15 percent) in 1981, which gave ‘industry a cost structure well above that of its rivals’ (Driesen 1988b: 167; EIU 1986: 45). René recognised the failure of SPPF plans to spark industrial development in his 1986 budget announcement: ‘Unfortunately Government measures to encourage industrial development have not had far reaching results’ and employment in the sector totalled only around 1,300 jobs (René 1985: 12).

Seychelles support to the operations of the EU DWF through the public provision of port investment and vessel services generated a steady source of potential raw material supply for tuna processing investment in Port Victoria. However, given the lack of domestic processing capacity, French and Spanish purse seine catch was all transhipped, including to supply the cannery markets: in West Africa (Dakar and Abidjan) – which needed EU-caught tuna in order to meet preferential rules of origin; EU-based processors in France, Italy and Spain; and Puerto Rico, Thailand and the USA (Marcille 1987: 42; Iverson 1987b: 11; Chapters 3 and 5). Compared to industrial fishing activities, the canning of tuna was a more commercially viable and developmentally strategic option for upgrading in Seychelles. This is for two reasons. First, it was recognised by the government that European and other firms in the industrial fishing node were (and are) highly capitalised and heavily subsidised and thus hard to compete with (Nageon de Lestang 1986: 18; Chapter 4), and second, that the labour-intensive process of canned tuna manufacture offered a major source of employment which would allow Seychelles to diversify its export-orientated economy away from dependence on tourism (René 1983: 2).<sup>11</sup>

A 1981 consultancy report had identified tuna as the only viable fish species to supply the setting-up of canning facilities in Seychelles, and even then only ‘if a recognised company with well developed marketing identity and facilities could be attracted’

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<sup>11</sup> The tourism sector emerged rapidly from 1971 with the opening of the international airport. The sole prior export-orientated sector in this small island economy was agriculture (especially copra), which collapsed through the 1970s (Campling et al. 2011: 9-11, 16-17).

(NEDECO, Arup and Ascon 1981: 13).<sup>12</sup> Given the concentration of ownership in the branded-manufacturing node of the global commodity chain, this was probably good advice. The Seychelles government could not act alone to develop a marketable brand in increasingly concentrated EU markets or provide the associated assurance of sufficient supply of product from additional oceanic regions to meet the purchasing demands of brands or supermarkets (see Section 3.4.1 on the ‘global ocean’ strategy).<sup>13</sup>

Investment in canning first came in the form of a joint-venture among the government, Pêcheurs de France – one of the original ‘big three’ French manufacturers (see Chapters 2 and 3) – and a minor French fishing firm, Armement Coopératif Finistérien (ACF) (Nageon de Lestang and Leblache 1989). The joint venture enterprise was called Conserveries de l’Océan Indien (COI) and the Seychelles government was majority shareholder. At that time Pêcheurs de France was moving its canned tuna production out of France, but still wanted to produce for the French market ‘which had a high price’ at retail (EUInd#61). Pêcheurs de France provided foreign marketing expertise, ACF two dedicated seiners (René 1986: 4; EIU 1986: 43), and government contributed land and constructed the factory at a cost of Rs.45 million. The latter was 50 percent funded by a loan from the Caisse Centrale de Coopération Economique (EIU 1987a: 44), again demonstrating the role of the French state in expanding the commodity frontiers of the EU-centred commodity chain (see Chapters 2, 4 and 5). The institutional conditions for this investment were provided on a discretionary basis (Boullé 1995: 7) in negotiations led by René, Glennly Savy and Vice President James Michel on the government side (SGvt#5; #8).<sup>14</sup>

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<sup>12</sup> The same report also correctly noted that the processing of by-product into animal feed (fish meal) and fish oil was an economically promising avenue (NEDECO, Arup and Ascon 1981: 13). Early fish processing in Seychelles was undertaken by parastatals. Frozen steaks and other prepared fish products were processed in a small plant (FAO/AfDB 1983: 10) and there was also discussion on setting-up a katsubushi plant to supply the Japanese market (Matthews 1981/2; NORPLAN 1981: 39).

<sup>13</sup> Although some firms, such as the parastatal Mifco cannery in the Maldives, successfully developed processing facilities independently of multinational involvement (AInd#9).

<sup>14</sup> Seychelles did not have an investment code at the time, despite a call for one from domestic private sector employers and the Central Bank (EIU 1986: 54)

The COI factory opened in June 1987. It was a comparatively small plant, employing 450 workers and with capacity to process 8,000 tonnes of raw material into canned tuna (René 1986: 49). As with the canneries in West Africa and Madagascar (Chapters 2 and 3), COI was established primarily to supply the France-centred commodity chain. It also eventually became a non-branded manufacturer of private label canned tuna for UK supermarkets, including Tesco, Morrison's and Safeway. But as a marginal player in the global commodity chain, COI was a price taker and buyers would routinely negotiate on a dropped down price that took into account commercial gains from the 24 percent margin of preference (EUInd#61).

COI experienced similar problems of unequal bargaining power in its commercial relations with the EU DWF. In anticipation of the completion of the plant, the government attempted to lock the EU DWF into supplying the factory in negotiations on the terms of the 1987-1990 access arrangement (EEC-Seychelles 1986: 7). The text agreed at this meeting appeared verbatim in the legal agreement:

Community tuna vessels shall participate in securing the need of the Seychellois tuna canning industry at a price to be fixed in common agreement between the Community shipowners and the Seychelles Fishing Authority on the bases of current international prices. The amount must be paid in convertible currency [a recognition of the monetary and financial problems facing Seychelles as early as the mid-1980s]. (EEC-Seychelles 1987: Annex I, Art. 5; see also Michaud 1990: 4).

Despite this legal commitment and that Port Victoria was by now one the world's major tuna transshipment hubs, COI sometimes suffered a lack of raw material (EUInd#61; SGvt#5). The firm's negotiating clout was weakened by the relatively small volumes of tuna purchased from boats – a reversal of the market power of large manufacturers vis-à-vis fleets detailed in Chapters 2 and 3. COI rarely hit its production capacity and thus failed to consistently process the volumes necessary to make margins. This resulted in it sometimes exporting canned tuna below cost, losing around US\$3-5 million per year, and being supported by 'heavy government subsidies' (EUInd#6; #61). On top of this, by the

early 1990s, Pêcheurs de France's canned tuna brand was being squeezed out of the increasingly concentrated French market.

### ***Indian Ocean Tuna Ltd (IOT), 1995-2009***

In these conditions of business failure, Heinz purchased COI in 1995 in a 60:40 joint-venture agreement with the Seychelles government. Like Pêcheurs de France, the two most important competitive conditions for Heinz investment in canned tuna manufacturing in Seychelles were the ACP trade preference and the large local availability of tuna raw material that is compliant with EU rules of origin. Unlike COI, which was 'a price taker' in 'buying fish and selling cans' (EUInd#61), Heinz European Seafood's effective control of the Cobrecaf fishing fleet from 1994 to 2006 provided security of supply for its EU-centred 'global ocean' strategy (see Section 3.4). This

made a big difference as it allowed [IOT managers] to focus on production and development. ... Heinz was making bulk purchases [of tuna] for Portugal, France, Seychelles and Ghana ... it had a lot of clout with vessel owners (EUInd#61).

Heinz was also motivated by the ability to gain from freight savings. By situating a cannery in Seychelles IOT could buy directly from the EU DWF, which allowed it to 'offer a lower price on fish but still be competitive. It gives the fob price plus a percentage of the cif, but not the full price' (EUGvt#15). In other words, because IOT had a relatively captive market in the Western Indian Ocean, it is estimated that the difference between the annual average Port Victoria price for skipjack was US\$ 40-50 per ton lower than the Bangkok equivalent (EUInd#7; TInd#5-#7), this is over and above insurance and freight costs, and possible quality and rule of origin price premiums demanded by the EU DWF (EUInd#49; see Chapter 5) as there is 'a 180 to 200 dollar increase for Bangkok just to get the fish there' (EUInd#7). This entails an important symbiosis between IOT and the EU DWF landing in Seychelles because the EU DWF obtains a better average price than transshipping to Bangkok (EUInd#54), while IOT benefits from a lower average price than its competitors in Bangkok . In addition, the Port



Louis price for canning-grade tuna is around US\$ 100 per ton higher than in Port Victoria because of the costs incurred in transshipping the fish from Seychelles to Mauritius and because the Princes Tuna Mauritius cannery only purchases single species (skipjack) which slows down offloading from the boat (EUInd#7; EUInd#50; Bruneau 2006). As one MW Brands representative put it:

To be competitive we buy as much [tuna] as we can and try to pay the ‘right’ price to get the fish. We buy from boats, not reefers. Our big advantage is that we process all species so we’re able to buy the full cargo of all the boat. Our competitors specialise in one species [e.g. Princes]. So it’s quicker and easier for vessels to deal with us: one invoice, one crew check, they just sort the species composition for relative pricing. All negotiations are done at sea at one week to a few hours before offloading. (EUInd#7)

The complete lack of independently owned cold storage in Port Victoria, mean that IOT held a highly strategic position (see 6.4.1). In short, IOT benefits from its location and the associated differential between the directly landed and the transhipped price, which includes reefer and insurance costs (the fob-cif differential).<sup>15</sup> IOT was able to attract boat owners by offering a price that was slightly higher than the landed price, but its raw material costs were lower than competing canneries because it did not incur the same costs for reefer transshipment and insurance. Even Spain-based buyers use the IOT price as a guide: ‘It’s very important, everyone depends on IOT’ (EUInd#51; #52).

Additional major conditions for Heinz in its investment were the creation of a legally secure environment and the reduction of avoidable costs. These conditions directly influenced the SPPF regime to institutionalise the Seychelles International Trade Zone in 1995 (noted earlier). The creation of the SITZ provided a wide range of exemptions and a legal-institutional basis to mitigate investment risks (e.g. around any concerns that the

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<sup>15</sup> This is a fairly common practice in the procurement strategies of canneries located close to rich tuna fishing grounds. For example, Starkist pioneered this strategy in the Western and Central Pacific Ocean at its American Samoa-based cannery, i.e. Starkist paid the US purse seine fleet and Taiwanese longline fleet a lower price than that received in Bangkok based upon the fob-cif differential (USInd#5; #10; #11).

factory might be nationalised) (SITZ 1995; SITZ 1997).<sup>16</sup> The tuna factory remained the largest player benefitting from SITZ terms throughout the 2000s and beyond, and by a very large margin.

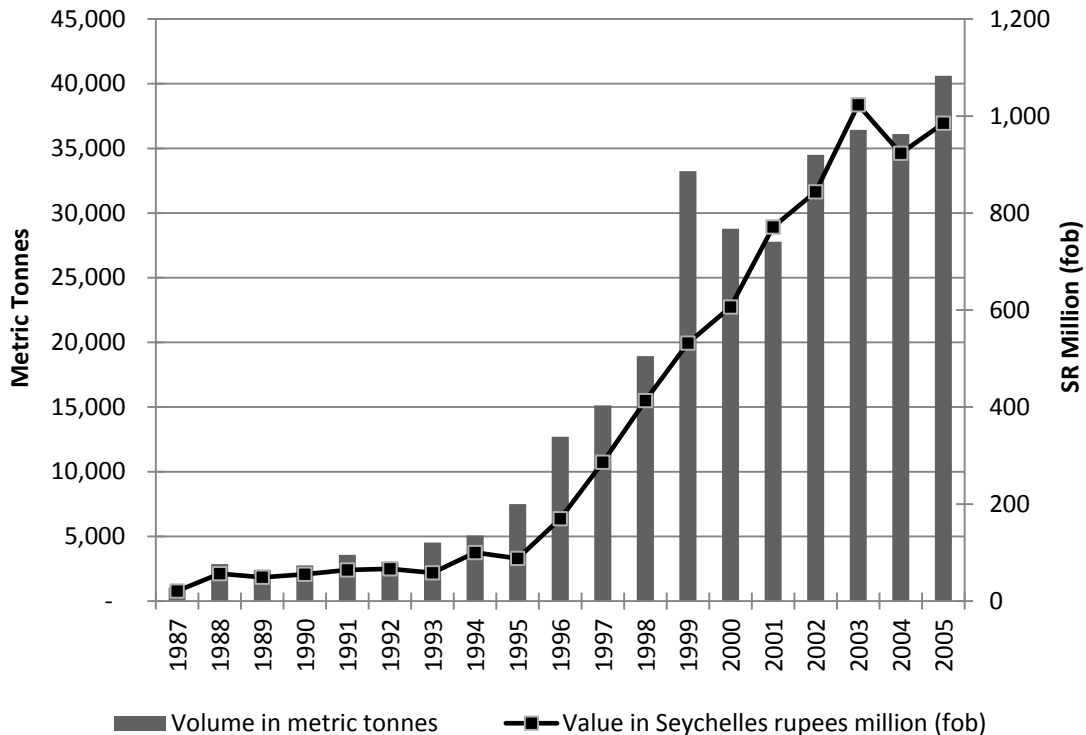
Heinz invested US\$ 45 million to upgrade the COI factory between 1997 and 1999 (SGvt#1; EUInd#6). The so-called ‘Diamond Project’ expanded the production line and moved it from a single shift operation to three shifts (two for production and one for cleaning). This brought daily raw material processing capacity up from 60mt per day under COI to a daily peak of 440mt per day by 2000 (EUInd#6; #61).<sup>17</sup> This expansion in productive capacity allowed for a diversification of the product range and target markets. Unlike COI’s France-centred production, IOT manufactured canned tuna for several other markets as well. From the Seychelles government’s perspective, Heinz was a ‘preferable partner’ precisely because of its forward integration into major canned tuna brands in the UK, France and Italy, as well as supplying private label to these markets and Germany and the Netherlands (EUInd#49; #61). By applying a similar strategy as its US-centred cannery in American Samoa, Heinz had transformed Seychelles’ relative cost disadvantages by building ‘economies of scale and the spreading of overhead costs’ (COS 2001: 17). The rapid success of the Diamond Project is reflected in the exponential growth of IOT’s canned tuna production in value and volume in the late 1990s (Figure 6.2). As detailed in Chapter 3, in 2006 Heinz European Seafood was bought by an investment fund controlled by Lehman Brothers and was renamed MW Brands. The deal included Heinz’ 60 percent share of IOT, and the Seychelles government continued to retain the other 40 percent. This leveraged buyout had no major impacts on IOT production. On the surface, the success of IOT served to justify René’s long-held belief in the potential of industrial upgrading in the tuna sector for diversifying the economy and generating employment, to which we now turn.

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<sup>16</sup> Here Seychelles was mirroring the tendency to the creation of export processing zones in countries across the planet, including in the small island developing states of the Caribbean from the mid-1980s (Heron 2004).

<sup>17</sup> Before this investment IOT management apparently pushed the same plant used by COI to 150mt per day (EUInd#6).

**Figure 6.2: Seychelles production of canned tuna in volume and value, 1987-2005**



Notes: 1) production in 1987 began mid-year; 2) only a tiny percentage of production was consumed locally; 3) export value for 2005 is provisional.

Source: SFA *Annual Report* (various years); CBS *Annual Report* (various years); MISD *Statistical Abstract* (various years)

#### 6.2.4 Upgrading, government revenue and employment

From the outset of the purse seine fishery the Seychelles government placed heavy emphasis on direct revenue generation from fishing access agreements (e.g. Table 6.1) and taxing vessels and their activities. For example, tuna transshipment was (and is) required to take place in Port Victoria so as to ensure the correct application of transfer fees (Plows 1982: 11). It was quickly recognised that indirect revenue was economically more significant (René 1986: 3). While total direct revenue from access arrangements was US\$ 4 million in 1985 (including the costs of collection), indirect benefits after import leakage totalled an estimated US\$ 9 million and included expenditure by vessels on bunkering, chandlery and other ship services (Nageon de Lestang 1988a: 179; for

similar estimates for different years in the 1980s see EIU 1987b: 42 and Nageon de Lestang and Leblache 1989: 6)

The SPPF regime's primary objective in upgrading into the canned tuna industry was to reduce reliance on tourism as the principal pillar of the economy (Adams and Rassool 1990: 105). Between 1992 and 2001 the contribution to GDP from the tourism sector was a fairly stable annual average of around 16 percent. However, this was in the context of an absolute increase in visitor arrivals from 98,500 in 1992 to 129,800 in 2001 (MISD 1995; 2001). This relative reduction in tourism's contribution to GDP can be explained by the parallel rise in the contribution of the tuna fishing and processing sectors. In 2002, the gross foreign exchange inflow of fisheries and related activities amounted to Rs. 1.2 billion, or US\$ 232 million, which was 48 percent higher than gross inflows from tourism (SFA 2002: 8-9; *Seychelles Today* 2000). Of this value, the activities of IOT contributed

*direct* inflows of foreign exchange of around 35 million euros each year that is converted into Seychelles rupees. That is, the buying of utilities, flows through the Central Bank, salaries, etc. ... This 35 million euros in cash coming through [but not necessarily staying! See below] excludes spin-offs and multiplier effects through rents, etc. (SGvt#1)

Heinz had used its far superior financial resources, backward integration into the tuna fishing node and ready access to major EU markets to transform tuna processing into a second pillar of Seychelles export-orientated economy. In 2007, when IOT had been controlled by Lehman Brothers for a year, canned tuna accounted for 91.4 percent in value of all Seychelles goods exports (CBS 2008: 49). IOT had become one of the largest tuna canneries in the world and in 2005 it supplied over 14 percent of the EU market for canned tuna imports (Valsecchi 2006). (IOT also provides an annual dividend to shareholders, discussed in Section 6.4.1)

However, given that Seychelles imports almost everything that it consumes,<sup>18</sup> these headline figures conceal a high proportion of import leakage and, as we shall see in Section 6.4, government subsidies to IOT. For example, in 2006, which was the highest year of foreign fishing vessel expenditure in Port Victoria in the 2000s (Rs. 865 million), the largest item was bunkering at 75 percent (SFA database). Gasoil is all imported by SEPEC and was bunkered duty-free, thereby only generating SEPEC's margin (which was used to cross-subsidise oil costs to the rest of the economy), its tax payments and the employment of around 40 fisheries-related staff engaged in this activity (Table 6.2; SVS#14).<sup>19</sup> In addition, IOT exports are based on imported fish, machinery, cans, packing media (e.g. vegetable and olive oil), and packaging, and, as we shall shortly see, even 40 percent of the workforce is 'imported'.

A more tangible benefit of Seychelles upgrading is direct and indirect employment generation. Based on interviews in 2009, it is estimated that around 3,320 people were employed fulltime as a direct or indirect result of Seychelles interactions with the EU-centred commodity chain in canned tuna (Table 6.2).<sup>20</sup> These jobs totalled around 8 percent of the total formal workforce in Seychelles (41,891 in 2009; National Statistics Bureau 2010). More specifically, private sector 'production' and 'services' employment in the tuna-related economy (3,160 in 2009, see Table 6.2) was over 11 percent of total private sector employment in the country (27,721 in 2009; National Statistics Bureau 2010). This employment is centred on the Port Victoria and IOT production networks. Figures 6.3 and 6.4 map the input-output structure of these two production networks in 2009. Here we use production 'network' as opposed to commodity 'chain' because the emphasis is on the horizontal and *diagonal* linkages of the fishing and manufacturing nodes with the domestic Seychelles economy ('spin-off' benefits) as opposed to the

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<sup>18</sup> Seychelles imports around 90 percent of its consumption. This has contributed to a consistently negative balance of trade throughout most of the country's history. In the period 1992–2001 Seychelles suffered an average annual balance of trade deficit of Rs. 976 million, or roughly Rs. 12,000 per capita (authors' calculations based upon MISD 2002; 2003).

<sup>19</sup> For detailed discussions of foreign exchange retention/ import leakage in Seychelles tuna-related economy, see Parker (1986), Kasprzyk (1994), SFA (1996) and Campling et al. (2009).

<sup>20</sup> Kasprzyk (1994) estimated that 1,166 people were employed in the fisheries-related economy in Seychelles in the early 1990s. Between 1983 and 1985, around 350 new local jobs were generated around the activities of foreign tuna fleets (EIU 1987a: 44; see also Nageon de Lestang 1988a: 179).

emphasis on vertical and horizontal relationships among firms in Chapters 2 and 3 (see the discussion of the GPN approach in Section 1.1.2).

Canned tuna processing is the most important component of Seychelles upgrading in terms of employment with 72 percent of tuna-related workers employed at IOT and Impress (a can making factory attached to IOT). IOT employs over 2,300 (mainly female) workers, primarily in the labour-intensive process of cooking and loining the fish. MW Brands (and Heinz before it) uses migrant workers for around 40 percent of its labour force, including, at various times, from Kenya, Madagascar and Thailand. Expatriate workers are especially important to IOT's nightshift as Seychellois women play a pivotal role as care givers as reflected in the high prevalence of women-headed households in Seychelles (EUInd#49; #50; Campling et al. 2011: 91).

**Table 6.2: Estimated full-time equivalent employment in the Port Victoria and IOT production networks, 2009**

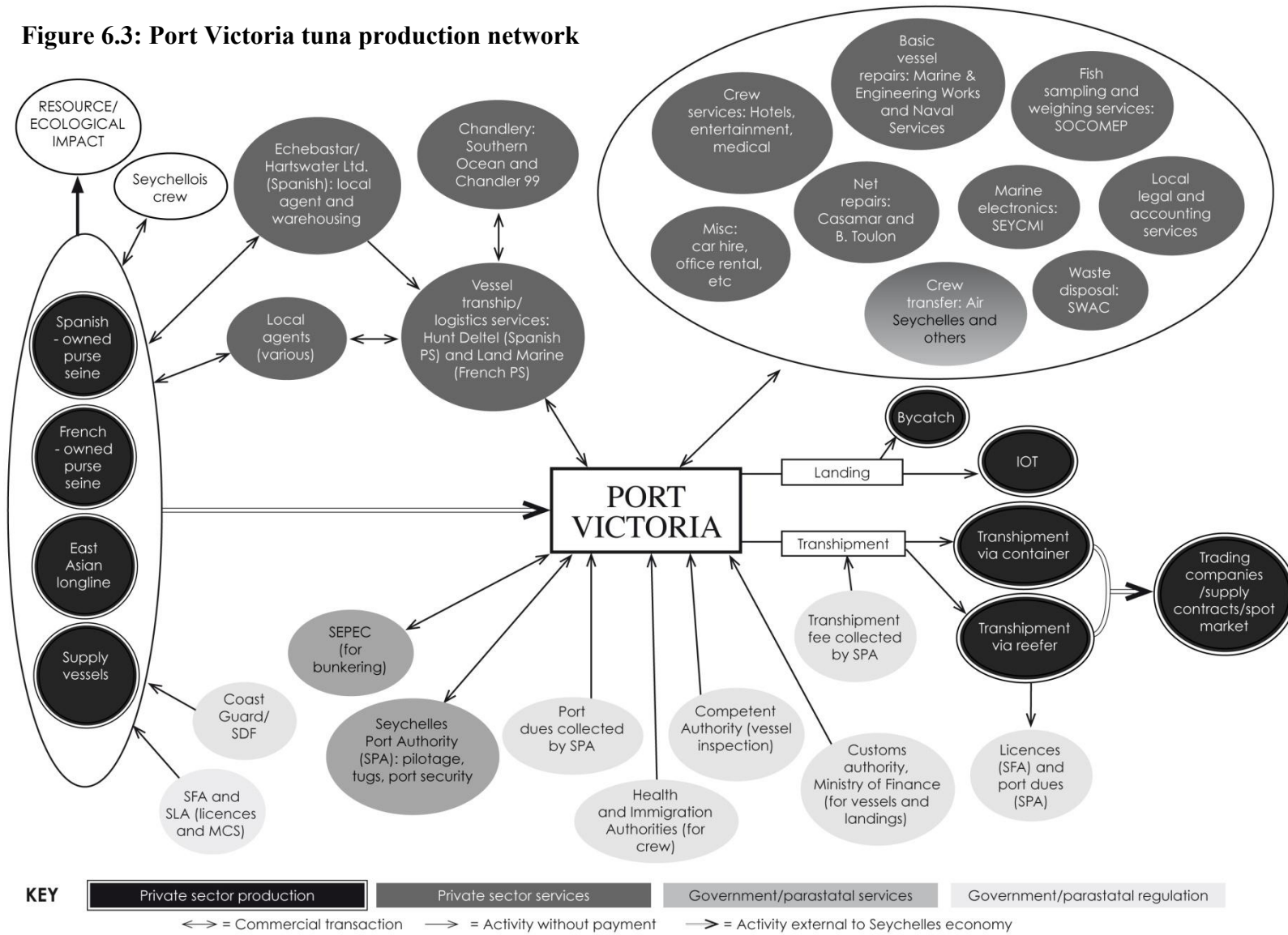
Category of activity	Activity (firm/agency)	Number of employees*
Private sector production**	Canned tuna production (IOT seychellois)	1,320
	Canned tuna production (IOT expatriate)	1,000
	Can production (Impress)	76
	FAD manufacture	5
Private sector services	Stevedoring (Hunt, Deltel & Co, Landmarine)	600
	Net repair (Bernard Toulon, CASAMAR)	63
	Vessel agents and locally-based EU DWF representatives (Aquarius Shipping Agency, CMB, Echebatar/ Hartswater, Mahé Shipping, misc. other)	35
	Fish inspection and quality control (Société de Contrôle d'Expertise Maritime et Pêche (SOCOMEPE))	24
	Chandlery (Chandler 99, Southern Ocean Ship Chandlers)	18
	Vessel engineering and repair (Marine and Engineering Works (Marzocchi), Naval Services (1994) Ltd, Seychelles Electronic Maritime Co. Ltd (SEYCMI))	19
Government/ parastatal services	Bunkering (SEPEC)	40
	Fish inspection and quality control (Fish Inspection Unit/ Competent Authority, Seychelles Bureau of Standards)	16
	Crew transfers (Air Seychelles)	3
Government/ parastatal regulation	Various activities (Seychelles Port Authority)	70
	Various activities (Seychelles Fishing Authority)	25
	Various activities (Seychelles Coastguard)	10
<b>Total</b>		<b>3,324</b>

Source: Multiple interviews in 2006 and 2009, Seychelles.

\* Employment is counted based upon actual or estimated full-time equivalent. The Port Victoria production network only includes those employed directly in the *industrial* tuna sector (see Figure 6.3).

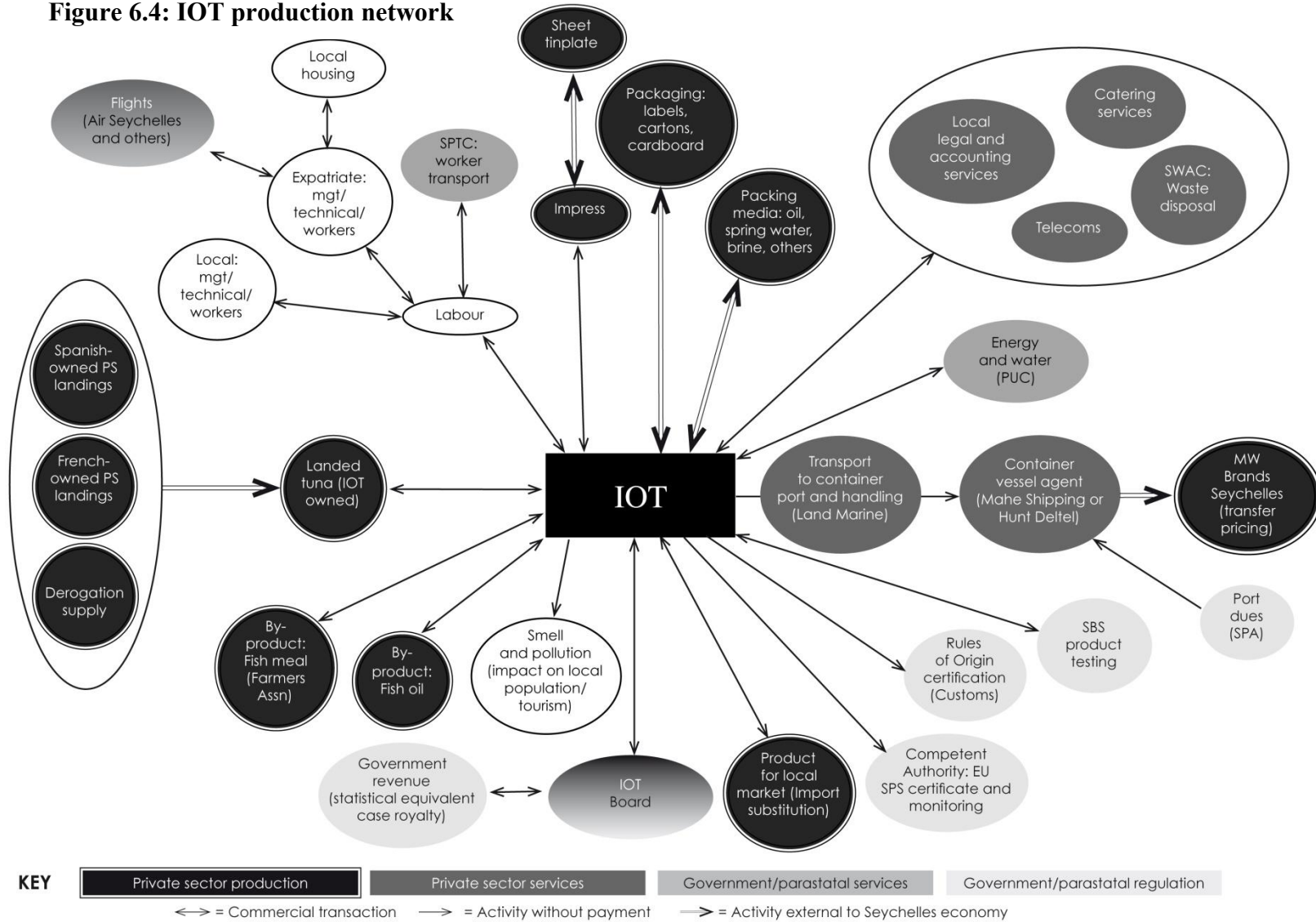
\*\* This excludes the local, high-value fish exporting firms Oceana Fisheries and Sea Harvest which both procure small volumes of high-quality bycatch from the EU DWF that is stored by crew in their food freezers (i.e. not in brine in the hold). This is then processed and sold locally or to export markets, mainly the EU.

**Figure 6.3: Port Victoria tuna production network**





**Figure 6.4: IOT production network**



René had correctly identified stevedoring as a major source of potential employment in Seychelles upgrading in the commodity chain (1983: 23). In 2009 stevedoring for the EU DWF was the second largest source of direct employment, with 18 percent of the total (Table 6.2), and unlike IOT all of these jobs employ locals. Of total foreign fishing vessel expenditure in 2006, stevedoring was 9 percent. Total expenditure *without* fuel was around Rs. 108 million of which stevedoring constituted almost 54 percent (SFA database).<sup>21</sup> In addition, given that around 60-65 percent of shipping inflows to Seychelles are containers for IOT and over 90 percent of national exports are from this firm, IOT supports ‘a huge network of services’ and employment in the Commercial Port, including non-fisheries stevedoring (SVS#4; #5; #13; #15; #16).<sup>22</sup> Compared to canned tuna processing and stevedoring other sources of employment are secondary and are mainly in specialised vessel services such as net and vessel repair, chandlery, and fish quality control. However, the political economy of Seychelles upgrading is more complex and ambiguous than this overview of the domestic benefits of revenue and employment generation suggests. The next two sections examine the unequal political relationships between the Seychelles government and the EU and its distant water fleet (6.3) and between the government and Heinz/MW Brands (6.4), and argue that these political dynamics provide a fuller story of the extent to which Seychelles benefits from ‘upgrading’ in the commodity chain.

### 6.3 The Politics of the Fishery

Chapter 1’s discussion of ‘institutional context’ in the GCC framework introduced the concept of territorial embeddedness, the ‘anchoring’ of firms in different places and at different scales (Henderson *et al.* 2002: 452). It argued that major lacunae in commodity studies are sufficient recognition of and explicit empirical attention to the roles both of

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<sup>21</sup> It is worth noting that, as a further reflection of the distinction between the French and Spanish ‘national production systems’ (Section 2.3.2), national fleets have exclusive contracts with different stevedoring firms in Seychelles (the French use Landmarine and the Spanish Hunt Deltel, see Figure 6.3).

<sup>22</sup> These volumes also mean that Seychelles benefits from more regular visits from container vessels (otherwise it would only be on a minor and more expensive feeder route for container shipping), which has wider benefits to the economy in terms of the frequency and price of movement of other goods to and from the country (SVS#15; #16).

unequal political power among states and firms and of domestic political economy in shaping relations and dynamics in commodity chains. The remainder of this chapter investigates these analytical concerns through the case of Seychelles. In this section we examine three aspects of the dynamics between the EU DWF and Seychelles: the relationship between environmental conditions of production and competition from other ports and canneries in the WIO region; non-linear shifts in Seychelles relative negotiation position and tactics with the EU DWF in the context of Seychelles' domestic political economy; and (ultimately unsuccessful) challenges to European dominance of the WIO purse seine fishery by other foreign fleets and by independent coastal states. This and the next section (on the politics of the cannery) demonstrate that social embeddedness, political asymmetry and domestic politics matter to the analysis of commodity chains, not only in terms of the shaping of chain activities and linkages<sup>23</sup> but also to the potential for local economies to 'upgrade' and the contingent role of local elites.

### **6.3.1 Environment conditions of production and regional competition**

The geographical importance of Seychelles to the business strategies of the EU DWF has been clearly established in this thesis. Yet a common perception of Seychelles government officials in the 1980s – encouraged by the representatives of vessel owners – was that the socio-economic benefits from vessel activity in Port Victoria 'could be lost overnight by licensed boats moving to other ports' (Nageon de Lestang 1988a: 179; Michaud 1986: 5). Material context for this concern were declines in world tuna prices in 1987 and the associated (temporary) re-emergence of the Eastern Atlantic as 'a cheaper and more attractive fishing ground for European based operators' because of the shorter steaming days to fishing grounds and lower freight costs for transporting tuna and vessel supplies (EIU 1987a: 44; Marcille 1987: 45). This and similar temporary shifts in the 1990s (Bargain 1998; Chaudron 1992) led to drops in Seychelles licence fee and vessel expenditure revenue and probably served to re-affirm the fear that the sector might shift

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<sup>23</sup> As argued in Chapter 1, firms behave differently in relation to different places and scales and adjust their business strategies and day-to-day operations in relation to national government policies, local labour regimes, and the broader dynamics of the domestic political economy.

to competing locations as quickly as it had arrived in Port Victoria. In short, that the fleet's home port would move with the fish.

The seasonality of the fishery, variations in tuna movements between years and the warming effects of El Niño events have each resulted in the EU DWF using different Indian Ocean ports for transshipment/ landing at different times (COWIconsult 1988: 7; Lawson et al 1986: 11; Marcille 1987: 42; Nageon de Lestang 1988a: 179). By the mid-1980s observers noted that the period mid-April to mid-June saw tuna populations move to the Mozambique Channel (see Figure 2.3). This seasonal shift in migration patterns made Diego Suarez, Madagascar a more profitable port for landing/transshipment because of the significant reduction in steaming days to offload compared to Port Victoria (Parker 1986: 4; Marsac 1988). But this movement in the Mozambique Channel was not a constant, and in some years, such as 1994, catch rates were higher in the Seychelles EEZ with positive implications for increased vessel expenditure in Victoria (SFA 1996: 3). Moreover, a particularly strong oceanic warming event in 1997-98 caused by the El Niño Southern Oscillation meant that tuna migrated eastwards, with many vessels shifting their base of operations to Phuket, Thailand. While this effect was only temporary, reduced fishing vessel activity in Port Victoria resulted in a 40 percent loss to the Seychelles economy compared to normal fishing years (Robinson et al. 2010). Policy decisions and investment in Mauritius in the early 2000s raised the spectre of the EU DWF shifting its base there. These included the construction of a dry dock suitable for purse seiner repairs and the creation of the Mauritius Seafood Hub which offered a range of incentives for fisheries-based investment (Barnes and Campling 2008; Bruneau 2006). Similarly, in the mid-2000s, the Spanish fleet commissioned a Seychelles firm to investigate whether Dar es Salaam, Tanzania was a viable alternative to Port Victoria. The results were considered confidential, but it '*could* be a real threat ... the infrastructure is there and labour is very cheap' (SVS#15; #16). This information may have been used by the EU DWF to extract additional concessions from the Seychelles government (6.3.2).

These dynamics serve to illustrate the highly competitive struggle by regional states to 'anchor' the EU DWF and also the vagaries of economic reliance on tuna fisheries in the

face of cyclical and ‘structural’ environmental change, such as El Niño events and anthropogenic climate change (e.g. Bell et al. 2011; Brander 2010). For some, the emerging ‘threat’ from Port Louis was seen as a particularly virulent challenge to tuna-based foreign exchange receipts in Seychelles (*The Nation* 17 September 2004; Nageon de Lestang 2004; SVS#8). In 2005 Mauritius increased its tuna processing capacity with the opening of a new loining and canning plant called Thon des Mascareignes (TDM), which specialises in processing yellowfin for the EU market and albacore loins for processing in the US (USInd#5; #10; #11). Combined with the introduction of additional cold storage under the new Seafood Hub and with Princes Tuna Mauritius (PTM) opening a new, expanded factory in 1999, Mauritius became ‘the largest collection point in the Indian Ocean with around 100,000 tonnes of whole tuna processed per annum’ (EUInd#34; Appendix 3D). In addition to reefers controlled by the EU DWF (Chapter 2),<sup>24</sup> the transshipment of fish to Mauritius was supplied by two reefers controlled by PTM and one by TDM, each dedicated to collecting tuna from the EU DWF in Port Victoria (EUInd #34; #40; #51; #52). PTM and TDM also receive *direct* supply from the EU DWF when (mainly French) vessels use the Port Louis dry dock (Chantier Naval de l’Ocean Indien) which provides up to 10 percent of PTM’s annual raw material supply (EUInd#34).

PTM was at a disadvantage in price negotiations with the EU DWF because it processes only skipjack for its principal canned tuna markets in the UK and the Netherlands. This is in contrast to IOT which is able to buy a boat’s entire catch as it processes mixed species to supply its main markets in the UK, France and Italy, and could thus negotiate a lower price from boat owners as selling to IOT sped-up the vessel’s turnaround time in port (EUInd#7). However, with expanded strategic cold storage of over 17,000mt,<sup>25</sup> PTM was able to gain ‘synergistic benefits’ with TDM, including the procurement of ‘mixed loads’ from the EU DWF (skipjack for PTM and yellowfin for TDM), and ‘as [independent]

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<sup>24</sup> With a 25 percent share in TDM, the Spanish fishing firm Echebatar is the only ANABAC member with investment in processing (Chapter 2) and as a result sends the majority of its catch to Mauritius (EUInd#40; #41). This again highlights the importance of types of ownership and industrial organisation in the fishing node to the direction of movement of raw material.

<sup>25</sup> Tuna processors in Mauritius benefit from the availability of 11,500mt of cold storage supplied by Froid des Mascareignes and 6,000mt offered by Mauritius Freeport Development (Barnes and Campling 2008).

cold storage is fairly poor in Seychelles’, the EU DWF ‘keep reefers bobbing around to get a better price during the low season’ (EUInd#35). In short, the value of IOT’s fob-cif differential declined, especially from 2006 onwards, because EU vessel owners now also had large volume and mixed species buyers in Mauritius (EUInd#35). As one interviewee put it in 2007:

The European fleet used to dump fish in Seychelles, so the price was low. But now there’s an option. IOT has lost some control in fish price negotiations with the fleet. (EUInd#34)

Several representatives of the EU DWF concurred in interviews in 2009: ‘We prefer to offload to their [PTM and TDM] reefers wherever we can’ (EUInd#38; #39), and; ‘The IOT price is too low and there’s a good price in Mauritius, despite cif costs’ (EUInd#40; #41). In addition to regional competition, catch declines in the Western Indian Ocean in 2007 induced by a combination of ecological limits to the yellowfin fishery and the impacts of Somali piracy (Chapters 2 and 4) resulted in an increase in price and a struggle over supply. PTM and TDM responded by paying higher raw material prices than IOT and were thus able to *increase* canned tuna production while it declined in Seychelles. This meant that IOT’s price advantage relative to world-leading processors in Bangkok was also reduced. As we saw in Chapter 3, MW Brands’ response to the decline of its competitiveness on fish price in the WIO was to increase production volumes at its other cannery in Ghana, which increased its exports to the EU between 2006 and 2009.

Despite this shift in relative buying power, IOT remained a major player and continued to take advantage of its strategic position. This was made clear by EU DWF representatives in an interview in 2010: ‘If the fleet has no logistical alternative, such as when PTM reefers aren’t in Port Victoria, then IOT buys. It’s very aggressive when the fleet has no alternative’ (EUInd#17–#20). Moreover, labour productivity in Port Victoria is comparatively high, contributing to ‘anchoring’ the purse seine fleet there. Industry representatives estimated that the average offloading ratio by stevedores in Seychelles was around 80mt per day in the mid-1980s, but had grown to 300mt per day in 2006, and up to 700mt for the newer ships which use an offloading mechanism based on mobile conveyor belts (EUInd#51; #52; direct observation, Port Victoria, 2006, and Yaizu,

Japan, 2006). This indicates that, over time, Seychelles also benefitted from the ‘upgrading’ of skill and expertise among the fisheries-related labour force (e.g. Appleyard and Ghosh 1990: xv). Competing ports such as Dar es Salaam are reportedly able to achieve similar offloading speeds but using double the number of stevedores, albeit at half the cost (SVS#15; #16).

Similarly, the ‘threat’ from the Mauritius Seafood Hub should not be overplayed. As one Seychelles government official put it, the perception of regional port competition from ‘Mauritius is a blessing in disguise, if it wasn’t for us believing it was an “enemy”, we would’ve sat on our arses’ (SGvt#14). When asked whether Port Louis is too far from the centre of purse seine fishing grounds to offer a commercially viable alternative for the EU DWF, the same official agreed and pointed out that ‘the Minister [had] said, “let them believe it”’.<sup>26</sup> This moment coincided with a change in presidency in 2004 from René, after 27 years in power, to James Michel who placed greater political emphasis on the tuna-related economy (SGvt#27). Michel’s response to the perception of heightened regional competition was to establish a public-private sector Task Force in 2004 to prepare a ‘master plan’ to develop the Industrial Port ‘to encourage shipowners not only to continue using Port Victoria but to increase their activities’ (Task Force 2004: 4). The Task Force’s central recommendation was to construct additional quay space to improve the turnaround time of the EU DWF which often hit a bottle neck at the Industrial Port. For most observers, this was a simple and achievable solution to this problem, and would have cost an estimated US\$ 4 million (SGvt#5). But it would have reduced IOT’s competitive advantage of private quay space that it could ‘offer’ boats for direct offloading to the factory when the Industrial Port was overly congested. A second committee was established in 2006 consisting of considerably more politically powerful individuals, including those perceived as being close to IOT. It superseded the Task Force and produced a highly ambitious Integrated Fisheries Development Project, which, in its entirety would have cost an estimated US\$80 million (CBS 2007). In short, nothing

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<sup>26</sup> In fact, no person with a working knowledge of the industry saw Port Louis as a genuine threat to Port Victoria (e.g. IntFS#36; SGvt#19; SVS#1; #2; #15; #16). As one industry insider pointed out: ‘The purse seiners won’t go to Mauritius to offload. To steam from Seychelles to Mauritius it takes 3 days. And from the fishing zone in the north it takes two to three days to get to Seychelles.’ (EUInd#40)

happened, the growing problem of Somali piracy and the introduction of an IMF stabilisation package in November 2008 meant that these two priorities took precedence over large-scale expenditure on port development. The question of why this second committee was established is an open one, but it is clear that the *effect* of its overly ambitious recommendations scuppered the considerably more modest Task Force proposal on quay development, which, whether deliberate or not, served the commercial interests of IOT over the EU DWF.

### **6.3.2 EU DWF-Seychelles government relations**

In the early days of the fishery, Seychelles was negotiating with the EU DWF from a position of considerable weakness. Availability of data on the fishery and knowledge of the industry was at first highly unequal (SGvt#19). For example, the French fisheries science research institute ORSTOM<sup>27</sup> claimed that the Seychelles government was over-optimistic about both the environmental sustainability of industrial tuna fisheries and the likelihood of purse seine fleets using Port Victoria as a base (ORSTOM reports as cited by Cooklin 1984: 40). While the scientists were no doubt sincere, this opinion may well have been used as a negotiating tactic by fleet representatives. The accession of Spain to the EEC and the incorporation of its purse seine fleet with the French under the EEC-Seychelles 1987-1990 access agreement further weakened Seychelles relative position. It meant that the micro-state of the Seychelles was pitted against ‘an economic giant’ in access negotiations (Michaud 1986: 3). Of course, these fleets were also in competition with each other: French against Spanish, ANABAC against OPAGAC, and firm against firm (Chapter 2). But, as elsewhere, in their relations with the Seychelles state they collaborate; with their interests mediated by DG Fish at the European Commission and its associated political-economic backing by the EU as a whole (see Chapters 4 and 5). Negotiating experience also plays a role. The European Union and vessel owners or their representatives deal simultaneously with several coastal states in order to gain fisheries

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<sup>27</sup> Office de la Recherche Scientifique et Technique d'Outre-Mer, now L'Institut de recherche pour le développement (IRD).



access (Chapter 4). The (then) Managing Director of SFA was cognisant that this provides the Europeans with ‘opportunities to “divide and rule” or at least claim that they have attractive alternatives’. He also pointed out that the EU DWF can claim a better knowledge of the global tuna industry and ‘plead financial difficulties and very low selling prices’. This combination of elements put the Seychelles state ‘somewhat at a disadvantage’ (Michaud 1986: 3).

But it did not take long for SFA staff to recognise the relative power of their negotiating position. The growth in SFA’s confidence was facilitated by Glenny Savy’s personal political power as the stepson of the president and his executive position at the head of SFA. He personally undertook access negotiations with foreign fleets, and SFA rapidly developed a high-level of fisheries and industry knowledge and personal contacts (SGvt#5; #14).<sup>28</sup> Sectoral focus and relative institutional autonomy in domestic politics were major advantages. SFA was

given latitude – within guidelines made by government. ... If there was a ministerial negotiator, fisheries would be used as a trade off with other issues with the EU and Japan. (SGvt#5)

As one EU official recognised: ‘The ship owners know that Seychelles depends on them and vice versa. Sometimes the Spanish fleet pretend that they’re going elsewhere, but the data speaks for itself’ (EUGvt#15).<sup>29</sup> For example, as we saw in Chapter 2, Port Victoria accounted for 88 percent of *total* known transshipment/landing volumes of the WIO purse seine fleet throughout the period 2000-08 (SFA database). By the end of the 1980s the Seychelles government had fully recognised the strategic centrality of Port Victoria’s location, SFA had been transformed into a highly professional organisation, Savy’s

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<sup>28</sup> One official said that Savy ‘used to be a super minister’ (SGvt#19) and an international fisheries specialist claimed that Savy ‘knew very well where he stood in negotiations ... he was a good negotiator’ (IntFS#36).

<sup>29</sup> A consultant to the FAO had made a similar point right at the outset of the fishery in a report to the Seychelles government. He correctly argued that distant water purse seiners are actually quite vulnerable and their ‘dependence on the country in which [they] are based is quite significant, although boat owners and/or managers like to play this down’. He went on to note that while keeping European purse seine fleets ‘as operative and content as possible’ is ‘a difficult task, especially with the French owners, ... it must be remembered that right now, and for an undetermined length of time, there is no better option open to these fleets’ (Cooklin 1984: 38).

power and confidence were assured, the industrial port was complete, vessel services were more developed, and COI was established. This all meant that the Managing Director could claim that the country was ‘now negotiating from a position of strength’ (Michaud 1990: 13). At the same time, major boat owners also have a direct line to the presidents, and when boats owners visit the country they are often granted an audience with the president (e.g. *The Nation* 19 November 2004; *The Nation* 29 January 2005; EUInd#40), which enhances their lobbying power compared to larger coastal countries where tuna fisheries are economically less significant.

When René passed the presidency on to Michel in 2004, the latter began to erode SFA’s relative institutional autonomy and placed the agency under the control of the Ministry of Environment and Natural Resources. This Minister apparently ‘wanted SFA under his belt. It was a power move as fisheries generates the biggest forex inflows’ (SGvt#5; also, SGvt#44). As part of this process Savy’s position as SFA chairman was passed to Sylvestre Radegonde and a fisheries scientist, Rondolph Payet, replaced the highly experienced Philippe Michaud as managing director. There was also a political purge of several other experienced individuals perceived as being sympathetic to the opposition party or as being closely associated with Savy (SGvt#5; #14; #19; #27; #44). The exit of two of the most experienced individuals in the politics of Seychelles relations with the EU DWF weakened the country in negotiations.<sup>30</sup> For one official, SFA became ‘completely understaffed regarding industrial tuna fisheries. How can they ever match the EU or distant water fleet negotiation teams?’ (SGvt#19). In this context, the EU DWF ramped-up claims that operating in Port Victoria was too expensive and ‘lobbied heavily and threatened to leave’ (SGvt#43). As one official shrewdly observed: ‘Sometimes they offload elsewhere for practical reasons but it also provides them with dividends, such as gaining concessions’ (SGvt#14; see also, SVS#1; #2). Radegonde took EU DWF

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<sup>30</sup> The removal of Savy probably had a dual motive. He and his two brothers are highly unpopular among the general population and were major targets of the opposition parties, but also it allowed Michel to exert greater influence over fisheries policy.

relocation threats seriously (*The Nation*, 17 September 2004) and reduced tuna transshipment fees paid by the fleet in March 2005.<sup>31</sup>

While there is some truth in on-going relocation threats by the EU DWF, the industry itself recognised that this would only be viable if the majority of the fleet collaborated to shift to East Africa or Madagascar at the same time, thereby sharing the cost:

If the owners decide to work together it would be a disaster for Seychelles.

If we move at the same time to a new port, we lose nothing! For example, during the stevedore strike [in 2003], we all went to Madagascar, but we were losing together so we could do it (EUInd#51; #52; also, EUInd#40).

But the EU DWF also wields influence in Seychelles through other means, including by backing government loans. A local vessel service company (Aquarius, see Figure 6.3) working with the French fleet was committed to channel its foreign exchange earnings through the Central Bank of Seychelles (SGvt#14). This was used to fund a foreign loan of US\$ 27 million by the Public Utilities Company for which one of the French fishing firms was a guarantor (SVS#1-4; #13). The same firm also reportedly guaranteed another loan through Aquarius for an infrastructure project to support domestic small scale fisheries (the 'Zone 14' project) (EUInd#38; #39).

It is also believed that elements of the EU DWF engage in the defrauding of Seychelles, as shall also shortly be seen in a discussion of alleged transfer pricing by Heinz and MW Brands. In the early 1990s Philippe Michaud (1990: 11) noted the practice of foreign vessels under-reporting catch in Seychelles EEZ. This allegedly continued into the 2000s when elements of the Spanish fleet systematically under-reported in-EEZ catch. When compared to the French record there were consistent and large relative declines as soon as some Spanish vessels entered the EEZ, meaning that they would not have to pay the vessel-owner 'top-up fee' for additional catch (Table 6.1). This issue was reported by Seychelles to DG Fish whose legal representative argued that this was not 'proof' (EC-

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<sup>31</sup> Radegonde naively argued that the EU DWF was operating from Port Victoria because it 'liked' the country: 'If you have a really beautiful girl, she could be living at Takamaka [in the less populated south of the main island Mahé] and you're still going to drive out there to see her' (quoted in *The Nation* 17 September 2004).

Seychelles 2009a). In response, Seychelles requested access to all internal vessel logs books, including on use of hydraulic gear and freezer temperature variation, which would demonstrate precisely when a vessel was fishing and storing catch on-board. The official response from Spain was reportedly that these logs do not exist, which is known to be false (SGvt#27; #43; #44). Regardless of the merits of Seychelles' argument (some experts argue that it was problematic, IntFS#41), government officials 'found it very hard to negotiate – we get bullied. We don't have enough expertise to stand up to them' (SGvt#8; also, SGvt#5; #14). Diplomatic representatives of France and Spain both reportedly said they would lobby the Paris Club, where Seychelles was holding negotiations on its debt, if the EU was forced to provide compensation for perceived under-reporting – 'neo-colonial or what?!' (SGvt#8; also, SGvt#43). The Seychelles government responded quite radically, it simply withdrew licences for vessels fishing under the FPA, to which a representative of the Spanish fleet responded: "It's simple. If we can't fish in their waters we will not use their port" (cited in Lough 2009). Additional fees were quickly agreed for an increased estimate of catch volume for 2006 and 2007 which both fell under the FPA of the time (Table 6.1), but not backdated to 2000-05 as requested by Seychelles (EC-Seychelles 2009b; Thande 2009).

In sum, most key players in the government and industry are cognisant of the state's relative negotiating power due to its strategic location and sovereignty over access to the resource. However, the economy's dependence on foreign exchange from both EU access agreements and vessel expenditure in Port Victoria in the context of structural indebtedness from the late 1990s meant that it was no longer in a position to leverage the EU DWF. Nonetheless, in the late 1980s and early 1990s some attempts to counter EU dominance were made, to which we now turn.

### **6.3.3 Challenges to EU dominance of the WIO purse seine fishery**

The EU DWF created the Western Indian Ocean purse seine fishery in the early 1980s and has dominated it ever since. There have been, however, two minor sets of challenges

to its position. One came from other distant water purse seine fleets supported by their home states and the other from the independent Western Indian Ocean coastal states themselves. Seychelles first formal access arrangement was signed in 1978 with the USSR. This included a wide range of areas of cooperation, including resource surveys, training, technical assistance for domestic fisheries development and, of course, fisheries access in the Seychelles EEZ by Soviet vessels (Savini with Dubner 1979: 5).

Fisheries access was a major component in Seychelles positioning in the geo-political dynamics of the Cold War (Franda 1982: 56, 85-90).<sup>32</sup> René proved to be an effective player in manoeuvring bi-polar politics to achieve ‘the maximisation of the benefits on offer from each superpower’ (EIU 1987b: 39). By the mid-1980s, the SPPF regime was deepening its relations with the USSR. For example, in 1987 Seychelles hosted visits by members of the Central Committee of the Communist Party of the Soviet Union and the Soviet-Seychelles friendship society was formed (EIU 1987b: 39). It also signed an agreement with the Soviet fishing firm SOVRYFLOT to allow access for up to four purse seines and two longliners (Nageon de Lestang and Lablache 1989: 3). However, even before the collapse of the Soviet Union it was clear that the government held a pragmatic preference for fisheries relations with France and Spain. The EU-centred commodity chain in canned tuna was a larger volume and higher value concern than the Soviet alternative, and drove a considerably larger and more sophisticated European fleet, which promised (and realised) greater revenue and other socio-economic benefits for the Seychelles economy. In addition, even if the SPPF regime deepened its ties with the USSR through the 1980s, it continued to maintain a position of non-alignment, with the USA maintaining a satellite tracking station on Mahé throughout the period.<sup>33</sup>

The second challenge to the EU DWF came from South-South cooperation among the independent coastal states of the Western Indian Ocean. In 1990, the Managing Director of SFA had suggested the:

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<sup>32</sup> See Teiwaki (1987) on the successful negotiation of bi-polar politics by the Pacific Island countries to improve tuna fisheries rents with the USA.

<sup>33</sup> The station reportedly played a role in the USA’s ‘Star Wars’ missile defence programme and René ‘drove a hard bargain to get the rental increased’ in 1985 (EIU 1986: 33).

possibility of entering into arrangements ... with other States in the Indian Ocean ... for joint or harmonized surveillance and enforcement measures in respect of foreign fishing vessels. ... Arrangements of such a nature could have a great impact on licence revenues earned in countries with adjacent EEZs as often vessels claim that catches are made on the border or just outside the licensing country's EEZ (Michaud 1990: 11).<sup>34</sup>

The direct institutional inspiration for this suggestion was the Pacific Islands Forum Fisheries Agency (FFA) which groups together independent island states in the Western Central Pacific Ocean to collaborate in their relations with distant water tuna fleets (Michaud 1992; WIOTO 1990). FFA had had several broad successes through the 1980s, including the raising of fisheries access revenue and collaboration over the management of foreign fleets (IntFS#3; #4; #28). Mirroring this example and largely under Seychelles leadership, the Western Indian Ocean Tuna Organisation (WIOTO) was formed in 1991 to counter the obvious dominance of French and Spanish vessel owners over the WIO purse seine fishery (WIOTO 1991). It committed members to the regional harmonisation of fisheries policies; collaboration in members' relations with distant water fishing nations to increase benefits from tuna resources; cooperation in fisheries surveillance and enforcement; and mutual access to the EEZs of WIOTO members (Marashi 1996; Michaud 1992). A positive sign of this initiative's potential was that 'industry is very scared of the WIOTO' (IntFS#36).

However, the WIOTO was a still-born institution. Only a handful of members remained by the mid-1990s (Seychelles, Mauritius, Comoros and India), and other parties to the organisation did not appear to take it seriously (Marashi 1996; WIOTC 1991).<sup>35</sup> Moreover, France directly opposed the organisation, not least because it excluded the two

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<sup>34</sup> The Chief Coordinator of the, then, EEZ Control Centre (the partial precursor to SFA), had also identified the unequal distribution of benefits from tuna fisheries in the WIO at the outset of the purse seine fishery in 1982 (albeit in a patronising tone): 'The potential of tuna fishing is immense, and it is sad that all the Indian Ocean states seem so incapable of properly tapping into this wonderful resource themselves, leaving to it nations who travel nearly half-way around the world to make a profit and reap the nutritional rewards' (Plows 1982: 18).

<sup>35</sup> Signatories to the Convention establishing the WIOTO were Comoros, India, Kenya, Madagascar, Maldives, Mauritius, Mozambique, Seychelles, Sri Lanka and Tanzania.

French overseas territories in the region – Mayotte and Reunion – and challenged the status quo for the French fleet. France undermined the WIOTC using its influence at the FAO – where ‘the French wield enormous influence’ (IntFS#28) – and in the WIO region where ‘countries were being bitten one by one’ (IntFS#36). French officials apparently referred to FFA and the spread of its institutional model as the ‘FFA disease’ (IntFS#28). The WIOTC also suffered from geographical weaknesses compared to FFA. The FFA member countries’ EEZs interlock, making it impossible to undertake commercially viable purse seiner operations in the WCPO without accessing several members’ EEZs across the year, but in the WIO tuna move through surrounding high seas areas for a greater proportion of the year. In the mid-2000s some attempts were made by the Indian Ocean Commission to develop improved South-South cooperation around the tuna resource, but, like the WIOTC, these were actively resisted by France (Int#23; IntFS#35) and also suffered from the problem of intra-regional rivalries between Mauritius and Seychelles (IntFS#36).

## **6.4 The Politics of the Cannery**

The social embeddedness of IOT incorporates a similarly complex set of dynamics as Seychelles’ relationships with the EU DWF. The following examines three major interactions: the terms of the IOT Shareholders Agreement, government subsidies to IOT operations, and government leveraging of IOT to gain access to commercial loans. We shall see that even where Heinz/MW Brands worked with the interest of the government in one respect – the leveraging of loans – the costs outweighed the benefits.

### **6.4.1 The IOT Shareholders’ Agreement**

Given the business failure of Conserveries de l’Océan Indien and its drain on the public purse, the Seychelles government was desperate to find a lead firm as a replacement investor (EUInd#6; SGvt#5). This may have weakened its position in joint venture

negotiations with Heinz. As one observer put it: ‘If King Kong had come along and wanted to buy they would’ve sold. As a result it wasn’t a very good deal.’ (EUInd#61). To be fair, the government’s primary interest was in retaining and expanding the direct and indirect socio-economic benefits associated with a large factory managed by a firm that was backward and forward integrated into the commodity chain,<sup>36</sup> as opposed to focussing on possible profits from a position as minority shareholder. Due to the government’s negative experience with COI of raw material supply constraints, marketing weaknesses and small production volumes, when it came to negotiating with Heinz it recognised that a successful cannery was about ‘volume scale ... and the marketing clout to do this’ (SGvt#5). This argument was summarised further by another government official:

Some say that we were screwed by Heinz. But without Heinz (pre-IOT), we had no one to distribute, so growth and development was structurally limited. The barriers to entry are very high. The cost of the factory was 250 million Seychelles rupees or 60 million US dollars. Straightaway that meant five million dollars in interest and debt service payments per annum *alone*. (SGvt#1)

Nonetheless, the inequality of the two parties in forming IOT – i.e. one of the smallest countries in the world ‘negotiating’ with one of the largest agri-business multinationals – was reflected in the basic terms of the joint venture Shareholders’ Agreement.<sup>37</sup>

Three aspects of the Shareholders’ Agreement serve to illustrate the unequal relationship between the government and Heinz. The first is that shareholder dividends appear to have been capped – at around US\$ 1 million in the early 2000s, although this was apparently only 30 percent of the dividend, with the rest going to pay the government share of IOT’s debt, especially that incurred with the Diamond Project (EUInd#6; SGvt#8). The mechanism for capping dividends was based on a ‘statistical equivalent case’ which

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<sup>36</sup> These included private sector employment, ancillary industry, extra volume of shipping services which would reduce deadheading and freight costs, and the provision of goods and services through increased landings of tuna (EUInd#6; #61).

<sup>37</sup> The text of the 1995 Shareholders’ Agreement and its amendments is considered by both parties to be confidential. As such, the following is based almost exclusively on the triangulation of interview transcripts in 2006.



aggregates the ex-factory price of IOT's range of canned tuna products (e.g. different grades of meat from flakes to steaks, different sized cans and different packing media). This method appears to have been based on the aggregated price for a standard case (48 cans) of a range of types of canned *skipjack*. Aside from the overly complex nature of this method (which may also have hidden potential surplus for canned skipjack), it also ignored IOT production of canned *yellowfin* tuna which fetches a considerable price premium on EU markets and, as larger fish, generates higher recovery rates in the labour process (Chapters 2 and 3). The apparent failure to incorporate this species differentiation in the 'statistical equivalent case' may have allowed Heinz (and MW Brands) to capture a greater share of the profits when producing canned yellowfin, which it did for 20-25 percent of its output in the mid-2000s (EUInd#6; #46). However, the dividend cap also reduced the government's exposure to risk. After the experience of subsidising COI, government negotiators may have thought assured dividends and the guarantee of no losses a favourable outcome (SGvt#5).

The second unequal aspect of the Agreement is a mechanism that facilitated alleged transfer pricing so that the full profitability of the cannery was not reported to the IOT Board (which consisted of Heinz and government representatives). The SITZ again played a major role in reducing Heinz' costs, in this case by hiding profits from its local 'partner'. A component of the SITZ was the registration of offshore companies which benefit from secrecy and privacy provisions.<sup>38</sup> The legal structure of Heinz' investment included an offshore entity – Heinz Seychelles Ltd (HSL) – which had an agreement with IOT to buy the vast majority of its production for export (Figure 3.5) and whose accounts are secret, even to IOT board members. As one manager put it: 'Transfer pricing was common. It all depended on when [and where] Heinz wanted to repatriate profit' (EU Ind#61). This mechanism continued into the legal structure of MW Brands in 2006 with the Lehman Brothers take-over. MW Brands Seychelles Ltd (MWBSL) played the same alleged function, but due to the legalised secrecy of offshore firms, official investigations

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<sup>38</sup> This aspect of the SITZ was administered by a parastatal – the Seychelles International Business Authority (SIBA). SIBA was designed to establish Seychelles as an 'Indian Ocean international financial and trading hub' and was touted as a potential third pillar of the Seychelles economy. SIBA's principal activity was the simple registration of offshore international business companies. For a short overview see Campling et al. (2011: 37, 87-88).

into IOT in the late 2000s were unable to prove transfer pricing (Int#5; SGvt#8). MW Brands defence is that the mechanism was established solely to administer and repay loans – ‘a transfer box’ – provided to IOT to fund the Diamond Project, which were still being repaid in 2009 (EUInd#6). Nonetheless, the widely held perception among government officials and domestic media is that MW Brands (and Heinz before it) engaged in transfer pricing and uses MWBSL to do so (SGvt#1; #5; #8; SVS#15; #16; *Regar* 2010; *Financial Times* 2008). This would be unsurprising as transfer pricing has long been a common strategy of multinational firms including in fisheries joint ventures, normally hidden in exchange rate conversions and the marketing functions of their business (Int#5; #15; IntFS# 28; Greboval 1987). It appears that government negotiators went into the Agreement with this in mind: ‘We knew there’d be transfer pricing, so we pushed for a royalty’ (SGvt#5).

Supporting the claim that IOT was not a profitable aspect of its wider business, MW Brands management regularly referred to it as a ‘cost centre’ (EUInd#6; #49). In its literal sense (i.e. the opposite of a profit centre) IOT only *indirectly* adds ‘profit’ to MW Brands by supplying the product where ‘value’ would then be added through marketing. But in accounting terms a ‘cost centre’ is treated as a separate entity within a wider firm with the objective of motivating management to maximise cost reduction (Russell et al 2001: 9). One senior government official repeated MW Brands’ language in an interview in 2006: ‘IOT is only a cost centre, it’s not a profit maker’ (SGvt#1). However, according to a leaked US government cable from the US embassy in Mauritius to the US State Department in the context of the collapse of Lehman Brothers, the Chief Financial Officer of IOT (and an IOT Board Member) reported that ‘IOT’s *current profitability and performance*’ and ‘the structure of ownership, which limits Lehman Brothers’ financial impact on the company, assuages any concern IOT has about Lehman’s bankruptcy’ (US Embassy Port Louis 2008). This and other (confidential) documentary sources indicate that IOT was not a ‘cost centre’ in the literal meaning of the term, and was, in fact, a profitable operation.

Finally, the Shareholders' Agreement includes an 'exclusivity clause' for the industrial processing of fish products and a first preference on the right to invest in new cold storage (SGvt#1; #43). Heinz' rationale for excluding other firms from establishing a cannery in Seychelles was motivated by IOT's position as the only domestic buyer of EU DWF-caught fish and the associated market power that this provides in negotiating lower prices. It also had more practical justifications, including the limited availability of (and competition for) domestic labour, electricity and, during the dry season, water (EUInd#6; SGvt#19). The preference on investment in new cold storage provided Heinz/ MW Brands with leverage over the EU DWF. If IOT were to build new cold storage it would give it additional market power as it could buy fish when the price was low and hold on buying when the price was high. Alternatively, it could (and apparently did) use the Agreement to block cold store construction by firms in the EU DWF. Connected to this, one of MW Brands' major growth strategies was to use the strategic buying position of IOT to compel the EU DWF to land its catch of yellowfin tuna rather than tranship it to Italy, Spain, competing canneries in the WIO and elsewhere (EUInd#38; #39). The primary objective was to process this species for MW Brands' Mareblu brand so as to expand its share of the highly profitable Italian market in time for the projected sale by Lehman Brothers (EUInd#6; #49; Chapter 3).

There were test cases on the preferential investment in cold store under the Agreement. In the 2000s Albacora declared an interest in building new cold storage and a new quay separate from the Industrial Port (e.g. *The Nation* 29 January 2005; EUInd#40). Some argue that the lure of investment possibilities by firms in the EU DWF is 'used as a bargaining chip' to attract additional gains from the Seychelles government (SGvt#43). Regardless, senior political players – including the governor of the Central Bank of Seychelles at the time – appear to have sided with Heinz/MW Brands to block investment (A new quay as both would have reduced IOT's advantage of having a private quay for direct offloading (EUGvt#15; SGvt#5).) In 2006, IOT stated that it intended to build a 10,000mt capacity cold store to address supply issues during the annual low fishing season (*The Nation*, 2 March 2006). This would certainly have given IOT greater market power in negotiations with the EU DWF throughout the year. As one fleet manager put it:

‘It’s better for IOT if shipowners have no choice but to discharge to the factory [when the Industrial Port is congested]. More quays give the fleet a better ability to tranship’ (EUInd#38; #39). The investment may also have been touted because the first preference under the Agreement required IOT to show movement before the option was allocated to other investors. However, as one Seychelles government official recognised:

IOT is against others having a cold store here; but should we be ‘yes sir’?

It may not be in IOT’s absolute interest to have an independent cold storage ... but it might not be in the *national* interest. (SGvt#14)

Regardless, IOT had still not built new cold storage by 2011, citing the decline in Western Indian Ocean catch (Chapter 4) and government investigations into IOT’s finances for the lack of movement (EU#6). Despite the lack of strategic cold storage or a new quay, the EU DWF evaded MW Brands’ objective of capturing greater yellowfin supply for its Italian market and continued to coordinate reefers to tranship the majority of its large yellowfin to buyers in Spain and elsewhere, attracted by premium prices or driven by forward integration into manufacturing (EUInd#38; #39; Chapter 3).

#### **6.4.2 Government subsidies to IOT**

Aside from the leveraging of IOT for government borrowing (see the following section), officials were focused on the factory’s direct generation of employment and foreign exchange inflows from its local activities. In terms of whether government should focus more on improving competitive conditions for the EU DWF or promote the interests of IOT, one senior official stated the issue clearly:

The dilemma is do we protect IOT or do we promote transhipment? We don’t have a choice because of the socio-economic impacts: Where will the 2,000 low-skilled employees go? The employment and taxes generated through transhipment will never be at the level provided by IOT. Politically, we can’t allow the factory to close. (SGvt#1)

It appears that MW Brands management (and Heinz before it) were cognisant of these sensitivities and leveraged this position to extract a number of subsidies from the Seychelles government.

When IOT was established the government ‘absorbed all [COI] debts and sold the assets [to IOT]’, some of which are very significant, ‘especially the land – the factory has a great location’ (EUInd#61). The government’s contribution of these assets was probably not properly valued under the terms of the joint venture. In addition, as 40 percent shareholder in IOT, government absorbed its proportion of the costs of the Diamond Project. The US\$ 45 million investment was channelled to IOT in an interest-bearing loan via the offshore entity Heinz Seychelles Ltd (EUInd#6). In addition, IOT ‘built and sold back items through the Diamond Project’ (SGvt#8) normally through long-term leaseback agreements with the government. In this way Heinz was able to generate a stronger financial statement by improving upon the appearance of its overall return on assets employed (see Section 3.4.2 on Heinz’ emphasis on ‘shareholder value’). Controversially, it also managed to sell non-performing assets to the government, including a waste water plant which could not be used because it generated a powerful stench that drifted to the capital city.<sup>39</sup> As one government official recognised of MW Brands: ‘In Seychelles they don’t own much, not even assets’ (Sgvt#14).

The CEO of MW Brands, Adolfo Valsecchi, played an active advisory role in policy formation in Seychelles.<sup>40</sup> He was a member of the elite National Economic Planning Council (established by President Michel in 2006), which generated concerns domestically that Seychelles fisheries development policy would reflect MW Brands’ interests.<sup>41</sup> In 2007 Valsecchi presented data to government on the ‘competitive benchmarking’ of IOT and placed relative emphasis on lower production costs in Thailand (IOT 2007; see also, *Financial Times* 2008). These data were used to argue that

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<sup>39</sup> General complaints about this smell were legion among Seychellois when the author was living there (also USInd#11).

<sup>40</sup> He had been Managing Director of Heinz European Seafood since 1999 (joining Heinz in 1996) and active in the Italian canned tuna industry before that.

<sup>41</sup> Valsecchi was also an advisor to the Minister of Fisheries in Ghana where MW Brands’ other major factory was based (EUInd#6).

without direct subsidies IOT would be non-competitive and MW Brands threatened to divest (SGvt#43). A very small group of senior politicians and government officials had been sufficiently convinced by MW Brands' lobbying to allocate IOT with Unemployment Relief Scheme rebates when employing new Seychellois workers and reduced employer contributions to the Social Security Fund (SGvt#8; #46).<sup>42</sup>

Despite the obvious problem of relying on data produced by interests that would benefit from its indications, as with the 'statistical equivalent case' method discussed above, these benchmarking data did not incorporate IOT's production of higher value canned yellowfin, even though this species allows for higher productivity in the labour process and larger profits on the Italian market. Moreover, the data itself showed that *without* URS rebates the EU import price of IOT product was more competitive than canneries in Mauritius and Madagascar, thereby making problematic the use of Thailand as the principal benchmark, especially given that Thailand is widely recognised as the most competitive producer of canned tuna on the planet (e.g. Campling et al. 2007; Hamilton et al. 2011). In sum, the combination of limited profit sharing and the cost of subsidies resulted in some arguing that IOT probably cost the government more than the various net benefits gained through local employment generation and spin-offs (SGvt#8; #45). While the precise weighting of the benefits of local upgrading in the canning node of the commodity chain is beyond the scope of this thesis, it is clear that, in this case, 'upgrading' included considerable hidden costs. But even where it appeared to offer benefits to the government, it worked in the interests of multinational firms.

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<sup>42</sup> The URS provided temporary income to active jobseekers. Participants were encouraged to work in productive industries such as tourism and manufacturing and their wages would be subsidised by the Social Security Fund. The success of this scheme may be debated, but it certainly contributed to halving formal unemployment between 2000 and 2007 (Campling et al. 2011: 82). Therefore, subsidised employment at IOT fulfilled wider social policy goals and the SPPF regime's domestic political objective of manipulating unemployment data.

### 6.4.3 Government leveraging of IOT

Government leveraging of IOT to plug holes in the national finances is central to understanding the domestic politics of the cannery. From the mid-1980s, Seychelles persistently suffered from foreign exchange shortages which were aggravated by the end of cold war patronage after 1991 (CBS 1999; Payet 2008; Scarr 2000).<sup>43</sup> Despite a series of home-grown liberal reforms in the mid-1990s and mid-2000s, the economy remained ‘hamstrung by foreign exchange shortages’ (CBS 2006: 3). Very high levels (and non-repayment) of domestic and external debt meant that Seychelles could not borrow from concessional lenders (Campling et al. 2011). By 2008, the annual shortfall of foreign exchange in the balance of payments was over US\$ 100 million (Afif 2008), almost US\$ 12,000 per capita. This crisis culminated in an emergency IMF loan and adjustment programme in late 2008, but before this rapid restructuring of the economy, government used IOT in various ways to stymie the shortfall.

In 2002 the government took out a US\$ 150 million loan with the Bank of Japan and Mitsubishi that was repayable at commercial interest rates over five years (CBS 2003; 2006). It used IOT’s future foreign exchange earnings as collateral, and ‘would never have gone through the capital market without a comfort letter from Heinz’ (Sgvt#1).<sup>44</sup> In 2006 the government arranged another loan for US\$ 200 million (a sovereign bond managed by Lehman Brothers) again to service external debt and provide desperately needed foreign exchange, US\$ 64 million of which was used to repay the Bank of Japan-Mitsubishi loan (CBS 2007). It also reportedly relied on Lehman Brothers for an additional US\$ 30 million to service the sovereign bond (US Embassy Port Louis 2008). By this time, Lehman Brothers had taken control of IOT and it was argued that: ‘There is high value in the linkages to Lehman Brothers. CBS [Central Bank of Seychelles] *needs*

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<sup>43</sup> The SPPF regime ‘insisted on an artificially high exchange rate for the Seychelles rupee, partly so as to insulate the population from external fluctuations, and instituted exchange controls in 1999 to limit the outflow of foreign exchange. The shortage of foreign exchange led to a flourishing informal economy from the late 1990s onwards, wherein rupees were routinely exchanged at around double the official rate.’ (Campling et al. 2011: 40).

<sup>44</sup> This is an interesting example of the inter-penetration of capital as Mitsubishi and Heinz were direct competitors in the canned tuna industry, around both raw material supply in the WIO (6.3.1) and the UK-centred chain through their Princes and John West brands (Chapter 3).

IOT for loans' (SGvt#1). This was clearly the case, but it also meant that the government was playing three (contradictory) roles: acting as a shareholder of IOT with an interest in maximising dividends, subsidising IOT's commercial survival so as to utilise it to mediate commercial loans, and regulating the tuna industry as a whole (including IOT) to maximise local upgrading and the national economic interest. Whichever of these took precedence at particular moments probably depended in part on political contingency and/or the policy issue in question, but the reliance on IOT to borrow foreign exchange and service external debt certainly gave Heinz/MW Brands a major bargaining chip in their relations with government.

In this context, it is worth noting a final example of government attempts to leverage IOT. Given the on-going foreign exchange crisis and the immediate need to inject foreign exchange into public coffers, the government approached Heinz in the mid-2000s to make an advanced purchase of electricity from the parastatal Public Utilities Corporation (PUC; EUInd#6). However, all electricity supply in Seychelles is generated by PUC using imported oil and subsequent sharp increases in the international oil price meant that the advanced purchase was based on a lower price. As a result, this attempt to leverage IOT resulted in the public directly subsidising IOT's electricity costs. In other words, even where the government tried to leverage IOT, MW Brands was the ultimate beneficiary.

## **6.5 Chapter Summary**

This chapter presented an analysis of the economic and the political dimensions of industrial upgrading through a case study of Seychelles – an ACP state and one of the most important tuna transshipment/ landing hubs and sites of canned tuna production in the world. Through a short sketch of fisheries development policy in the colonial period, including advocacy for the creation of an industrial fleet and cannery among the leadership of the pro-independence movement, this chapter demonstrated the historical antecedents for Seychelles contemporary industrial upgrading. It then investigated the



integral role and relative autonomy of government policy in generating the legal-institutional and infrastructural conditions for creating the Port of Victoria and IOT production networks. In doing so, we demonstrated that upgrading is a historical process that cannot be understood by examining contemporary dynamics alone, and that the state plays a highly significant role in shaping the local conditions for competitive accumulation in the commodity chain. The analysis once again returned to a consideration of the environmental conditions of production, from oceanic dynamics shaping the movement of tuna and the seasonality of the fishery and their socio-economic effects in Seychelles, to the commercial importance of species differentiation and its manipulation by firms such as the failure to properly value yellowfin in EU access agreements and the IOT joint venture agreement.

Rather than focussing on upgrading as a technical issue and as primarily a concern of firms, it was explained as a combination of structural, environmental and conjunctural political dynamics, including the contingent and changing role of the domestic elite. Similarly, in examining the developmental effects of upgrading, we moved beyond a firm-centred account to emphasise implications for direct and indirect government revenue and local employment. Combined, the Port of Victoria and IOT production networks were found to contribute over 11 percent of total private sector employment in the country in 2009. However, we also saw how attempts to counter the dominance of the EU DWF failed, either because the countervailing power was insufficiently well placed to do so (e.g. the USSR), or that internal divisions among independent coastal states and the influence of the French state undermined South-South cooperation (the WIOTO).

The chapter also examined the extent of territorial embeddedness of firms. The EU DWF and IOT are anchored in the Seychelles and respond to the domestic political economy, including guaranteeing government loans. Conversely, these firms shape the institutional conditions of their local interactions, including the use of unequal bargaining power by Heinz to create an export processing zone and by the EU DWF to achieve a reduction in tuna transshipment fees. The threat of relocation – whether real or not – plays an important part in this negotiating power. Even individual firm managers play a role, such as the

CEO of MW Brands, by influencing government policy through relationships with a tiny domestic elite to generate maximum gains for their firms, including direct government subsidies. The provision of tax breaks and public subsidies not only demonstrates a hidden cost of ‘upgrading’, but also shows how Seychelles domestic political economy became intertwined with the commercial survival of fishing and processing interests.

## Chapter Seven

### Conclusion

This thesis used the Global Commodity Chain approach to unravel the complex and multi-layered dynamics of the EU-centred canned tuna industry. The GCC approach was understood here as an investigative tool for the analysis of firm activities and government policies under conditions of competitive accumulation. The thesis applied five conceptual components of GCC analysis: input-output structure, territoriality, chain governance, institutional context and upgrading. These components were used to structure the thesis and, in turn, were interrogated through the empirical case under investigation. The thesis also identified and discussed three lacunae in the GCC approach: the environmental conditions of production, the historical formation of chains, and unequal political power among states and firms. Eight sets of research questions were formulated in Section 1.2.2 to engage directly with these concepts and lacunae. This concluding chapter presents the major findings of the thesis by addressing those questions.

#### 7.1 GCC Analysis and the EU-centred Chain in Canned Tuna: Five Concepts

##### *Input-output structure*

*What is the input-output structure of the canned tuna commodity chain (i.e. what are the functions or activities necessary to canned tuna production)?*

All political economy commodity studies approaches emphasise the foundational importance of an understanding of input-output structure in a commodity chain (or segment of a chain). Chapters 2 and 3 identified the activities necessary to the functioning of the canned tuna chain in considerable detail, supplemented in appendices with additional descriptions of production processes and cost structures (especially 2B, 3A and 3B). The chain is composed of four major vertical linkages: raw material extraction in industrial fisheries, processing of canned tuna, branding, and distribution and retail (Figure 1.2). A fifth linkage, raw material trade, is carried out by specialised fishing firms themselves in the EU-centred chain,

individually or in collaborative arrangements.<sup>1</sup> Some firms are vertically integrated from fishing to branding, and others specialise in a single activity. No retailers have backward functional linkages into the chain beyond supply contracts for their private label product and most EU supermarkets use importing firms to source canned tuna.

Chapter 2 showed how technological and organisational innovations in fishing gear, refrigeration and reefer transshipment allowed firms to overcome prior limits to geographical distance and organic durability in the global commodity chain. Chapter 3 described the division of the processing node into full canning, loining only and canning only factories, reflecting the relative costs of production in the international division of labour and the role of the EU trade regime (below). Horizontal competition among processing firms is driven by access to (and price negotiation for) tuna raw material. Species differentiation plays a major role with larger yellowfin allowing for higher recovery rates and fetching higher prices on EU canned tuna markets. Larger, more diversified economies such as Spain and Thailand benefit from cheaper inputs, such as cans, compared to production locations like Seychelles. So-called ‘value added’ production in France relies almost entirely on the ‘logic of loining’, while canneries in Spain apply a more complex ratio of labour time/cost to fish yield and the ‘tuna-tinplate factor’. We also mapped diagonal linkages in the Port Victoria and IOT production networks in Seychelles which allowed for a fuller account of the direct and indirect input-output structure of the chain in this economy.

### ***Territoriality***

*Who owns or controls these activities? What is the spatial dispersal or concentration of production? Is there a tendency to concentration in ownership? If so (or if not), what factors help to explain this process? In sum, what is the role of ‘territoriality’ in the commodity chain?*

Gereffi’s notion of territoriality, ‘the spatial dispersion or concentration of production ... comprised of enterprises of different sizes and types’ (1994: 96), is underdeveloped but, as noted in Chapter 1, sufficed for the purposes of this thesis. Chapters 2 and 3 detailed the major firms which control fishing, processing, branding and retail activities in the EU-centred

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<sup>1</sup> In the WCPO fishery by contrast this is a distinct node, where three specialised trading companies concentrate this activity (Campling et al. 2007).

commodity chain. In the fishing node, we traced the geographical dispersal of the EU DWF as a whole from the 1950s to the late 2000s and the parallel intensification of concentration of control in the French fleet. We then showed how struggles over corporate control of the French fleet by manufacturers to ensure strategic access to raw material, especially Cobrecaf by Heinz, were a major dynamic in the EU-centred commodity chain from the 1980s onwards. Historically, the Spanish fleet is family-owned and managed, and in the 2000s five main players were identified. The most important of these is the vertically integrated Albacora, the world's only purse seine firm with fishing operations across the global ocean, and the overall lead player in the EU DWF. The other four Spanish firms were active only in the WIO and the Atlantic, and except for one, are all specialised fishing firms.

We also traced territoriality in the canned tuna manufacturing node over time. We identified distinct national production systems and created a typology of firms engaged in manufacturing. While the French 'national' production system became spatially dispersed to its colony of Senegal in the 1950s, there was a parallel intensification of corporate concentration with the emergence of the 'big three' branded-manufacturers acting as an oligopoly in the France-centred commodity chain from the 1970s, each of which were integrated backward into fishing and also had a cannery in France. By the late 1980s, only two brands dominated the French market, Saupiquet and Petit Naivre; by this time the latter was controlled by Heinz in its first step to a consolidated position in the EU market as whole. The remaining French firms transformed themselves into specialised non-branded manufacturers to supply increasingly concentrated French supermarkets, and followed the new WIO fishery to establish factories in Madagascar and Seychelles in the late 1980s.

By the mid-2000s only three main players remained in the France-centred chain – Heinz, Bolton Group (undertaking only the marketing function with Saupiquet) and Thunnus Overseas Group (a non-branded manufacturer), none owned by French capital. Conversely, the Spanish production system remained a 'national' one in the 2000s, with full canning production geographically clustered in Galicia but ownership dispersed across several family firms, with production volumes led by Calvo (a branded-manufacturer integrated backward into fishing), Frinsa del Noroeste (a non-branded manufacturer), and Jealsa (backward integrated into fishing and combining branded and non-branded manufacturing). In the context of the highly competitive Spanish market, Calvo and Jealsa bought Italian brands

which contributed to the rapid intensification of EU-based production volumes in Spain and an absolute and relative decline in Italy.

In the 1970s the main extra-EU locations of canned tuna production were in Japan and West Africa, supplying Northern Europe and France respectively. The changing geography of canned tuna production from the 1980s was shaped by the expansion of the EU tuna trade regime to new states (e.g. ACP and GSP+ countries), new commodity frontiers in the WIO and WCPO, the emergence of new industrial purse seine fleets divorced from supplying their own 'national' production systems (e.g. boats owned by Taiwanese and South Korean firms), and technological and organisational change (such as the emergence of a global trade in tuna using reefers). By the 2000s, non-branded manufacturing centred on the EU import market was dispersed both spatially and in terms of corporate concentration. The global dispersal and overcapacity of export-orientated production is of considerable benefit to buyers in EU branded-firms and supermarkets as they were able to rely upon an increasing number of non-branded manufacturers across the 'global ocean'. This provided buyers with security of supply, allowing branded-firms to divest direct ownership of production facilities, and also saw buyers play suppliers off against each other in price negotiations. This evidence supports the notion of a fallacy of composition, which is a particular problem for highly standardised manufactures such as canned tuna where suppliers are fragmented in terms of ownership and thus negotiating power.

### ***Chain governance***

*Which firms, if any, 'drive' the canned tuna commodity chain? If there are 'lead firms' in this commodity chain, what mechanisms produce and reproduce their relative control over chain 'governance'?*

In Chapter 1 chain governance was defined as the concrete processes and relationships that allow lead firms to shape the activities of and distributional outcomes for other firms in a vertical division of labour. This definition avoids Gereffi's original ideal-typical approach to identifying 'drivenness' in chain governance. Chapters 2 and 3 showed that governance is achieved by lead firms through a combination of their relative market power, creation and enforcement of rules and conditions of chain participation, and their positioning in nodes of the chain that enjoy enhanced shares of value extraction. The findings broadly concur with

the commodity studies literature on the rise of supermarket power in agri-business chains since the 1980s onwards. The volatility of tuna raw material price fluctuations lessens as the commodity moves through the various nodes of the chain – from fishing to processing, and branding to retail – generated by varying degrees of exposure to global fleet overcapacity (i.e. intense horizontal competition in the fishing node) and the vagaries of the environmental conditions of production. Evidence of ‘buyer drivenness’ in the canned tuna chain includes ‘macro’ dynamics such as the dispersal of export-orientated canned tuna production in the international division of labour, which allows branded and supermarket buyers to engage in highly competitive sourcing, and ‘micro’ supermarket buying practices such as pushing various costs onto suppliers. Barriers to entry are very high and most principal EU markets are typified by two or three major canned tuna brands, while others are squeezed out by supermarket private (own-) label product.

However, the findings also demonstrate differential levels of buyer drivenness in principal EU markets. This was shown to depend upon levels of concentration among canned tuna branded-firms and supermarkets, which has an effect on market share (e.g. the relative role of private label), retail prices and strategies of oligopolistic rent-seeking by branded-firms and supermarkets. We also found that lead branded-firms use a range of corporate strategies, with some specialised in canned fish chains that own processing facilities and fishing fleets (e.g. MW Brands), and others focussing on their role as diversified consumer goods marketing firms (e.g. Bolton Group). In addition, contrary to generalised assumptions in commodity studies that highly capital-intensive industries generate ‘producer-driven’ chains, the industrial fishing node of the chain is subject to a high degree of buyer-drivenness which translates into sharp struggles over raw material prices. It was argued that this is largely because the EU DWF will catch the same volumes regardless of price (ecological conditions allowing), which is a result of a combination of fragmented ownership of the *global* fleet, high levels of overcapacity, and an extensive regime of EU subsidies.

Increasing buyer drivenness in the processing node of the France-centred commodity chain from the 1960s onwards was met by a number of countervailing strategies by firms in the fishing node. These included the intensification of concentration of control of the fleet (as noted earlier), but also moments of collaboration among fishing firms such as the creation of the Soveto trading company as a source of collective bargaining power with the ‘big three’ French manufacturers. Some specialised fishing firms in the Spanish ANABAC producer

organisation attempted a similar collaborative strategy with Peva Eche, but this was less successful with only two members (a third firm having left in the 2005 due to commercial tensions). It is worth noting that capital as a whole in this node collaborated during the 1999-2000 cost/price squeeze to create the World Tuna Purse Seine Organisation which temporarily limited raw material supply and increased prices (Appendix 2C), demonstrating that the constraint of fragmented ownership can be overcome in moments of declining profitability.

*If lead firms play a role in governing the commodity chain, to what extent do the ways in which these firms are themselves governed influence the whole chain?*

Chapter 1 also asked how lead firms *themselves* are governed and the extent to which this influences chain governance. The most important dynamic identified in the thesis is the short-term doctrine of shareholder value. Here we focussed mainly on Heinz/ MW Brands. Chapter 3 detailed how Heinz stripped several of StarKist's productive assets in 2001, which was motivated by the *financial* objective of improving return on assets. This strategy was mirrored in its 1995 joint-venture with the Seychelles government where a range of fixed assets were sold to the government and leased-back in order to demonstrate a low ratio of working capital, and also an alleged transfer pricing mechanism was established (Chapters 3 and 6). The sale of Heinz European Seafood was also motivated by the maximisation of shareholder value: even though profitable, this business was sold so that Heinz could focus on building profitability in 'core categories', including through the purchase of competing brands so as to control the supermarket shelf (e.g. table sauces in the UK).

Lehman Brothers purchase of Heinz European Seafood was based on the projected sale of the investment tranche (of which MW Brands was a part) in four to five years. This put pressure on MW Brands management to realise additional value from the firm, which it did through heavy product promotion in the EU to expand market share, attempts to 'capture' EU DWF sales of yellowfin in Port Victoria, and the successful extraction of subsidies for IOT from the Seychelles government (Chapters 3 and 6). Other firms less subject to corporate financialisation, such as Bolton Group and Princes, appear better placed to spread out risk over the medium term, such as the fluctuations of raw material costs, without the need for intense and costly marketing campaigns to maximise shareholder value in the short-term.



Finally, while apparent monoliths in the commodity studies literature, supermarkets themselves are subjects of the doctrine of shareholder value. Aside from the well documented day-to-day pressures that buyers place on suppliers, moments of heightened competition among supermarkets can transform their buying practices. Chapter 3 showed how horizontal competition between Sainsbury's and Tesco on core category products such as canned tuna resulted in the downgrading of factories in Fiji and Solomon Islands (below) and offered a new market opening for competing canneries such as IOT. In sum, the thesis demonstrated that chain governance in the EU-centred commodity chain in canned tuna can be better understood through examination of the corporate drivers of lead firms themselves, including horizontal competition and the wider dynamics of corporate finalisation.

### ***Institutional context(s)***

*How have the regulatory mechanisms of international trade and resource access and management shaped (and in turn been shaped by) the commodity chain?*

The fourth component of the GCC approach examined in the thesis was 'institutional context'. Gereffi's initial formulation was extended in Chapter 1 in three ways to incorporate regulatory mechanisms (Bair 2005), territorial embeddedness (Henderson et al. 2002), and social embeddedness, which includes wider dynamics of domestic political economy distinct from the specifics of the commodity chain (Taylor 2008). Chapters 4 and 5 detailed how resource and trade regulations are *constitutive* of the commodity chain in canned tuna. The specificity of the environmental conditions of tuna fisheries, especially the species' highly migratory flows, means that the international legal governance of the (transnational) resource is laden with tensions. The Law of the Sea and regional fisheries management organisations, such as IOTC, provide the institutional conditions for interactions between fishing fleets and coastal states, and in turn, these interactions shaped these institutional conditions. Chapters 4 and 6 described how the EU DWF receives substantial institutional support in its relations with coastal states such as Seychelles in the negotiation and subsidisation of resource access. This component of the Common Fisheries Policy is complemented by a regime of additional subsidies which provide the EU DWF with a substantial commercial advantage over actual and potential competitors in this node of the chain. This combination of institutional supports from the EU certainly contributed to the EU DWF dominating the WIO purse seine fishery since its creation in the early 1980s.

Chapter 5 showed how the EU tuna trade regime shaped the geography of export-orientated canned tuna production. Contrary to the methodologically flawed arguments of the preference pessimists, we saw that the EU tuna preference provided a highly significant commercial advantage for processors in several ACP coastal and island states. Yet at the same time, fisheries rules of origin were shown to be an important regulatory pillar of EU DWF operations, which make ACP-based processors captive buyers of the fleet's raw material sales. Despite this, the evidence also contests any simplistic argument that the EU acted purely as a mediator for the interests of 'national' capital: beneficiary firms based in ACP production sites were often not owned by 'EU' or 'ACP' capital and ACP countries benefited from local employment generation and spin-off benefits (below). Finally, Chapter 5 detailed the wider regulatory context of the WTO, including how this institution was used by Southeast Asian countries to challenge non-reciprocal ACP market access and how several ACP non-LDCs were pressured into initialling Interim Economic Partnership Agreements with the EU to ensure WTO compatibility of their trading arrangements.

*Has territorial and social 'embeddedness' configured interactions and relationships between firms and Seychelles in the commodity chain?*

Discussion in the thesis of territorial and social embeddedness was largely focussed on the interactions of Seychelles with the EU-centred commodity chain in Chapter 6, and relates to upgrading (below). In terms of territorial embeddedness, we described the initial moment of anchoring of the EU DWF which was based upon the strategic location of Port Victoria to the business strategy of maximising fishing days, and how investment in canning capacity followed based upon subsequent local raw material supply and the competitive advantage of the EU tuna preference. We traced the deepening complexity of the EU DWF's and IOT's anchoring in Seychelles over time and how firms became embroiled in the dynamics of the domestic political economy, including guaranteeing government loans. Chapter 6 also showed how these firms shaped the institutional conditions of their local interactions, from the creation of the Seychelles International Trade Zone with the investment by Heinz to the reduction in transshipment fees paid by the EU DWF based on the threat of relocation to competing ports in region.

Discussion of the social embeddedness of the commodity chain in the domestic political economy included the contingent role of a small local elite in Seychelles. We traced how the domestic political power of individuals was used to give the Seychelles Fishing Authority relative institutional autonomy in its relations with the EU DWF (reducing trade-offs in negotiating access arrangements), and how this relative autonomy was lessened when SFA fell under direct ministerial control with a change in the country's presidency in 2004. We also saw how the political elite collaborated with senior Heinz/ MW Brands management to provide public subsidies to IOT on the assumption that this would ensure the commercial survival of the cannery. Chapter 6 also showed how the wider policy direction of the SPPF regime had implications for the country's specific relations with the chain. This included the objective of diversifying the economy so to reduce dependence upon tourism and how, in turn, Seychelles' domestic political economy became intertwined with the commercial survival of fishing and processing interests.

Finally, Chapters 2, 4 and 5 detailed the social embeddedness of the EU DWF. Combined, this evidence demonstrated that, while minor in terms of their economic weight in the macro-regional context of the EU as a whole, tuna fishing firms are of great political and social importance. The interests of the EU DWF – locally-embedded in Breton and Basque politics and identity – made its voice heard in national and EU political fora, enabling it to punch above its economic weight in terms of its lobby power.

In sum, the thesis argued that the combination of territorial and social embeddedness as an 'institutional context' for chain activities and linkages *matters*. Firms behave differently in different spaces and places and adjust their business strategies and day-to-day operations in relation to local political and economic dynamics.

### ***Upgrading***

*Have interactions with the fishing and processing nodes of the chain resulted in 'upgrading' in Seychelles?*

Upgrading is the fifth and final component in existing commodity studies frameworks addressed in the thesis.<sup>2</sup> Rather than a technical question, upgrading in this thesis was analysed as a political one. The case study of Seychelles demonstrated the role of developing country *states* in creating the *conditions* for industrial upgrading. Chapter 6 identified and explained the set of policy interventions deployed by the Seychelles government from the late 1970s to 1995 to upgrade interactions in the fishing and canning nodes of the commodity chain. It also described how Seychelles maintained its position in the chain by subsidising foreign firms (e.g. investing in port development for EU DWF and providing state subsidies to COI and IOT), illustrating the important of public subsidies to capital even in the case of politically and economically insignificant states such as Seychelles.

The thesis then described the main developmental effects of Seychelles upgrading. The Port Victoria and IOT production networks directly or indirectly supported a wide range of local firms and parastatals. We emphasised the broader dynamics of upgrading rather than firm-centred ones. Seychelles' upgrading accounted for over 11 percent of total private sector employment in the country in 2009 and provided a diverse range of sources of government revenue for spending in other areas, including an extensive programme of social policy interventions (Campling et al. 2011).

However, as argued in Chapter 1, industrial upgrading is not a linear developmental process, changing market dynamics and buyer demands can also generate *downgrading*. In Chapter 3 we described how intensified competition among UK supermarkets downgraded non-branded manufacturers of canned tuna in Fiji and Solomon Islands to contract processors of tuna loins. This is a clear evidence of chain governance by supermarkets, especially for non-branded manufacturers. In addition, concentration among supermarkets and branded canned tuna firms in the EU-centred chain severely limits the possibility of upgrading of new entrants, even if they are major coastal state 'resource owners'.

Finally, as already partly noted, the thesis made clear the centrality of other states in the formation and reproduction of the commodity chain. The EU contributed directly to upgrading its home firms, including supporting: the creation of fisheries, especially in the WIO, through negotiating and paying for access arrangements and providing other direct

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<sup>2</sup> Recall from Chapter 1 that it is a concern of the GCC, Value Chain and GVC approaches.

subsidies; the creation of regional ports and canning capacity (e.g. French state funding of port development in Seychelles and of COI); and, their maintenance through the EU trade regime, limiting environmental regulation (e.g. at IOTC) and resisting coastal state initiatives (below).

## **7.2 GCC Analysis and the EU-centred Chain in Canned Tuna: Three Lacunae**

Interrogation of the empirical case of the EU-centred commodity chain in canned tuna highlighted three major conceptual lacunae in chain analysis. Here we summarise how the thesis engaged with these.

### ***Environmental conditions of production***

*Given that the chain is based directly on an extractive industry, what are the environmental conditions of production? How do these affect business strategies?*

Chapter 2 made clear that the environmental conditions of production are the starting point of any analysis of capture fisheries. Tuna biology in general and population dynamics in the WIO in particular determine the range of business activities and forms of industrial organisation of firms engaged in fishing for tuna. The search for and creation of new commodity frontiers, in terms of both geographical extent and socio-technological intensity, provided the basis for an original periodisation of the EU DWF's development from the 1860s to the 2000s. Chapters 2 and 3 showed how species preference in cultures of consumption in different European markets shape business strategies, with, for example, the smaller vessels of the French fleet placing greater emphasis on targeting more valuable yellowfin, Princes' cannery in Mauritius focussing on canned skipjack markets with negative commercial implications for raw material price as it did not buy 'mixed loads' from boats, and Heinz/MW Brands using its strategic position in Port Victoria to try to procure greater volumes of yellowfin to expand its share of the profitable Italian market. The Spanish fleet invested in larger boats to maximise fishing days per trip which brought with it additional pressure to reduce the risks of hunting for fish, which the introduction of FADs (often supported by service vessels) since the 1990s seemed to have solved. However, the unintended consequences of these productivity enhancing measures include negative effects on the environmental conditions of production, with commercial consequences for the EU

DWF as a whole, but also for manufacturers' raw material supply, shown in the discussion of competition between canneries in Mauritius and Seychelles in Chapter 6. In the context of struggles over raw material supply, we also saw the centrality of business strategies employed to mitigate the complexities and fluctuations of the environmental conditions of production, such as Heinz/MW Brands backward integration into fishing through its control of Cobrecaf and ownership of the TTV fleet in Ghana.

Chapter 6 discussed how the commercial importance of species differentiation was downplayed by firms in their agreements with the Seychelles government. The EU DWF provides a set value for 'top-up fees' for tuna catches over pre-agreed catch quotas in all of its access agreements, but this fee did not account for the higher proportion of more valuable yellowfin catch in the WIO. Similarly, dividend payments under the IOT Shareholders' Agreement was based upon a 'statistical equivalent case' of canned *skipjack*, masking the factory's production of canned yellowfin (20-25 percent of its output in the mid-2000s) even though this species allows for higher productivity in the labour process and larger profits on the Italian market.

### ***Historical formation of chains***

*How does a historical approach to GCC analysis (i.e. chain formation) contribute to an understanding of contemporary dynamics, processes and relationships?*

The second lacuna is the central importance of a historical understanding of chain formation. While commodity studies analysts have often emphasised the importance of this aspect, very few have demonstrated it empirically. The thesis described how the historical formation of the EU-centred chain shaped several aspects of its contemporary dynamics, including the import substitution policies of Franco's regime in Spain in supporting the development of the Spanish distant water fleet, and the policy campaigning of René in the colonial era for the promotion of industrial fishing and canning in Seychelles to its actualisation in shaping forms of local upgrading and their contemporary effects.

In particular, Chapter 5 showed how the historical evolution of the EU trade regime was shaped largely by the interests of the French fishing and canning industry in the 1950s, and in turn, how this regime shaped the geography of EU-centred canned tuna production into the

2000s. Even though the trade preference had developmental effects for some ACP countries, the chapter argued that it was not designed as a tool of development policy but was instead a historically contingent and ad hoc commercial arrangement advanced to support the interests of European capital. In Chapter 4, we saw how the world-historic context of the 1970s shaped the outcomes of the negotiations on the Law of the Sea and that the eventual terms of UNCLOS saw an uneasy compromise between the rights of coastal states and distant water fishing nations on sovereignty over highly migratory species such as tuna (e.g. the ‘use it or lose it’ clause). The same context saw the ACP gain *non-reciprocal* preferential market access under Lomé I (Appendix 5A). However, the argument was advanced that very few tuna-related gains were achieved in future EU-ACP agreements, and that this was a reflection of the growing inequality of political power in relations between these two blocks of states.

### ***Unequal political power***

*What is the role, if any, of unequal political power in mediating dynamics among states and firms in the commodity chain?*

The final lacuna identified in this thesis is the role of unequal *political* relations among states and between developing country states and multinational firms. While this is often an implicit concern of the political economy variant of commodity studies, it is less commonly used as an ordering principal in empirical investigation of commodity chains. For example, despite the emphasis on horizontal and diagonal relations in the GPN approach, Bridge (2008) points out the continuing importance of vertical relations and associated inequalities of power and dependency in extractive industries. This is the case in the tuna fisheries analysed in this thesis: colonial power gave France ready access to the fishery off the coast of Senegal, post-colonial state power shaped the terms of resource access in the Western Indian Ocean, and the EU fishing and canning industry effectively lobby their home states and the EU to maintain the status quo of the various pillars of the EU tuna trade regime.<sup>3</sup>

Rules set by the powerful in the state system more broadly (often in the interest of ‘home’ firms) determine the range of policy options open to developing country states in the commodity chain. For example, the terms of UNCLOS do not unambiguously allow coastal

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<sup>3</sup> Including how the EU, the largest economic entity on the planet, ‘negotiates’ resource access arrangements with fiscally-squeezed and politically weak developing coastal states such as Seychelles.

states to exclude foreign fleets from their EEZs and where a coastal state suspects malpractice (e.g. Seychelles, Chapter 6), dependence on access revenue and fleet activities limits its ability to respond. Similarly, the EU used the formation of the WTO to justify ending non-reciprocal market access to the ACP and, instead of providing a workable alternative (e.g. GSP+), imposed a network of WTO-compatible Economic Partnership Agreements, which both divided the ACP into six groups<sup>4</sup> and will give EU firms access to these countries' markets for goods and services, among other things. Several ACP states were coerced into negotiating EPAs in order to avoid the collapse of tuna processing industries dependent upon duty-free access to EU markets. Despite the reciprocal nature of these negotiations, the EU continued to impose restrictive rules of origin which limit the scope for tuna-based development in most ACP countries by excluding sources of raw material that may allow for both lower costs and greater production flexibility and volume.

Several chapters touched upon the theme of unequal power relations between multinational firms and developing countries, but the main example was the Seychelles government's relations with the EU DWF and Heinz/MW Brands in Chapter 6. Most important, the continued threat of relocation by the EU DWF and Heinz/ MW Brands allowed these firms to extract additional concessions from the government, from reduced taxation to public subsidies. We also described the highly unequal terms of the IOT Shareholders' Agreement, including a profit cap, alleged transfer pricing and an exclusivity clause that reinforced IOT's buying power in Port Victoria and blocked the government from attracting competing firms, effectively locking-in the country's economic dependency on Heinz/ MW Brands.

Yet the thesis has also shown that these tendencies are not structurally immutable: changing dynamics in the world economy can shift the balance of political forces. For example, forms of South-South cooperation can generate countervailing tendencies where developing states resist and extract (albeit limited) gains, such as the compromise terms of UNCLOS and non-reciprocal market access under Lomé I noted above. Yet we also how tensions among developing states and the geopolitical and economic influence of powerful states (e.g. France) can limit countervailing power. For example, attempts by the Seychelles government to counter the dominance of the EU DWF failed, either because the countervailing power was insufficiently well placed to do so (the USSR), or that internal divisions among independent

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<sup>4</sup> Which became seven when the East African Community split from the ESA group.



coastal states and the influence of the French state undermined South-South cooperation (e.g. the Western Indian Ocean Tuna Organisation).

### 7.3 Future Research

Several future research agendas have been identified through the process of producing this thesis.<sup>5</sup> The following briefly summarises four of these. The first is to develop the specific (and highly detailed) evidence presented in the thesis to reflect on the conceptual implications for commodity studies more broadly. While the three lacunae identified here go some way to doing this, more conceptual work is required to make interventions with resonance beyond the specifics of the global commodity chain in canned tuna. These potentially include comparative work on the *politics* of upgrading (including for labour, Selwyn 2007) and critical engagement with associated assumptions in the literature around linear development.

Second, as identified in Chapter 1, the political economy of capture fisheries is seriously understudied despite the importance of the sector to the direct and indirect employment of over 100 million people, the high value of seafood in developing country trade with the global North, and that the environmental bases of capture fisheries are increasingly being undermined. An initial intervention into this emerging field was made in a co-edited special issue of *Journal of Agrarian Change*. The editorial introduction identified the need for more comparative work on fisheries production systems, including of distinct commodity chains (Campling et al. 2012). In addition, given that fisheries management tends to ignore the role of differentiated firms in driving extraction, the findings of this thesis combined with other work in the area could form the bases for analysis of the effectiveness of regulation in the context of the tendency to corporate concentration and associated market power in the sector.

Third, and similarly, capture fisheries have tended to be ignored in accounts of extractive industries and there is potentially fruitful research in examining the similarities and differences between fisheries and, for example, mining. As noted in Chapter 4, one specific avenue is comparing property rights, ground-rent and landed-property in industrial tuna

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<sup>5</sup> The policy implications of the work are also numerous, several of which have already been followed through in single-authored and joint publications and reports by the author, including Campling (2008a; 2008b), Campling and Doherty (2007), Campling et al. (2007), Campling et al. (2008), Campling et al. (2009), Campling et al. (2011), Doherty and Campling (2007), and Hamilton et al. (2011).

fisheries and platinum mining (e.g. Capps 2010). Finally, the thesis could also form the basis for comparative analysis of the role of trade policy and development, whether focussed on specific issues such as historical development and contemporary dynamics in EU trade arrangements with developing countries or on broader ones such as South-South cooperation among resource rich countries to extract maximum local gains from multinational firms.

## Bibliography

- Acheampong, Anthony (1997), 'Coherence Between EU Fisheries Agreements and EU Development Cooperation: The Case of West Africa', *ECDPM Working Paper*, No. 52, Maastricht: ECPDM
- ACP (2003), 'EU-ACP Fisheries Agreements – Co-operation, Partnership Agreements: Executive brief', Brussels: ACP Secretariat
- ACP (June 2007). "A preliminary analysis of the Convention on rules of origin for EPAs and way forward for EPAs negotiations", ACP/00/028/07, SEDD/HF/fk, Brussels, 7<sup>th</sup> June 2007.
- ACP-EC (1995), *Agreement Amending the Fourth ACP-EC Convention of Lomé, signed in Mauritius on 4 November 1995*, Brussels: ACP-EC Council of Ministers
- Actionaid 2007, *Who Pays? How British Supermarkets are Keeping Women Workers in Poverty*, London: Actionaid
- Adams, R and B. Rassool, (1990) 'Development planning in Seychelles: work in progress', in R. T. Appleyard and R. N. Ghosh (eds.), *Economic Planning and Performance in Indian Ocean Island States*, National Centre for Development Studies, Research School of Pacific Studies, Australian National University and Centre for Migration and Development Studies, University of Western Australia.
- ADB/INFOFISH 1991, *Global Industry Update – Tuna*, Kuala Lumpur: INFOFISH
- Adler, J and Sumaila, U (2005), 'Western Africa: A fish basket of Europe past and present', *Journal of Environment & Development*, 13(2):156-178.
- Afif, A. (2008), 'Foreign Debts and Balance of Payments'. Paper presented at Consultation Conference on Profiling Economic Vulnerability and Resilience, Commonwealth Secretariat, Seychelles, 25–26 June 2008 by the Principal Secretary of Finance.
- AFP/Taipei Times (2002), China willing to talk about fishing industry laborers, Thursday March 28 2002.
- Africa Research Bulletin 2007, 'Africa–France: Growth in Business', May 16<sup>th</sup>–June 15<sup>th</sup>.
- African Business* (2000), 'Markets: Deadlock Continues in Banana Wars', June 2000
- Ahmed, Mahfuz 2005, Market access and trade liberalisation in fisheries, Geneva: ICTSD.
- AIMS (Atlantic, Indian Ocean, Mediterranean and South China Seas) Small Island Developing States (January 2004), Draft AIMS negotiating document prepared for the Barbados Programme of Action+10 Review, scheduled for 28 August-2 September 2004, Port Louis, Mauritius
- Alavi, Amin, Peter Gibbon and Niels Jon Mortensen (2007), *EU-ACP Economic Partnership Agreements (EPAs): Institutional and Substantive Issues*, Copenhagen: Danish Institute for International Studies
- Albacora (2009), Albacora Group website. Available at <http://www.albacora.es> (last accessed 10 December 2009)
- Albacora (2010), Albacora Group website. Available at: <http://www.albacoragroup.com> (last accessed 26 July 2010)
- Alfter, Brigitte (2009), *Slipping through the net: How EU countries evade new budget transparency rules*, EU Transparency.
- Alimarket 2010, Overviews of Spanish fishing and processing firms [in Spanish] (subscription service, last accessed June 2010)
- Allain, Valérie (2003), 'Food web study in the tuna ecosystem of the Western and Central Pacific Ocean [BBRG-7]'. Noumea, New Caledonia: SPC, Secretariat of the Pacific Community. Standing Committee on Tuna and Billfish, Honolulu, Hawaii, USA, 22-27 July 2002, 15<sup>th</sup>. 6 p. Available at <http://wwwx.spc.int/coastfish/sections/reef/Library/index.html> (last accessed 17 July 2010)
- Allain, Valérie (2005a), 'What do tuna eat? A tuna diet study', *SPC Fisheries Newsletter Information Bulletin*, 112: 20-22. Available at <http://wwwx.spc.int/coastfish/sections/reef/Library/index.html> (last accessed 17 July 2010)

- Allain, Valérie (2005b), 'Diet of four tuna species of the Western and Central Pacific Ocean', *SPC Fisheries Newsletter Information Bulletin*, 114: 30-33. Available at <http://wwwx.spc.int/coastfish/sections/reef/Library/index.html> (last accessed 17 July 2010)
- Allen, Robin (2010), 'International management of tuna fisheries: arrangements, challenges and a way forward', *FAO Fisheries and Aquaculture Technical Paper*. No. 536. Rome: FAO.
- Allen, Robin L. (2002), 'Global tuna resources: Limits to growth and sustainability', in S. Subasinghe and Sudari Pawiro (eds.), *Global Tuna Industry Situation and Outlook: Resources, Production & Marketing Trends and Technological Issues*, Kuala Lumpur: INFOFISH.
- ANFACO (2007). Letter from the Spanish Association of Fish and Seafood Processors (ANFACO) to the Director General of DG FISH on rules of origin, 10 May 2007.
- ANFACO (2010), Canned tuna market share data by brand in 2010 [provided to author by ANFACO in Vigo]
- Anon (2001), 'Status report of the World Tuna Purse Seine Organization (WTPO) [FT 7]'. Noumea, New Caledonia: SPC, Secretariat of the Pacific Community. Standing Committee on Tuna and Billfish, Noumea, New Caledonia, 9-16 August 2001, 14th. 5 p. Available at: [wwwx.spc.int/coastfish/sections/reef/Library/index.html](http://wwwx.spc.int/coastfish/sections/reef/Library/index.html) (last accessed 17 July 2010)
- Anon (2003), 'WTPO Resolution, WTPO Declaration [FTWG-7]' (2nd Interim Evaluation Meeting, Kaohsiung, Taiwan, 18 June 2002). Noumea, New Caledonia: SPC, Secretariat of the Pacific Community. Standing Committee on Tuna and Billfish, Honolulu, Hawaii, USA, 22-27 July 2002, 15th. 12 p. Available at: [wwwx.spc.int/coastfish/sections/reef/Library/index.html](http://wwwx.spc.int/coastfish/sections/reef/Library/index.html) (last accessed 17 July 2010)
- Anonymous (2009), *Report of the IOTC Performance Review Panel: January 2009*, Mahé: Indian Ocean Tuna Commission
- Antonietti, Paul (1993), 'The Tuna Industry in West Africa: Situation and Prospects', in Henri de Saram and N. Krishnasamy (eds.), *Tuna 93 Bangkok: Papers of the 3<sup>rd</sup> INFOFISH Tuna Trade Conference, 26-28 October, 1993, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Antonietti, Paul (1996), 'The Tuna Industry in West Africa', in K. P. P. Nambiar and N. Krishnasamy (eds.), *Tuna 95 Manila. Papers of the 4<sup>th</sup> World Tuna Trade Conference, 25-27 October 1995, Manila, Philippines*, Kuala Lumpur: INFOFISH
- Antonietti, Paul (1998), 'The Tuna Industry Situation and Outlook in Western Indian Ocean and West Africa', in K. P. P. Nambiar and Sudari Pawiro (eds.), *Tuna 97 Bangkok: Papers of the 5<sup>th</sup> World Tuna Trade Conference, 25-27 October, 1997, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Anzer, Walter J. (1993), 'Market Trends and Import Regulations in the European Economic Community', in Henri de Saram and N. Krishnasamy (eds.), *Tuna 93 Bangkok: Papers of the 3<sup>rd</sup> INFOFISH Tuna Trade Conference, 26-28 October, 1993, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Anzer, Walter J. (1998), 'European market for tuna and issues related to import regulations for canned tuna', in K. P. P. Nambiar and Sudari Pawiro (eds.), *Tuna 97 Bangkok: Papers of the 5<sup>th</sup> World Tuna Trade Conference, 25-27 October, 1997, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Anzer, Walter J. (2000), 'EU markets, legislation and the dolphin-safe issue', in S. Subasinghe and Sudari Pawiro (eds.), *Tuna 2000 Bangkok: Papers of the 6<sup>th</sup> World Tuna Trade Conference, 25-27 May, 2000, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Aoyama, Yuko (2007), 'Oligopoly and the structural paradox of retail TNCs: an assessment of Carrefour and Wal-Mart in Japan', *Journal of Economic Geography*, 7(4): 471-490.
- Aoyama, Yuko and Guido Schwarz (2006), 'The Myth of Wal-Martization: retail Globalization and Local Competition in Japan and Germany', in S. D. Brunn (ed.), *Wal-Mart World: The World's Biggest Corporation in the Global Economy*, Abingdon: Routledge
- Appelbaum, Richard and Nelson Lichtenstein (2006), 'A New World of Retail Supremacy: Supply Chains and Workers' Chains in the Age of Wal-Mart', *International Labor and Working-Class History*, 70(1): 106-125.
- Appelbaum, Richard P. (2008), 'Giant Transnational Contractors in East Asia: Emergent Trends in Global Supply Chains', *Competition and Change*, 12(1): 69-87.
- Appleyard, R. T. (1988). "Human Resources". In R.T. Appleyard and R. N. Ghosh (eds.), *Indian Ocean Islands Development*, Australian National University, Canberra.

- Appleyard, R. T. and R. N. Ghosh (1990) 'Overview', in R. T. Appleyard and R. N. Ghosh (eds.), *Economic Planning and Performance in Indian Ocean Island States*, National Centre for Development Studies, Research School of Pacific Studies, Australian National University and Centre for Migration and Development Studies, University of Western Australia.
- Aqorau, Transform (2001), 'Tuna Fisheries Management in the Western and Central Pacific Ocean: A Critical Analysis of the Convention for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean and Its Implications for the Pacific Island States', *International Journal of Marine and Coastal Law*, 16(3): 379-431
- Aqorau, Transform and Anthony Bergin (1997), 'Ocean Governance in the Western Pacific Purse Seine Fishery: The Palau Arrangement', *Marine Policy*, 21(2): 173-186
- Armstrong, H.W. and R. Reed (2001), 'Explaining Differences in the Economic Performance of Micro-states in Africa and Asia', in P. Lawrence and C. Thirtle, *Africa and Asia in Comparative Economic Perspective*, London: Palgrave.
- Arnason, Ragnar 2007, 'The Economics of Rising Fuel Costs and European Fisheries', *EuroChoices*, 6(1): 22-29.
- Arrighi, Giovanni (1990), 'The Developmentalist Illusion: A Reconceptualization of the Semiperiphery', in William G. Martin (ed.), *Semiperipheral States in the World Economy*, London: Greenwood, pp. 11-42.
- Arrighi, Giovanni (1994), *The Long Twentieth Century: Money, Power, and the Origins of Our Times*, London: Verso, 1994.
- Arrighi, Giovanni and Jessica Drangel 1986, 'The Stratification of the World-Economy: An Exploration of the Semiperipheral Zone', *Review* (Fernand Braudel Center), 10(1): 9-74.
- Arrighi, Giovanni, Beverly J. Silver and Benjamin D. Brewer 2003, 'Industrial Convergence and the Persistence of the North-South Divide', *Studies in Comparative International Development*, 38, 1: 3-31.
- Arts, J. and Byron J. (1997), 'The Mid-Term Review of the Lomé IV Convention: Heralding the Future?' *Third World Quarterly*, 18 (1): 73-91.
- Ashenden, Geoffrey P., and Graham W. Kitson (1986), 'Japanese Tuna Fishing/ Processing Companies', Mimeo, Pacific Islands Development Program, Honolulu, East-West Center, pp. 1-88.
- Ashenden, Geoffrey P., and Graham W. Kitson (1987a), 'Japanese Tuna Fishing and Processing Companies', in David Doulman (ed.), *The Development of the Tuna Industry in the Pacific Islands Region: An Analysis of Options*, Honolulu: East-West Center
- Ashenden, Geoffrey P., and Graham W. Kitson (1987b), 'The Japan Tuna Market', in David Doulman (ed.), *The Development of the Tuna Industry in the Pacific Islands Region: An Analysis of Options*, Honolulu: East-West Center
- Atuna (2005), 'Consumer Products Firms Swapped Tuna Brand To Focus', Atuna News Article, United States, 24 June 24 2005
- Atuna (2006a), 'EU Freezes Philippines "Single Duty Quota"', Atuna News Article, Philippines, 10 July 2006.
- Atuna (2006b), 'Philippines Wants 12 Pct Duty On All EU Canned Tuna Exports', Atuna News Article, Philippines, 7 July 2006
- Atuna (2007), 'Thai Union: "Selling at a Loss is Better than Closing the Factory"', Atuna News Article, Thailand, 5 June 2007.
- Atuna (2010), 'France Shifts Ivory Coast Imports to Ecuador and Thailand', Atuna News Article 9 April 2010.
- Babarinde, Olufemi and Gerrit Faber (2004), 'From Lomé to Cotonou: Business as Usual?' *European Foreign Affairs Review*, 9: 27-47
- Babarinde, Olufemi and Gerrit Faber (2005), 'From Lomé to Cotonou: ACP-EU Partnership in Transition', in Olufemi Babarinde and Gerrit Faber (eds.), *The European Union and the Developing Countries: The Cotonou Agreement*, Leiden: Martinus Nijhoff
- Babarinde, Olufemi and Gerrit Faber (eds.) (2005), *The European Union and the Developing Countries: The Cotonou Agreement*, Leiden: Martinus Nijhoff

- Bair, Jennifer (2006), 'Regional trade and production blocs in a global industry: towards a comparative framework for research', *Environment and Planning A*, 38(12): 2233-2252.
- Bair, Jennifer (2008), 'Analysing global economic organization: embedded networks and global chains compared', *Economy and Society*, 37(3): 339-364.
- Bair, Jennifer (2009), 'Global Commodity Chains: Genealogy and Review', in Jennifer Bair (ed.), *Frontiers of Commodity Chain Research*, Stanford: Stanford University Press.
- Bair, Jennifer and Sam Bernstein (2006), 'Labor and the Wal-Mart Effect', in S. D. Brunn (ed.), *Wal-Mart World: The World's Biggest Corporation in the Global Economy*, Abingdon: Routledge
- Bair, Jennifer and Harvie Ramsay (2001), 'Global production networks: a commodity chain analysis and its implications for labor', in W. Cooke (ed.) *Multinational Companies and Transnational Workplace Issues* (Westport, CT, Praeger).
- Bair, Jennifer, (2005), 'Global Capitalism and Commodity Chains: Looking Back, Going Forward', *Competition and Change*, 9 (2): 153-180.
- Bair, Jennifer, and Gary Gereffi (2003), 'Upgrading, uneven development, and jobs in the North American apparel industry', *Global Networks*, 3(2): 143-169.
- Bank of Thailand <<http://www.bot.or.th>>
- Barclay, Kate (2008), *A Japanese Joint Venture in the Pacific: Foreign bodies in tinned tuna*, London: Routledge
- Barclay, Kate and Sun-Hui Koh (2008), 'Neo-liberal reforms in Japan's tuna fisheries? A history of government-business relations in a food-producing sector', *Japan Forum*, 20(2): 139-170
- Barclay, Kate with Ian Cartwright (2007), *Capturing Wealth from Tuna: Case Studies from the Pacific*, Canberra: ANU E Press and Asia Pacific Press
- Bargain, R-M. (1998), 'Trends in the Seychelles Tuna Fishery', in 7<sup>th</sup> *Expert Consultation on Indian Ocean Tunas, Victoria, Seychelles, 9-14 November 1998*, Victoria: IOTC.
- Barling, David and Tim Lang (2005), 'Trading on health: cross-continental production and consumption tensions and the governance of international foods standards', in Niels Fold and Bill Pritchard (eds.) *Cross-continental Food Chains*, London: Routledge.
- Barnes, Colin, and Liam Campling (2008), 'The Competitive Position of the Mauritius Seafood Hub: Present and Future Challenges, Development Options and Scenarios', London: Commonwealth Secretariat.
- Barrett, Hazel R., Angela W. Browne and Brian W. Ilbery 2004, 'From farm to supermarket: the trade in fresh horticultural produce from sub-Saharan Africa to the United Kingdom', in Alex Hughes and Suzanne Reimer (eds.), *Geographies of Commodity Chains*, London: Routledge.
- Barston, R. (1999), 'The Law of the Sea and Regional Fisheries Organisations', *International Journal of Marine and Coastal Law*, 14(3): 333-352
- Bartels, Lorand (2007), 'The WTO legality of the EU's GSP+ program'. Available at <http://www.worldtradelaw.net/articles/bartelsgspplus.pdf>
- Bartels, Lorand (2008), 'The Trade and Development Policy of the European Union', in Marise Cremona (ed), *Developments in the EU External Relations Law*, Oxford: Oxford University Press.
- Bartels, Lorand, Louise de la Fayette, Helen Davies and Liam Campling (2007). *Policy Coherence for Development and the Effects of EU Fisheries Policies on Development in West Africa*, Brussels: European Parliament.
- Bates, Quentin (2010), 'Sapmer owner orders two more tuna seiners', *Intrafish Media*, 18 November.
- Bayliff, William H. and Jacek Majkowski (eds.) (2007), Methodological Workshop on the Management of Tuna Fishing Capacity: Stock Status, Data Envelopment Analysis, Industry Surveys and Management Options. La Jolla, California, United States of America, 8-12 May 2006. *FAO Fisheries Proceedings*. No. 8. Rome: FAO. Available at: <http://www.fao.org> (last accessed 26 July 2010)
- Bayliff, William H., Juan Ignacio de Leiva Moreno, and Jacek Majkowski (eds.) (2005), Second Meeting of the Technical Advisory Committee of the FAO Project 'Management of Tuna Fishing Capacity: Conservation

- and Socio-economics'. Madrid, Spain, 15–18 March 2004. *FAO Fisheries Proceedings*. No. 2. Rome: FAO.
- Bedjaoui, M. (1979), *Towards a new international economic order*, Paris: UNESCO
- Bell, J.D., J.E. Johnson, and A.J. Hobday (eds.) (2011), *Vulnerability of Tropical Pacific Fisheries and Aquaculture to Climate Change*, Noumea: Secretariat of the Pacific Community.
- Bendini, Mónica and Norma Steimbregger 2005, 'The penetration of lead firms in regional agri-food chains: evidence from the Argentinian[sic.] fresh fruit and vegetable sector', in Niels Fold and Bill Pritchard (eds.) *Cross-continental Food Chains*, London: Routledge.
- Bene, Christophe, Rebecca Lawton and Edward H. Allison (2010), "'Trade Matters in the Fight Against Poverty": Narratives, Perceptions, and (Lack of) Evidence in the Case of Fish Trade in Africa', *World Development*, 38(7): 933-954
- Bergin, A. (1994), 'Political and Legal Control over Marine Living Resources – Recent developments in South Pacific Distant Water Fishing', *International Journal of Marine and Coastal Law*, 9(3): 289-309
- Bergin, Anthony and Marcus Haward (1996), *Japan's Tuna Fishing Industry: A Setting Sun or a New Dawn?*, New York: Nova Science.
- Bernal, L. E., and H. Hampton (2007). "Agriculture Safeguard Measures in the Context of the Economic Partnership Agreements (EPAs)", (August), Geneva.
- Bernstein, Henry (1996), 'The Political Economy of the Maize Filière', *Journal of Peasant Studies*, 23: 2/3, pp. 120-145,
- Bernstein, Henry (2006), 'Studying Development/Development Studies', *African Studies*, 65(1): 45-62
- Bernstein, Henry (2007), 'Rural livelihoods in a globalizing world: bringing class back in', Paper prepared for *Historical Materialism* Fourth Annual conference, School of Oriental and African Studies, London, 9-11 November 2007: *Journal of Agrarian Change* panel on 'Class relations in the countryside'
- Bernstein, Henry (2010a), *Class Dynamics of Agrarian Change*, Sterling, VA: Kumarian.
- Bernstein, Henry (2010b), 'Introduction: Some Questions Concerning the Productive Forces', *Journal of Agrarian Change*, 10(3): 300-314
- Bernstein, Henry and Bonnie Campbell (eds.) (1985), *Contradictions of accumulation in Africa: Studies in economy and state*, London: Sage.
- Bernstein, Henry and Liam Campling (2006a), 'Review Article: Commodity Studies and Commodity Fetishism I: Trading Down', *Journal of Agrarian Change*, 6:2, pp. 239-264.
- Bernstein, Henry and Liam Campling (2006b), 'Review Article: Commodity Studies and Commodity Fetishism II: 'Profits with Principles?'' *Journal of Agrarian Change*, 6(3): 414-447.
- Bestor, Theodore (2004) *Tsukiji: The Fish Market at the Center of the World*, London: University of California Press.
- Bhagwati, J. N. (ed.) (1977), *The New Economic Order: The North-South Debate*, Cambridge, Mass: MIT.
- Bilal, Sanoussi and Francesco Rampa (2006), 'Alternative (to) EPAs. Possible scenarios for the future ACP trade relations with the EU', *Policy Management Report 11*, Maastricht: ECDPM.
- Binotto, Donald J. (2004), 'The US Market for Canned Tuna: Present Situation and Future Prospects', in S. Subasinghe, Sudari Pawiro and Shirlene Maria Anthonysamy (eds.), *Tuna 2004 Bangkok: 8<sup>th</sup> INFOFISH World Tuna Trade Conference and Exhibition, 3-5 June, 2004., Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Block, Lindsey and Roman Grynberg (2005), 'EU Rules of Origin for ACP Tuna Products (HS Chapter 16.04)', paper prepared for Commonwealth Secretariat, London.
- Bonacich, Edna and Jake B. Wilson 2006, 'Global Production and Distribution: Wal-Mart's Global Logistics Empire (with special reference to the China/Southern California connection)', in S. D. Brunn (ed.), *Wal-Mart World: The World's Biggest Corporation in the Global Economy*, Abingdon: Routledge
- Bonanno, Alessandro and Douglas Constance (1996), *Caught in the Net: The Global Tuna Industry, Environmentalism and the State*, Lawrence, Kansas: University Press of Kansas

- Borg, Joe (2008), 'Further reform of the Common Fisheries Policy', Note to the College from Commissioner Borg', 19 September 2008.
- Bostock, Tim, G. Greenalgh and U. Kleith (2004), *Policy Research – Implications of liberalisation of fish trade for developing countries*, Chatham, UK: Natural Research Institute.
- Boullé, David 1995, 'Seychelles Fisheries Country Profile 1990-1994, *Seychelles Fishing Authority Technical Report*, SFA/R&D/033, Port Victoria: SFA.
- Brander, K.M. (2010), 'Impacts of climate change on fisheries', *Journal of Marine Systems*, 79: 389-402.
- Brandt, Urs Steiner and Gert Tinggaard Svendsen (2009), 'Trawling for subsidies: the alignment of incentives between fishermen and marine biologists', *Journal of European Public Policy*, 16(7): 1012-1029
- Braxton, Nick (2006), *Fishing for a Future: The Advantages and Drawbacks of a Multilateral Fisheries Agreement between the Pacific and European Union*, New Zealand: Oxfam.
- Brenner, Robert (1977), 'The Origins of Capitalist Development: A Critique of Neo-Smithian Marxism', *New Left Review*, 1/104: 25-92.
- Brenton, Paul and Miriam Manchin (2003), 'Making EU Trade Agreements Work: The Role of Rules of Origin', *World Economy*, 26(5): 755-69.
- Brenton, Paul, (2003), 'Notes on Rules of Origin with Implications for Regional Integration on Southeast Asia', *PECC Trade Forum 22-23 April 2003*, Washington DC, Singapore: Pacific Economic Cooperation Council.
- Brewer, Anthony 1990, *Marxist Theories of Imperialism*, (2<sup>nd</sup> edn.) London: Routledge.
- Bridge, Gavin 2008, 'Global production networks and the extractive sector: governing resource-based development', *Journal of Economic Geography*, 8 (3): 389-419
- Brown, P. (2002), 'EU fishing fleets devastate third world', *The Guardian* (UK), 16 March 2002
- Brown, William (2000), 'Restructuring north-south relations: ACP-EU development co-operation in a liberal international order', Paper presented at the Review of African Political Economy Millennium Conference: *Africa - Capturing the Future*, University of Leeds 28-30 April 2000.
- Bruneau, Joel (2006), 'The tuna companies in a global market: Present situation and future perspectives to tuna market in Pacific area and Indian ocean – Mauritius perspective', presentation prepared for the Third Worldwide Tuna Conference, Vigo 2006.
- Brunn S. D. (ed.), *Wal-Mart World: The World's Biggest Corporation in the Global Economy*, Abingdon: Routledge
- Brus, Henk J.C. (2002), 'The EU Market for Canned Tuna', in S. Subasinghe and Sudari Pawiro (eds.), *Global Tuna Industry Situation and Outlook: Resources, Production & Marketing Trends and Technological Issues – Proceedings of the Tuna 2002, Kuala Lumpur 7<sup>th</sup> INFOFISH World Tuna Trade Conference, 30 May-1 June, 2002, Kuala Lumpur, Malaysia*, Kuala Lumpur: INFOFISH.
- Brus, Henk (2004), 'The Northern European Canned Tuna Market', in S. Subasinghe, Sudari Pawiro and Shirlene Maria Anthonysamy (eds.), *Tuna 2004 Bangkok: 8<sup>th</sup> INFOFISH World Tuna Trade Conference and Exhibition, 3-5 June, 2004, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Brus, Henk (2006), 'European market for non-canned tuna products: Trends and issues', in S. Subasinghe, Sudari Pawiro and S. M. Anthonysamy (eds.), *Proceedings of Tuna 2006: Ninth INFOFISH World Tuna Trade Conference and Exhibition 25-27 May 2006*, Kuala Lumpur: INFOFISH
- Brus, Henk (2008), 'European market for non-canned tuna products: Trends and issues', paper presented at the Tuna 2008: Tenth INFOFISH World Tuna Trade Conference and Exhibition 28-30 May 2008
- Bryman, Alan 2004, *Social Research Methods*, [2<sup>nd</sup> Edn.] Oxford: Oxford University Press.
- Buckley, Peter and M. Casson (1976), *The Future of the Multinational Enterprise*, London: Macmillan.
- Buckley, Peter and M. Casson (2003), 'The Future of the Multinational Enterprise in retrospect and prospect', *Journal of International Business Studies*, 34(2): 219-222.
- Buddruss, Rudiger (1998), 'Advanced tuna processing', in K. P. P. Nambiar and Sudari Pawiro (eds.), *Tuna 97 Bangkok: Papers of the 5<sup>th</sup> World Tuna Trade Conference, 25-27 October, 1997, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.



- Bumble Bee (2006), Basic Data on Production of and Supply to US Canneries, data supplied to author via email.
- Burch, David (2005), 'Production, consumption and trade in poultry: corporate linkages and North-South supply chains', in Niels Fold and Bill Pritchard (eds.) *Cross-continental Food Chains*, London: Routledge.
- Burt, Steve and Leigh Sparks (2001), 'The implications of Wal-Mart's takeover of ASDA', *Environment and Planning A*, 33(8): 1463-1487.
- Burt, Steve and Leigh Sparks (2003), 'Power and Competition in the UK Retail Grocery Market', *British Journal of Management*, 14(3): 237-254.
- Burt, Steve and Leigh Sparks (2006a), 'Wal-Mart's World', in S. D. Brunn (ed.), *Wal-Mart World: The World's Biggest Corporation in the Global Economy*, Abingdon: Routledge
- Burt, Steve and Leigh Sparks (2006b), 'ASDA: Wal-Mart in the United Kingdom', in S. D. Brunn (ed.), *Wal-Mart World: The World's Biggest Corporation in the Global Economy*, Abingdon: Routledge
- Butler, W. E. (1990), 'Grotius and the Law of the Sea', in Hedley Bull, Benedict Kingsbury and Adam Roberts (eds.), *Hugo Grotius and International Relations*, Oxford: Oxford University Press.
- Caddy, J. F. (2001), 'A Global Perspective to Fisheries for Highly Migratory Species and Their Management: The Additional Standards Provided for Regional Bodies by the Code of Conduct and the UN Fish Stocks Agreement', in IATTC (Inter-American Tropical Tuna Commission) (2001), *Symposium on World Tuna Fisheries*, La Jolla, California: IATTC
- Cairns, George and Martyna Sliwa (2008), *A Very Short, Fairly Interesting and Reasonably Cheap Book About International Business*, London: Sage
- Calvo (2010), Calvo Group website. Available at: <http://www.calvo.es> (last accessed 23 July 2010)
- Campbell, H. F. (1996), 'Prospects for an international tuna resource owners' cartel', *Marine Policy*, 20(5): 419-427
- Campbell, H. F. (2000), 'Managing tuna fisheries: a new strategy for the Western and Central Pacific Ocean', *Marine Policy*, 24(2): 159-163
- Campling, Liam (2000), 'Analysing the effects of neoliberal reform in Uganda', unpublished Masters dissertation, Department of Government, University of Manchester
- Campling, Liam (2004a), 'A preliminary assessment of commodity chain analysis, with reference to the tuna chain', unpublished mimeo, pp. 25 (available on request).
- Campling, Liam (2004b), 'A Comparative Political Economy of Industrial Tuna Exploitation and its Impact on Developing Countries: the cases of Fiji and Seychelles', Research Proposal for a PhD in Development Studies, School Of Oriental And African Studies, pp. 8 (available on request).
- Campling, Liam (2006) 'A Critical Political Economy of the Small Island Developing States Concept: South-South Cooperation for Island Citizens?' *Journal of Developing Societies*, 22(3): 235-285.
- Campling, Liam (2008a). "Direct and Indirect Preference Erosion and the Competitiveness of the ACP Tuna Processing Sector", in V. Qalo (ed.), *Bilateralism and Development: Emerging Trade Patterns*, London: Cameron May. Paper originally commissioned by the Commonwealth Secretariat and presented at the *ESA meeting on Trade and Sustainable Approaches to Fisheries Negotiations under WTO and EPA*, 2-4 May 2007, Port Louis, Mauritius.
- Campling, Liam (2008b) *Fisheries Aspects of ACP-EU Interim Economic Partnership Agreements: Trade and Sustainable Development Implications*. ICTSD Series on Fisheries, Trade and Sustainable Development – Issue Paper No. 6. Geneva: International Centre for Trade and Sustainable Development. Available at: <http://ictsd.net/i/publications/33418/>
- Campling, Liam (2008c), 'Follow-up on the food miles/carbon footprint debate', *FFA Fisheries Trade Briefing*, 1(7) (June). Available at: [http://www.ffa.int/trade\\_news](http://www.ffa.int/trade_news)
- Campling, Liam (2008d), 'The global economic slowdown and the fish trade', *FFA Fisheries Trade Briefing*, 1(6) (May). Available at: [http://www.ffa.int/trade\\_news](http://www.ffa.int/trade_news)
- Campling, Liam (2008e), 'France requests permission to assist its fishers as fuel protests spread across the EU', *FFA Fisheries Trade Briefing*, 1(6) (May). Available at: [http://www.ffa.int/trade\\_news](http://www.ffa.int/trade_news)

- Campling, Liam (2008f), 'The fuel crisis, fisheries subsidies and suspension of East Asian tuna operations', *FFA Fisheries Trade Briefing*, 1(7) (June). Available at: [http://www.ffa.int/trade\\_news](http://www.ffa.int/trade_news)
- Campling, Liam (2008g), 'Somali pirates seize Spanish purse seiner in Indian Ocean', *FFA Fisheries Trade Briefing*, 1(5) (April). Available at: [http://www.ffa.int/trade\\_news](http://www.ffa.int/trade_news)
- Campling, Liam (2008h), 'Piracy and tuna fisheries in the western Indian Ocean', *FFA Fisheries Trade Briefing*, 1(11) (October). Available at: [http://www.ffa.int/trade\\_news](http://www.ffa.int/trade_news)
- Campling, Liam, with Mike Batty and Amanda Hamilton (2008), 'An Assessment of the Potential Benefits to PACP States of a Revision of the Rules of Origin for Fisheries Products of HS Chapters 0304 and 0305', report prepared for the Pacific Islands Forum Secretariat.
- Campling, Liam, Hansel Confiance and Marie-Therese Purvis (2011), *Social Policies in Seychelles*, London: Commonwealth Secretariat and UNRISD.
- Campling, Liam and Elizabeth Havice (2007) 'Industrial Development in an Island Economy: US Trade Policy and Canned Tuna Production in American Samoa', *Island Studies Journal*, 2(2): 209-228.
- Campling, Liam and Elizabeth Havice (2010a), 'Mainstreaming Environment and Development at the WTO? The peculiar case of fisheries subsidies', paper presented to the 51<sup>st</sup> International Convention of the International Studies Association, New Orleans, LA, USA, 17-20 February 2010
- Campling, Liam and Elizabeth Havice (2010b) (working draft), 'Industrial structure, market power and ecology in the US-centered canned tuna industry', unpublished mimeo
- Campling, Liam and Elizabeth Havice (2010c), 'When Science-based Policy Fails to Rely on Science: The Political Economy of Bluefin Tuna Decline', unpublished mimeo
- Campling, Liam and Martin Doherty (2007). "A comparative analysis of cost structure and sanitary and phytosanitary (SPS) issues in canned tuna production in Mauritius/the Seychelles and Thailand: Is there a level playing field?" Report commissioned by the Regional Trade Facilitation Programme and presented at the *ESA Dedicated Session on Fisheries*, 23-24 July 2007, Le Morne, Mauritius.
- Campling, Liam, Elizabeth Havice and Penny Howard (2012), 'The Political Economy and Ecology of Capture Fisheries: Market Dynamics, Resource Access and Relations of Exploitation and Resistance', *Journal of Agrarian Change*, 12(2-3): 177-203.
- Campling, Liam, Elizabeth Havice and Vina Ram-Bidesi (2007), *The Pacific Islands, The Global Tuna Industry and the International Trade Regime – A Guidebook*, Honiara: Forum Fisheries Agency. pp. 450.
- Campling, Liam, Kwame Mfodwo and Colin Barnes (2009), 'Increasing the Net Benefits from Fisheries and Associated Sectors in Seychelles – Volume I: Main Report', Victoria: Seychelles Fishing Authority, pp. 324 (confidential).
- Cantorna, Ana I. Sinde, Isabel Diéguez Castellón and Ana Gueimode Canto (2007), 'Spain's Fisheries Sector: From the Birth of Modern Fishing through to the Decade of the Seventies', *Ocean Development & International Law*, 35(4): 359-374.
- Cantwell, John 2000, 'A survey of theories of international production', in Christos N. Pitelis and Roger Sugden (eds.), *The Nature of the Transnational Firm*, (2<sup>nd</sup> Edn.), London: Routledge
- Capps, Gavin (2010) '*Tribal Landed Property*' and the Platinum Mining Industry in Bafokeng, South Africa. London: LSE. PhD thesis.
- Cartwright, I. (2004). 'Fisheries Partnership Agreement (FPA) Negotiating Strategy for Phase II Pacific ACP Negotiations with the EU'. Paper presented to the Pacific Trade Experts Advisory Group V (TEAG V) Meeting & Regional Negotiating Team (RNT) Meeting, Forum Secretariat, Suva, Fiji, 17-18 & 20-21 January 2005
- Cassuto, Alain (2004), 'The African canned tuna industry', in S. Subasinghe, Sudari Pawiro and Shirlene Maria Anthonysamy (eds.), *Tuna 2004 Bangkok: 8<sup>th</sup> INFOFISH World Tuna Trade Conference and Exhibition, 3-5 June, 2004., Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Catarchi, Camillo (2004), 'World Tuna Markets', *GLOBEFISH Research Programme, Vol. 74*, Rome: FAO.
- Cato, J. and S. Subasinge 2003, 'Food Safety in Food Security and Food Trade, Case Study: the Shrimp Export Industry in Bangladesh', *2020 Vision for Food, Agriculture and the Environment*, 10: 9, September 2003, Washington DC: International Food Policy Research Institute.

- Cayré, Patrice and Jean Yves Le Gall (eds.) (1998), *Le thon : enjeux et stratégies pour l'Océan Indien/ Tuna prospects and strategies for the Indian Ocean*, Mauritius 27-29 novembre 1996 Colloques et séminaires - Institut français de recherche scientifique pour le développement en coopération.
- CBS (1999–2008). *Annual Reports* (various years), Victoria: Central Bank of Seychelles
- CFFA, Greenpeace and WWF (2010), 'NGOs recommendations concerning the EU-Solomon Islands Fisheries Partnership Agreement', available at: <http://www.cape-cffa.org>
- Chang, Seung Wha (2003), 'WTO Disciplines on Fisheries Subsidies: A Historic Step Towards Sustainability?', *Journal of International Economic Law*, 6(4): 879-921.
- Chang, Shui-Kai, Kun-Yu Liu and Yann-Huei Song (2010), 'Distant water fisheries development and vessel monitoring system implementation in Taiwan—History and driving forces', *Marine Policy*, 34(3): 541–548
- Chaudron, P. H. (1992), 'Economic Situation and Impact of the Fisheries Sector on the National Economy', unpublished mimeo by Senior Economist, Seychelles Fishing Authority, Port Victoria [obtained at Seychelles Fishing Authority Documentation Centre].
- Chou, Shih-Chin (2006), 'The tuna industry in Taiwan', in S. Subasinghe, Sudari Pawiro and S. M. Anthonysamy (eds.), *Proceedings of Tuna 2006: Ninth INFOFISH World Tuna Trade Conference and Exhibition 25-27 May 2006*, Kuala Lumpur: INFOFISH
- Christensen, Villy, Sylvie Guénette, Johanna J Heymans, Carl J. Walters, Reginald Watson, Drik Zeller and Daniel Pauly (2003), 'Hundred-year decline of North Atlantic predatory fishes', *Fish and Fisheries*, 4(1): 1-24.
- Christopherson, Susan (2006), 'Challenges Facing Wal-Mart in the German Market', in S. D. Brunn (ed.), *Wal-Mart World: The World's Biggest Corporation in the Global Economy*, Abingdon: Routledge
- Churchill, Robin Rolf (1987), *EEC Fisheries Law*, London: Kluwer
- Ciccantell, Paul and David A. Smith (2009), 'Rethinking Global Commodity Chains: Integrating Extraction, Transport and Manufacturing', *International Journal of Comparative Sociology*, 50(3-4): 361-384
- CIMB Securities (2010), The Opinion of the Independent Financial Advisor on the Asset Acquisition of Thai Union Frozen Products Pcl., CIMB Securities (Thailand) Company Limited, 11 August 2010, pp. 1-46
- Clapham, Christopher (1996), *Africa and the International System: The Politics of State Survival*, Cambridge: Cambridge University Press.
- Clarence-Smith, William Gervase and Steven Topik (eds.) (2003), *The Global Coffee Economy in African, Asia and Latin America, 1500-1989*, Cambridge: Cambridge University Press.
- Clausen, Rebecca and Brett Clark (2005), 'The Metabolic Rift and Marine Ecology: An Analysis of the Ocean Crisis within Capitalist Production'. *Organisation and Environment*, 18(4): 422-444.
- Coase, Ronald H. (1937), 'The Nature of the Firm', *Economica*, 4(16): 386-405.
- Coe, Neil M. and Neil Wrigley (2007), 'Host economy impacts of transnational retail: the research agenda', *Journal of Economic Geography*, 7 (4): 341–371
- Coe, Neil. M., Peter Dicken and Martin Hess (2008), 'Introduction: global production networks—debates and challenges', *Journal of Economic Geography*, 8(3): 267-269.
- Cohen, Robert B., Nadine Felton, Morley Nkosi and Jaap van Liere (1979), 'General introduction', in Robert B. Cohen, Nadine Felton, Morley Nkosi and Jaap van Liere (eds.), *The multinational corporation: A radical approach, Papers by Stephen Herbert Hymer*, Cambridge: Cambridge University Press
- COI (2006), Review of the Economic Contribution of Tuna and Tuna Like Fish to the Economies of IOC Member Countries, Quatre Bornes: Indian Ocean Commission
- Cole, H. (2003), 'Contemporary challenges: globalisation, global interconnectedness and that 'there are not plenty more fish in the sea'. Fisheries, Governance and globalisation: is there a relationship?' in *Ocean & Coastal Management*, 46(1): 77-102
- Colony of Seychelles (1959), *A Plan for Seychelles*, Victoria: Government Printer
- COM (1996) 570, Green Paper on relations between the European Union and the ACP countries on the eve of the 21st century - Challenges and options for a new partnership, November 1996

- COM(2002) 637 final, Communication from the Commission on an Integrated Framework for Fisheries Partnership Agreements with Third Countries, Brussels, 23.12.2002
- COM(2004) 715 final, Commission Staff Working Document: Annex to the 33rd Financial Report on the European Agricultural Guidance and Guarantee Fund, Guarantee Section, 2003 Financial Year, SEC(2004) 1311, Brussels, 27.10.2004
- COM(2008) 902/final 2, Commission Staff Working Document I: Annual Report from the Commission to the Council and the European Parliament on Member States' efforts during 2007 to achieve a sustainable balance between fishing capacity and fishing opportunities, SEC(2008) 3108/2, Brussels, 25.5.2009
- COM(2009) 461 final, Commission Staff Working Document Accompanying the Report from the Commission to the Council: 'EU 2009 Report on Policy Coherence for Development', Commission of the European Communities, Brussels, 17.09.2009
- COMESA (2004). "Eastern and Southern Africa Economic Partnership Agreement with the European Union: Elements for Inclusion in a ESA Fisheries Framework Agreement", second draft (July)
- Comitini, Salvatore (1987), 'Japanese Trading Companies: Their Possible Role in Pacific Tuna Fisheries Development', in David J. Doullman (ed.), *The Development of the Tuna Industry in the Pacific Islands Region: An Analysis of Options*, Honolulu: East-West Center.
- Commere, Pierre (2009), 'Overview of the European tuna market', Paper presented to the 2<sup>nd</sup> European Tuna Conference, Brussels 27 April 2009
- Commission for Africa (2005). *Our Common Interest: Report of the Commission for Africa*
- Commission Regulation (EC) No 80/2001 of 16 January 2001 laying down detailed rules for the application of Council Regulation (EC) No 104/2000 as regards notifications concerning recognition of producer organisations, the fixing of prices and intervention within the scope of the common organisation of the market in fishery and aquaculture products. *Official Journal of the European Communities* L 13/3, 17.1.2001
- Commission Regulation (EC) No 585/2001 of 26 March 2001 providing for compensation to producer organisations for tuna delivered to the processing industry between 1 January and 31 March 2000. *Official Journal of the European Communities* L 86/8, 27.3.2001
- Commission Regulation (EC) No 2496/2001 of 19 December 2001 providing for compensation to producer organisations for tuna delivered to the processing industry between 1 January and 31 March 2001. *Official Journal of the European Communities* L 337/25, 20.12.2001
- Commission Regulation (EC) No 1342/2005 of 16 August 2005 providing for compensation to producer organisations for tuna delivered to the processing industry between 1 January and 31 March 2004, *Official Journal of the European Union*, L 212/5
- Commission Regulation (EC) No 1343/2005 of 16 August 2005 providing for compensation to producer organisation or tuna delivered to the processing industry between 1 April and 30 June 2004, *Official Journal of the European Communities* L 212/8, 17.8.2005
- Committee on Fisheries (2003), Report on the tuna fleet and industry: situation and future prospects in the EU and worldwide (2003/2017(INI)), Rapporteur: Daniel Varela Suanzes-Carpegna, Final A5-0412/2003, 26 November 2003.
- Commodity Trade Statistics Database (COMTRADE) of the United Nations Statistics Division (UNSD) Available at <<http://comtrade.un.org/db/>>
- Commonwealth Advisory Group (1997), *A Future for Small States: Overcoming Vulnerability*, London: Commonwealth Secretariat
- Commonwealth Secretariat/World Bank Joint Task Force on Small States (2000), *Small States: Meeting Challenges in the Global Economy*, London and Washington: Commonwealth Secretariat/World Bank
- Connors Bros. (2006a) 'Bumble Bee Foods to Invest in Thai Tuna Processor, Sea Value', Connors Bros. Income Fund press release 22 May 2006.
- Connors Bros. (2006b), *Connors Bros. Income Fund 2005 Annual Report*, Markham: Connors Bros. [Online] Available at: [http://library.corporate-ir.net/library/14/144/144315/items/196211/ANNUAL%20REPORT\\_FINAL%20LASERS.pdf](http://library.corporate-ir.net/library/14/144/144315/items/196211/ANNUAL%20REPORT_FINAL%20LASERS.pdf)

- Consumer Reports (2001), 'Canned Tuna: Test – Tuna goes upscale', June 2001. <http://www.consumerreports.org>
- Cook, Ian, Philip Crang and Mark Thorpe (2004), 'Tropics of consumption: 'getting with the fetish' of 'exotic' fruit?', in Alex Hughes and Suzanne Reimer (eds.), *Geographies of Commodity Chains*, London: Routledge.
- Cooklin, Gerald (1984), 'Fisheries in the Republic of Seychelles: Report Prepared in Respect to the Tuna Management Options for the State Enterprises in the Seychelles', Rome: FAO
- Cooper, Frederick and Randall Packard (1997), 'Introduction', in Frederick Cooper and Randall Packard (eds.), *International Development and the Social Sciences*, Berkeley: University of California Press.
- Corrales, Juan (2004), 'Latin American tuna market: Emerging trends, consumption and new products', in S. Subasinghe, Sudari Pawiro and Shirlene Maria Anthonysamy (eds.), *Tuna 2004 Bangkok: 8<sup>th</sup> INFOFISH World Tuna Trade Conference and Exhibition, 3-5 June, 2004., Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- COS (2001), 'Prehearing Statement of COS Samoa Packing Company', Special Industry Committee No. 24 for All Industries in American Samoa, US Department of Labor, Wage and Hour Division (June).
- Cosgrove Twitchett, Carol (1981). *A Framework for Development: The EEC and the ACP*, London: George Allen & Unwin
- Coulson, Justine (2004), 'Geographical knowledges in the Ecuadorian flower industry', in Alex Hughes and Suzanne Reimer (eds.), *Geographies of Commodity Chains*, London: Routledge.
- Council of the EU General Secretariat (28 November 2007). "Note for the Attention of the ACP WP: Subject: EPA – Art XXIV compatible arrangement with East African Community", 28 November 2007, MD no: 281/07 ACP, Directorate-General for Trade (Directorate D - Development and EPAs)
- Council of the EU General Secretariat (30 November 2007). "Note for the Attention of the 133 Committee: Subject: EPA – Art XXIV compatible arrangement with Seychelles and Zimbabwe of ESA", 30 November 2007, MD no: 538/07, Directorate-General for Trade (Directorate D - Development and EPAs)
- Council of the EU General Secretariat (4 December 2007). "Note for the Attention of the 133 Committee: Subject: EPA – Art XXIV compatible agreement with Papua New Guinea and the Republic of the Fiji Islands", 4 December 2007, MD no: 287/07 REV 1 ACP, Directorate-General for Trade (Directorate D - Development and EPAs)
- Council Regulation (EC) No 1263/1999 of 21 June 1999 on the Financial Instrument for Fisheries Guidance. *Official Journal of the European Communities* L 161/54, 26.6.1999
- Council Regulation (EC) No 104/2000 of 17 December 1999 on the common organisation of the markets in fishery and aquaculture products. *Official Journal of the European Communities* L 17, 21.1.2000, p. 22–52
- Council Regulation (EC) No 975/2003 of 5 June 2003 opening and providing for the administration of a tariff quota for imports of canned tuna covered by CN codes 1604 14 11, 1604 14 18 and 1604 20 70, *OJL*141/1
- Council Regulation (EC) No 980/2005 *Applying a Scheme of Generalised Tariff Preferences* [2005] *OJ* L169/48.
- Council Regulation (EC) No 1198-2006 of 27 July 2006 on the European Fisheries Fund. *Official Journal of the European Union* L 223/1, 15.8.2006
- Council Regulation (EC) No 1528/2007 of 20 December 2007, "Applying the arrangements for products originating in certain states which are part of the African, Caribbean and Pacific (ACP) Group of States provided for in agreements establishing, or leading to the establishment of, Economic Partnership Agreements", *Official Journal of the European Union*, L 348/1, 31 December 2007.
- Council Regulation (EEC) No 105/76 of 19 January 1976 on the recognition of producers' organizations in the fishing industry. *Official Journal of the European Communities* L 020, 28.01.1976
- Council Regulation (EEC) No 171/71 of 26 January 1971 on granting and reimbursing aids granted by Member States to producers' organisations in the fishing industry. *Official Journal of the European Communities* L 23, 29.1.1971

- Council Regulation (EEC) No 2142/70 of 20 October 1970 on the common organisation of the market in fishery products. *Official Journal of the European Communities* L 236, 27.10.1970
- Cowen, Michael and Robert Shenton (1996), *Doctrines of Development*, London: Routledge.
- COWiconsult (1988), 'Feasibility Study for a Repair Shipyard in Victoria, Seychelles', Government of Seychelles and Danyard A/S.
- Cox, Adrian and Martin Arnold (2009), 'Private equity unit escapes the Lehman whirlpool', *Financial Times*, 10 March 2009.
- Cox, Andrew (1999), 'Power, value and supply chain management', *Supply Chain Management: An International Journal*, 4(4): 167-175.
- Cox, Robert W. (1979), 'Ideologies and the New International Economic Order', *International Organization*, 33
- Cox, Robert W. (1986), 'Social Forces, States and World Orders: Beyond International Relations Theory', in Robert O. Keohane (ed.), *Neorealism and its Critics*, New York: Columbia University Press.
- Cramer, Chris (1999), 'Can Africa Industrialize by Processing Primary Commodities? The Case of Mozambican Cashew Nuts', *World Development*, 27(7): 1247-1266.
- CREFMPPM (2008), 'Armement - Paul Paulet quitte la Cobrecaf', 24 October 2008. Available at: <http://www.crefmpm.com> (last accessed 26 July 2010)
- Crewe, Louise (2004), 'Unravelling fashion's commodity chains', in Alex Hughes and Suzanne Reimer (eds.), *Geographies of Commodity Chains*, London: Routledge.
- CRNM (2008). 'CARIFORUM/EU Economic Partnership Agreement (EPA) – Treatment of Fisheries', 19 February 2008. Obtained from: <http://www.crn.org/>
- Crough, Greg J. (1987a), 'The Development of the Tuna Industry in Thailand', in David Doulman (ed.), *The Development of the Tuna Industry in the Pacific Islands Region: An Analysis of Options*, Honolulu: East-West Center
- Crough, Greg J. (1987b), 'The Development of the Tuna Industry in Thailand', Mimeo, Pacific Islands Development Program, Honolulu, East-West Center, pp. 1-34.
- Crough, Greg J. (1987c), 'The Development of the Australian Tuna Industry', in David Doulman (ed.), *The Development of the Tuna Industry in the Pacific Islands Region: An Analysis of Options*, Honolulu: East-West Center
- Cullis-Suzuki, Sarika, and Daniel Pauly (2010), 'Failing the high seas: a global evaluation of regional fisheries management organizations', *Marine Policy*, 34(5): 1036-1042
- Cunningham, S and Tim Bostock (eds.) (2004), Report of the Workshop and Exchange of Views on Fiscal Reforms for Fisheries - to Promote Growth, Poverty Eradication and Sustainable Management. Rome, 13-15 October 2003. *FAO Fisheries Report*. No. 732. Rome, FAO. 2004. 37p <http://www.fao.org/docrep/007/y5653e/y5653e00.htm#Contents>.
- Customs Department, Thailand. Available at: <http://www.customs.go.th/Statistic/StatisticIndex.jsp>
- Daily Guide* (2008), 'Tuna Export Hits 70, 000 Tonnes', 03 March 2008. Available at: <http://www.modernghana.com/news/159171/1/tuna-export-hits-70-000-tonnes.html> (last accessed 2 June 2011)
- Darity, William and Lewis S. Davis 2005, 'Growth, trade and uneven development', *Cambridge Journal of Economics*, 29(1): 141-170.
- Datamonitor (2004), *Canned Food in the United Kingdom: Industry Profile*, New York: Datamonitor
- Datamonitor (2005), *Canned Food in the United Kingdom: Industry Profile*, New York: Datamonitor
- Datamonitor (2008), *Canned Food in the United Kingdom: Industry Profile*, New York: Datamonitor
- Datamonitor (2009), *Canned Food in the United Kingdom: Industry Profile*, New York: Datamonitor
- Davenport, M., A. Hewitt and A. Konig (1995), *Europe's Preferred Partners? The Lomé Countries in World Trade*, London: ODI
- Davenport, Michael (1992), 'Africa and the Unimportance of Being Preferred', *Journal of Common Market Studies*, XXX(7): 233-251

- Davenport, Michael with Sheila Page (1991), *Europe: 1992 and the Developing World*, London: Overseas Development Institute.
- Davenport, Michael, Adrian Hewitt and Antonique Koning (1995), *Europe's Preferred Partners? The Lomé Countries in World Trade*, London: Overseas Development Institute.
- Daviron, Benoit and Peter Gibbon (eds.) (2002a), *Global Commodity Chains and African Export Agriculture*, Special issue of *Journal of Agrarian Change*, 2(2): 137-277.
- Daviron, Benoit and Peter Gibbon (2002b), 'Global Commodity Chains and African Export Agriculture', *Journal of Agrarian Change*, 2(2): 137-161.
- Daviron, Benoit and Stefano Ponte (2005), *The Coffee Paradox: Commodity Trade and the Elusive Promise of Development*, London: Zed Books.
- Dawson, John (2001), 'Strategy and Opportunism in European Retail Internationalization', *British Journal of Management*, 12(4): 253-266.
- Dawson, John A. (2007), 'Scoping and conceptualising retailer internationalisation', *Journal of Economic Geography*, 7 (4): 373-397
- de San, Michel, and Alain Pages (1998), 'FADs-The Western Indian Ocean experience', *SPC FAD Information Bulletin*, 3: 24-29. Available at: [www.spc.int/coastfish/sections/reef/Library/index.html](http://www.spc.int/coastfish/sections/reef/Library/index.html) (last accessed 17 July 2010)
- De Santis, Luciano (1996), 'Can handling after sterilisation', in K. P. P. Nambiar and N. Krishnasamy (eds.), *Tuna 95 Manila. Papers of the 4<sup>th</sup> World Tuna Trade Conference, 25-27 October 1995, Manila, Philippines*, Kuala Lumpur: INFOFISH
- Dean, J. M. (1997), 'International Bio-Political Fisheries Management: Sashimi on the Cutting Edge', in D.A. Hancock *et al* (eds.), *Developing and Sustaining World Fisheries Resources: The State of Science and Management*, Proceedings of the 2<sup>nd</sup> World Fisheries Congress, Collingwood, Australia: CSIRO
- Dearden, Stephen (2003), 'The Future Role of the European Union in Europe's Development Assistance', *Cambridge Review of International Affairs*, 16(1): 105-117.
- Del Monte Foods Company (2005), Form 10-K: Report to the United States Securities and Exchange Commission for the Fiscal Year Ended May 1, 2005. Available at: <http://www.delmonte.com/company/Investors/Doc/77948ACL.pdf>
- Delegation of the European Commission to Thailand (2006). 'News release: European Union agrees additional duty-free access for Thai exports', 30 March 2006. Available at: [http://www.deltha.cec.eu.int/en/news\\_2006/Compensation%20agreement\\_EN.htm](http://www.deltha.cec.eu.int/en/news_2006/Compensation%20agreement_EN.htm)
- Deloitte 2008, *The Global Powers of Retailing 2008*, Available at: [http://www.deloitte.com/assets/Dcom-FYRMacedonia/Local%20Assets/Documents/mk\\_Global\\_powers\\_of\\_retailing\\_2008.pdf](http://www.deloitte.com/assets/Dcom-FYRMacedonia/Local%20Assets/Documents/mk_Global_powers_of_retailing_2008.pdf)
- Deloitte 2010, *The Global Powers of Retailing 2010*, Available at: [http://www.deloitte.com/assets/Dcom-Global/Local%20Assets/Documents/Consumer%20Business/dtt\\_globalpowersofretailing2010.pdf](http://www.deloitte.com/assets/Dcom-Global/Local%20Assets/Documents/Consumer%20Business/dtt_globalpowersofretailing2010.pdf)
- DeSombre, Elizabeth R. (2006), *Flagging Standards. Globalization and Environmental, Safety, and Labor Regulation at Sea*. Cambridge, MA: The MIT Press
- DG (SANCO) 7305/07. "Final report of a mission carried out in Fiji from 9 to 13 July 2007 to assess the public health controls and conditions of production of fishery products intended for export to the EU". Obtained from: <http://ec.europa.eu/food/fvo/>
- DG DEV (1996), *Lomé IV Revised: Changes and Challenges*, Brussels: Directorate General for Development, European Commission.
- DG FISH (2001), *European distant water fishing fleet: Some principles and some data*, Brussels: European Commission, Directorate General Fisheries.
- DG FISH (2001), *European distant water fishing fleet: Some principles and some data*, Brussels: European Commission, Directorate General Fisheries.
- DG MARE (2008), *Annual Activity Report 2008 of the Directorate General for Maritime Affairs and Fisheries*, Brussels: European Commission.

- DG TAXUD (2005), “The rules of origin in preferential trade arrangements: Orientations for the future”, COM(2005) 100 final, Brussels, 16 March 2005.
- DG Trade (March 2007). “Information paper: Negotiation of the Economic Partnership Agreements (EPAs) with the ACP countries - Information on a possible EC draft convention on rules of origin for consultation to the ACP countries”, DG TRADE/D/3/AR D(2007) 3212, Brussels, 23 March 2007
- DG Trade (June 2007). “Letter to European Industry Associations – Subject: Reform of preferential rules of origin”, Brussels, European Commission, G/2/FS/bm(D)2007 5551, 11 June 2007
- DG Trade (July 2007). “Accompanying document to the proposal of the Commission for improvements of the current rules of origin of the Cotonou Agreement under EPA: Background document on Rules of origin for the fisheries sector for the specific case of the Pacific ACP region”, Draft Commission Staff Working Document, Brussels, European Commission, 20 July 2007
- DG Trade (September 2007). “Information note to EU Member States: Elements for an EU offer on rules of origin in the Economic Partnership Agreement regional negotiations”, Brussels: European Commission, 19 September 2007. (Received by email.)
- DG Trade (October 2007). “Civil Society Dialogue on preferential rules of origin”, Brussels, 9 October 2007, minutes.
- DG Trade (March 2008). “Interim Economic Partnership Agreements: Questions and Answers”, *Trade Policy in Practice*, 27 March 2008, Brussels: European Commission. Obtained from: <http://ec.europa.eu/trade/>
- DG Trade (April 2008). “CARIFORUM-EU Economic Partnership Agreement: An Overview”, *DG Trade Information Paper*, (April) Brussels: European Commission.
- DG TRADE and DG DEV (2002), *Economic Partnership Agreements – Start of Negotiations: A new approach in the relations between the European Union and the ACP countries*, Brussels: Directorate-General for Trade & Directorate-General for Development, European Commission.
- Dias, Joao Ferreira and Patrice Guillotreau (2005), ‘Fish canning industries of France and Portugal: life histories’, *Economia Global e Gestão*, X(2): 61-79.
- Diaz, Adrian Carril (2002), ‘Technological developments in tuna canning and processing’, in S. Subasinghe and Sudari Pawiro (eds.), *Global Tuna Industry Situation and Outlook: Resources, Production & Marketing Trends and Technological Issues*, Kuala Lumpur: INFOFISH.
- Dicken, Peter, (1986), *Global Shift: Industrial Change in a Turbulent World*, London: Harper & Row.
- Dicken, Peter, (2007), *Global Shift: Mapping the Changing Contours of the World Economy*, (5th Edn), London: Sage.
- Dicken, Peter, Philip F. Kelly, Kris Olds and Henry Wai-Chung Yeung (2001), ‘Chains and networks, territories and scales: towards a relational framework for analysing the global economy’, *Global Networks*, 1(2): 89-112.
- DiPietro, Ben (2008), ‘Economics of super-frozen tuna’, *IntraFish Media*, 11 August 2008. Available at: <http://www.intrafish.no>
- Division for Ocean Affairs and the Law of the Sea (1998), *The United Nations Convention on the Law of the Sea (A historical perspective)*, New York: United Nations. Available at: [http://www.un.org/Depts/los/convention\\_agreements/convention\\_historical\\_perspective.htm#Menu](http://www.un.org/Depts/los/convention_agreements/convention_historical_perspective.htm#Menu) (Last accessed 14 December 2009.)
- Dixon, Jane and Christina Jamieson (2005), ‘The cross-Pacific chicken: tourism, migration and chicken consumption in the Cook Islands’, in Niels Fold and Bill Pritchard (eds.) *Cross-continental Food Chains*, London: Routledge.
- Dodds, K. (2000), ‘Geopolitics, Patagonian Toothfish and living resource regulation in the Southern Ocean’, *Third World Quarterly*, 21(2): 229-246
- Doherty, Martin (2007), ‘Development of the Inland Fisheries Export Sectors in ESA Region: SPS and other Barriers’. Report commissioned by the Regional Trade Facilitation Programme (October).
- Doherty, Martin (2010), *The Importance of Sanitary and Phytosanitary Measures to Fisheries Negotiations in Economic Partnership Agreements*. ICTSD Series on Fisheries, Trade and Sustainable Development. Issue Paper No. 7. Geneva: International Centre for Trade and Sustainable Development.



- Doherty, Martin and Liam Campling (2007), 'Comparative analysis of SPS issues in canned tuna production in Mauritius/the Seychelles and Thailand: Follow-up study'. Report commissioned by the Regional Trade Facilitation Programme on behalf of the COMESA Secretariat.
- Dolan, Catherine and John Humphrey (2000), 'Governance and Trade in Fresh Vegetables: The Impact of UK Supermarkets on the African Horticulture Industry', *Journal of Development Studies*, 37(2): 147-176
- Dolan, Catherine S. and Meenu Tewari (2001), 'From What We Wear to What We Eat: Upgrading in Global Value Chains', *IDS Bulletin – The Value of Value Chains: Spreading the Gains from Globalisation*, 32(3): 94-104.
- Doulman, David J. (1986), 'Options for U.S. Fisheries Investment in the Pacific Islands', Mimeo, Pacific Islands Development Program, Honolulu, East-West Center, pp. 1-25.
- Doulman, David (1987a), *Tuna Issues and Perspectives in the Pacific Islands Region*, Honolulu: East-West Center
- Doulman, David (1987b), *The Development of the Tuna Industry in the Pacific Islands Region: An Analysis of Options*, Honolulu: East-West Center
- Doulman, David (1987c), 'Distant-Water Fishing Operations and Regional Fisheries Cooperation', in David Doulman (ed.), *The Development of the Tuna Industry in the Pacific Islands Region: An Analysis of Options*, Honolulu: East-West Center
- Doulman, David (1987d), 'Development and Expansion of the Tuna Purse Seine Fishery', in David Doulman (ed.), *Tuna Issues and Perspectives in the Pacific Islands Region*, Honolulu: East-West Center
- Doulman, David J. 1990, 'Consideration of Recent International Events in the Tuna Industry and their Potential Impact on the Western Indian Ocean', Paper presented to the Second Consultative Meeting on Tuna Management and Development Strategies for Western Indian Ocean Coastal States', Mahe, Seychelles, 28-31 1990
- Doulman, David and Robert E. Kearney (1987), 'Domestic Tuna Industries', in David Doulman (ed.), *The Development of the Tuna Industry in the Pacific Islands Region: An Analysis of Options*, Honolulu: East-West Center
- Duncan, Ron (2006), 'Troubled Fishing in Pacific Waters', *Pacific Economic Bulletin*, 21(3): 98–105.
- Dunn, Steve, Len Rodwell and Glen Joseph (2006), 'The Palau Arrangement for the Management of the Western Pacific Purse Seine Fishery – Management Scheme (Vessel Day Scheme)'. Paper presented at Sharing the Fish Conference, February 26 – March 2, Perth, Australia,
- Dunning, John (2000), 'The eclectic paradigm as an envelope for economic and business theories of MNE activity', *International Business Review*, 9(2): 163–190
- Dunning, John (2001), 'The Key Literature on IB Activities: 1960-2000', in Alan Rugman and Tom L. Brewer(eds.), *Oxford Handbook of International Business*, London: Oxford University Press.
- Earle, Michael (2006), 'Paying for Unsustainable Fisheries: Where the European Union Spends its Money', in D. M. Lavigne (ed.), *Gaining Ground: In Pursuit of Ecological Sustainability*, International Fund for Animal Welfare and University of Limerick.
- Easterly, W. and A. Kraay (1999), 'Small States, Small Problems?', *World Bank Working Paper No. 2139*, Washington: World Bank
- EC (1995) (Directorate-General for Development) DG DEV, *Industrial and Economic Co-operation between the European Union and the Developing Countries*, Luxembourg: Office for Official Publications of the European Communities.
- EC (1996) (Directorate-General for Development) DG DEV, *Lomé IV Revised: Changes and Challenges*, Luxembourg: Office for Official Publications of the European Communities.
- EC (December 2001), 'Council Regulation No 2501/2001 of 10 December 2001 applying a scheme of generalised tariff preferences for the period from 1 January 2002 to 31 December 2004', Official Journal of the European Communities. [Online] Available from: [http://trade.ec.europa.eu/doclib/docs/2003/may/tradoc\\_113021.pdf](http://trade.ec.europa.eu/doclib/docs/2003/may/tradoc_113021.pdf)
- EC (2002), *The common organisation of the markets in fishery and aquaculture products*, Brussels: European Commission.

- EC (April 2004), 'WTO India - GSP: WTO confirms differentiation among developing countries is possible', Brussels, 7 April 2004 [Online] Available from: [http://trade.ec.europa.eu/doclib/docs/2004/april/tradoc\\_116680.pdf](http://trade.ec.europa.eu/doclib/docs/2004/april/tradoc_116680.pdf)
- EC (July 2004), 'Developing countries, international trade and sustainable development: the function of the Community's generalised system of preferences (GSP) for the ten-year period from 2006 to 2015', COM(2004) 461 final, 7 July 2004. Brussels: EC: 12. [Online] Available from: [http://trade.ec.europa.eu/doclib/docs/2004/july/tradoc\\_117929.pdf](http://trade.ec.europa.eu/doclib/docs/2004/july/tradoc_117929.pdf)
- EC (March 2005), 'The rules of origin in preferential trade arrangements: Orientations for the future', COM(2005) 100 final, Brussels 16.3.2005. [Online] Available from: [http://eur-lex.europa.eu/LexUriServ/site/en/com/2005/com2005\\_0100en01.pdf](http://eur-lex.europa.eu/LexUriServ/site/en/com/2005/com2005_0100en01.pdf)
- EC (June 2005a). 'Council Regulation (EC) No 980/2005 of 27 June 2005 applying a scheme of generalised tariff preferences', *Official Journal of the European Union* L 169, Volume 48, 30 June 2005. [Online] Available from: [http://trade.ec.europa.eu/doclib/docs/2005/june/tradoc\\_123910.pdf](http://trade.ec.europa.eu/doclib/docs/2005/june/tradoc_123910.pdf)
- EC (June 2005b), 'GSP: The new EU preferential market access system for developing countries. Memo.' Brussels, 23 June 2005 [Online] Available from: [http://www.eusa.org.za/PDFdownload/Trade%20&%20Economic/Current%20Issues%20page/New\\_GSP.pdf](http://www.eusa.org.za/PDFdownload/Trade%20&%20Economic/Current%20Issues%20page/New_GSP.pdf)
- EC (July 2005), *The European Community's Rules of Origin for the Generalised System of Preferences – A Guide for Users*, [Incl. Appendix II & III] Brussels: EC
- EC (December 2005), 'Commission Decision of 21 December 2005 on the list of the beneficiary countries which qualify for the special incentive arrangement for sustainable development and good governance, provided for by Article 26(e) of Council Regulation (EC) No 980/2005 applying a scheme of generalised tariff preferences', *Official Journal of the European Union*, L 169/1 (2005/924/EC). [Online] Available from: [http://eur-lex.europa.eu/LexUriServ/site/en/oj/2005/l\\_337/l\\_33720051222en00500050.pdf](http://eur-lex.europa.eu/LexUriServ/site/en/oj/2005/l_337/l_33720051222en00500050.pdf)
- EC (September 2006), 'Commission Staff Working Document: *Annex to the Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions – Global Europe: Competing in the World, A Contribution to the EU's Growth and Jobs Strategy*' SEC(2006) 1230, Brussels, 4 October 2006
- EC COM(2005) 100, 'Communication from the Commission to the Council, the European Parliament and the European Economic and Social Committee: The rules of origin in preferential trade arrangements: Orientations for the Future', COM(2005) 100final, Brussels.
- EC COM(2007) 289 final, 'Proposal for a Council Regulation opening and providing for the management of autonomous Community tariff quotas for certain fishery products for the period 2007 to 2009', Brussels, 4 June 2007.
- EC Inter-service Group (2006). "Meeting Note: Fourth meeting of the inter-service group on the use of a value-added method for the determination of preferential origin", TAXUD/C/5/RL D(2006) 30802, Brussels, 13 November 2006
- EC Inter-service Group (2006). "Meeting Note: Fourth meeting of the inter-service group on the use of a value-added method for the determination of preferential origin", TAXUD/C/5/RL D(2006) 30802, Brussels, 13 November 2006
- Economic Assessment of European Fisheries (2004), 'Economic Performance of Selected European Fishing Fleets: Annual Report 2004', Concerted Action (Q5CA-2001-01502), Brussels: European Commission
- ECP (2009) Press release: Investment in Thunnus Overseas Group – Emerging Capital Partners invests in African tuna processing and distribution company, 28 January 2009. Available at: <http://www.ecpinvestments.com>
- EC-Seychelles (1993) Protocol defining for the period 18 January 1993 to 17 January 1996 the fishing opportunities and the financial contribution provided for by the Agreement between the European Community and the Republic of Seychelles on fishing off Seychelles, *Official Journal of the European Communities* L 246 , 02.10.1993
- EC-Seychelles (1996) Protocol defining, for the period from 18 January 1996 to 17 January 1999, the fishing opportunities and financial contribution provided for by the Agreement between the European Community

- and the Republic of Seychelles on fishing off Seychelles, *Official Journal of the European Communities* L 157 , 29/06/1996
- EC-Seychelles (1999) Protocol defining for the period 18 January 1999 to 17 January 2002 the fishing opportunities and the financial contribution provided for by the agreement between the European Economic Community and the Republic of Seychelles on fishing off Seychelles, *Official Journal of the European Communities* L 131 , 27.05.1999
- EC-Seychelles (2002) Protocol defining, for the period 18 January 2002 to 17 January 2005, the fishing possibilities and the financial contribution provided for by the Agreement between the European Economic Community and the Republic of Seychelles on fishing off Seychelles, *Official Journal of the European Communities* L 134, 22.05.2002
- EC-Seychelles (2005) Protocol setting out, for the period from 18 January 2005 to 17 January 2011, the fishing opportunities and the financial contribution provided for by the agreement between the European Economic Community and the Republic of Seychelles on fishing off Seychelles, *Official Journal of the European Communities* L 348, 30.12.2005
- EC-Seychelles (2009a), EC/Seychelles Fisheries Partnership Agreement, Joint Committee – London, 12th January 2009. Agreed Minutes.
- EC-Seychelles (2009b), EC/Seychelles Fisheries Partnership Agreement, Joint Committee – Victoria, 5-6 February 2009. Agreed Minutes.
- ECSIEP (European Centre on Pacific Issues) (2005), ‘European tuna fishery in the Pacific, what’s at stake?’. Available at: <<http://www.antenna.nl/ecsiep/fish/infotuna.doc>> (last accessed 25 January 2005).
- EEC-Seychelles (1984), Agreement between the European Economic Community and the Government of the Republic of Seychelles on fishing off Seychelles - Protocol between the European Economic Community and the Government of the Republic of Seychelles, *Official Journal of the European Communities* L 079 , 23/03/1984
- EEC-Seychelles (1986), Agreed Record of the Fishing Negotiations between the European Economic Community and the Government of the Republic of Seychelles which took place at Victoria on December 2 and 3, 1986, meeting minutes at Seychelles Fishing Authority Documentation Centre
- EEC-Seychelles (1987), Agreement between the European Economic Community and the Republic of Seychelles on fishing off Seychelles - Protocol on the fishing rights and financial compensation provided for in the Agreement between the European Economic Community and the Republic of Seychelles on fishing off Seychelles, *Official Journal of the European Communities* L 119, 07.05.1987
- EEC-Seychelles (1990) Protocol defining for the period 18 January 1990 to 17 January 1993 the fishing opportunities and the financial contribution provided for by the Agreement between the European Economic Community and the Republic of Seychelles On fishing off Seychelles, *Official Journal of the European Communities* L 125 , 15.05.1990
- EIU. (1983), *Quarterly Economic Review of Madagascar, Mauritius, Seychelles, Comoros – Annual Supplement 1983*, Economist Intelligence Unit, London.
- EIU. (1984), *Quarterly Economic Review of Madagascar, Mauritius, Seychelles, Comoros – Annual Supplement 1984*, Economist Intelligence Unit, London.
- EIU. (1986), *Country Profile: Mauritius, Seychelles 1986-87*, Economist Intelligence Unit, London.
- EIU. (1987a), *Country Profile: Mauritius, Seychelles 1987-88*, Economist Intelligence Unit, London.
- EIU. (1987b), *Country Report: Madagascar, Mauritius, Seychelles, Comoros No.4 - 1987*, Economist Intelligence Unit, London
- EJF (2009), *Lowering the Flag: Ending the use of Flags of Convenience by Pirate Fishing Vessels*, London: Environmental Justice Foundation
- Elsy, Richard (1987), ‘The European and Middle East Tuna Market: A View from the Pacific Islands’, in David Doullman (ed.), *The Development of the Tuna Industry in the Pacific Islands Region: An Analysis of Options*, Honolulu: East-West Center
- Enviro – Fish Africa (Pty) Ltd (2009). Seychelles Mariculture. Scoping Report. Prepared for SFA under the RECOMAP project.

- Environmental Advisory Council to the Swedish Government (2002), *Resilience and Sustainable Development: Building Adaptive Capacity in a World of Transformations*, Stockholm: Edita Norstedts Tryckeri AB
- Ernest & Young (2008), *Evaluation of the Common Organisation of the Markets in Fishery and Aquaculture Products: Executive summary*, Brussels: DG MARE
- Ernest & Young (2010a), *Ex-Post evaluation of the Financial Instrument for Fisheries Guidance (FIFG) 2000-2006: Final Report – Tome 1*, Brussels: DG MARE
- Ernest & Young (2010b), *Ex-Post evaluation of the Financial Instrument for Fisheries Guidance (FIFG) 2000-2006: Final Report – Tome 2*, Brussels: DG MARE
- Estudios Biologicos (2006) Chapter 6 ‘Evaluación de los costes de explotación de un buque atunero’ (translated by Béatrice Gorez)
- Eunni, Rangamohan V. and James E. Post (2006), ‘What Matters Most? A Review of MNE Literature, 1990-2000’, *The Multinational Business Review*, 14(3): 1-27.
- Eurofish Magazine*, (2010), ‘Jealsa Rianxeira, S.A.: Investing in automation to stay competitive’ (April).
- European Parliament (2001), Working Document on the developing countries: Fisheries and Poverty Reduction (COM(00)0724 – C5-0071/2001 – 2001/2032(COS)). Committee on Development and Cooperation. Rapporteur: Paul A.A.J.G Lannoye, 21 May 2001.
- European Scrutiny Committee (2004), *Thirty-seventh Report of Session 2003-04*, London: House of Commons. Available at: <http://www.publications.parliament.uk> (last accessed 9 December 2009)
- Eurothon (2006a). “EUROTHON Position on the WTO Negotiations Regarding the Tariff Preference Erosion in the Tuna Market”, (May) Paris
- Eurothon (2006b), Reponse du Secteur «Thon» au Questionnaire «ADE Consulting» sur l’application d’une règle d’origine basée sur la valeur ajoutée, Paris le 9 mars 2006. Mimeo translated by Judith Fessehaie.
- Eurothon (2007a). “ACP Tuna Economies Facing WTO Negotiations: Tariff Preference Erosion in the Tuna Market”, (January) Paris
- Eurothon (2007b). “ACP/GSP+ Tuna Cannery Position on the WTO Negotiations Regarding the Tariff Preference Erosion in the Tuna Market”, (June) Paris
- Faber, Gerrit (2005), ‘Economic Partnership Agreements and Regional Integration Among ACP Countries’, in Olufemi Babarinde and Gerrit Faber (eds.), *The European Union and the Developing Countries: The Cotonou Agreement*, Leiden: Martinus Nijhoff
- Fagan, Robert (2005), ‘Globalization, the WTO and the Australia-Philippines ‘banana war’, in Niels Fold and Bill Pritchard (eds.) *Cross-continental Food Chains*, London: Routledge.
- FAO (2001), ‘Research Implications of Adopting the Precautionary Approach to Management of Tuna Fisheries’, *FAO Fisheries Circular No. 963*, Rome: FAO.
- FAO (2002), ‘Report and Documentation of the International Workshop on Factors of Unsustainability and Overexploitation in Fisheries’, (Bangkok, Thailand, 4-8 February 2002), *FAO Fisheries Report No. 672*, Rome: FAO
- FAO (2003), ‘Report of the Expert Consultation on Identifying, Assessing and Reporting on Subsidies in the Fishing Industry’, Rome: *FAO Fisheries Report No. 698*, Rome: FAO
- FAO (2005), ‘Review of the state of world marine fishery resources’, *FAO Fisheries Technical Paper*. No. 457. Rome: FAO
- FAO FIGIS. Fisheries Global Information System. Available at: <<http://www.fao.org/figis>>
- FAO, Atlas of tuna and Billfish Catches Online. Available at: <<http://www.fao.org/fi/atlas/tunabill/english/home.htm>> (last accessed 10 February 2005).
- FAO/AfDB (1983), ‘Report of the Seychelles Fisheries Development Project Preparation Mission’, Rome: FAO and African Development Bank Investment Centre
- Fauvel, Thomas, Nicolas Bez, Emily Walker, Alicia Delgado, Murua Hilario, Pierre Chavance and Laurent Dagorn (2009), ‘Comparative study of the distribution of natural versus artificial drifting Fish Aggregating Devices (FADs) in the Western Indian Ocean’, paper presented to the Eleventh Session of the IOTC

- Working Party on Tropical Tunas, 15-23 October 2009 (IOTC-2009-WPTT-19). Available at: <http://www.iotc.org> (last accessed 16 July 2010)
- Felando, August (1987), 'U.S. Tuna Fleet Ventures in the Pacific Islands', in David Doulman (ed.), *Tuna Issues and Perspectives in the Pacific Islands Region*, Honolulu: East-West Center
- Fernie, John, Barbara Hahn, Ulrike Gerhard, Elke Pioch and Stephen J. Arnold (2006), 'The Impact of Wal-Mart's Entry into the German and UK Grocery Markets', *Agribusiness*, 22 (2): 247-266.
- FFA Fisheries Trade News* (various issues), monthly publication of the Pacific Islands Forum Fisheries Agency, single-authored by Liam Campling since December 2007, and co-authored (with Elizabeth Havice and Amanda Hamilton) since March 2009. Available at: [http://www.ffa.int/trade\\_news](http://www.ffa.int/trade_news)
- FFA/DEVFISH (2008), *Development of a regional strategy to maximize economic benefits from purse seine caught tuna* (April), Honaira: Pacific Islands Forum Fisheries Agency.
- Financial Times* (2008), 'Fishing: Anxiety over the state of "blue gold"', 22 September 2008.
- Findlay, M. and A. E. Searle (1998), 'The North East Atlantic albacore fishery: a Cornish crisis of confidence', *Marine Policy*, 22(2): 95-108.
- Fine, Ben (1994), 'Coal, diamonds and oil: Towards a comparative theory of mining?', *Review of Political Economy*, 6(3): 279-302
- Fine, Ben (2002), *The World of Consumption: The material and cultural revisited* [second edn.] London: Routledge.
- Fine, Ben and Ellen Leopold (1993), *The World of Consumption*, London: Routledge.
- FIS (2009), 'International private equity firm invests in African tuna group', 29 January 2009. Available at: <http://www.fis.com>
- Fisheries Development (1978), 'Fisheries Development in Seychelles: Volume I', London: Fisheries Development Ltd
- Fisheries Development Ltd (c.1975/6), 'Trends in International Suppliers of and Markets for Tuna', unpublished consultancy report, available at Seychelles Fishing Authority library.
- Fitter, Robert, and Raphael Kaplinsky (2001), 'Who gains from product rents as the coffee market becomes more differentiated? A value chain analysis', *IDS Bulletin*, 32(3): 69-82
- Flanders Marine Institute (2009), *Maritime Boundaries Geodatabase*, version five. Available at: <http://www.vliz.be/vmcddata/marbound> (last accessed 12 December 2009)
- Fleury, Afonso and Maria Tereza Fleury (2001), 'Alternatives for Industrial Upgrading in Global Value Chains: The Case of the Plastics Industry in Brazil', *IDS Bulletin – The Value of Value Chains: Spreading the Gains from Globalisation*, 32(3)
- Floyd, Jesse M. (1987a), 'Development of the Philippine Tuna Industry', Mimeo, Pacific Islands Development Program, Honolulu, East-West Center, pp. 1-60.
- Floyd, Jesse M. (1987a), 'U.S Tuna Import Regulations', in David Doulman (ed.), *The Development of the Tuna Industry in the Pacific Islands Region: An Analysis of Options*, Honolulu: East-West Center
- Fold, Niels (2002), 'Lead Firms and Competition in 'Bi-polar' Commodity Chains: Grinders and Branders in the Global Cocoa-Chocolate Industry', *Journal of Agrarian Change*, 2(2): 137-277.
- Fold, Niels (2004), 'Spilling the beans on a tough nut: liberalization and local supply system changes in Ghana's cocoa and shea chains', in Alex Hughes and Suzanne Reimer (eds.), *Geographies of Commodity Chains*, London: Routledge.
- Fold, Niels (2005), 'Global cocoa souring patterns', in Niels Fold and Bill Pritchard (eds.) *Cross-continental Food Chains*, London: Routledge.
- Fold, Niels and Bill Pritchard (2005b), 'Introduction', in Niels Fold and Bill Pritchard (eds.) *Cross-continental Food Chains*, London: Routledge.
- Fold, Niels and Bill Pritchard (eds.) (2005a), *Cross-continental Food Chains*, London: Routledge.

- Fonteneau, Alain (2004), 'An overview of Indian Ocean albacore: fisheries, stocks and research', paper presented to First Session of the IOTC Working Party on Temperate Tunas, Shizuoka (Shimizu), Japan, 2-5 August 2004 (IOTC-2004-WPTMT-02). Available at: <http://www.iotc.org> (last accessed 16 July 2010)
- Fonteneau, Alain (2008), 'What effects of the closed Somalian area on tuna stocks and fisheries?', paper to IOTC Working Party on Tropical Tuna, IOTC-2008-WPTT-AdHoc03
- Fonteneau, Alain, Pilar Pallares, John Sibert and Ziro Suzuki (2002), 'The Effect of Tuna Fisheries on Tuna Resources and Offshore Pelagic Ecosystems', in E. M. Borgese *et al* (eds.), *Ocean Yearbook 16*, London: University of Chicago Press
- Foodmarket Exchange (January 2002), 'Tuna: A review of the news in 2001', 21 January, 2002. Available at: <http://www.foodmarketexchange.com>
- Foodmarket Exchange (June 2002) 'Review of Thai tuna price movement (Bangkok landings) and trade in the first quarter of 2002', 17 June, 2002. Available at: <http://www.foodmarketexchange.com>
- Franchino, Fabio and Anne J. Rahming (2003), 'Biased Ministers, Inefficiency, and Control in Distributive Policies: An Application to the EU Fisheries Policy', *European Union Politics*, 4(1): 11–36
- Francis, J. A. Nilsson and D. Waruinge (2002), 'Marine Protected Areas in the Eastern African Region: How Successful Are They?' *AMBIO: A Journal of the Human Environment*, 31(7): 503–511.
- Freidberg, Susanne (2004), *French Beans and Food Scares: Culture and Commerce in an Anxious Age*, Oxford: Oxford University Press
- Freidberg, Susanne (2007), 'Supermarkets and imperial knowledge', *Cultural Geographies*, 14(3): 321–342.
- Freitas, Natalia (2008), 'MW Brands: "Lehman Brothers Bankruptcy Will Not Impact Us"', *Atuna*, United Kingdom, 17 September 2008
- Friedheim, R. (2000), 'Designing the Ocean Policy Future: An Essay on How I am Going To Do That', *Ocean Development & International Law*, 31(1/2): 183-195
- Friedland, William (1984), 'Commodity Systems Analysis: An Approach to the Sociology of Agriculture', in Harry K. Schwarzweller (ed.), *Research in Rural Sociology and Development*, Greenwich, CT: JAI Press.
- Friedland, William (1994), 'The Global Fresh Fruit and Vegetable System: An Industrial Organization Analysis', in Philip McMichael (ed.), *The Global Restructuring of Agro-Food Systems*, London: Cornell University Press.
- Friedland, William (2001), 'Reprise on Commodity systems Methodology', *International Journal of Sociology of Agriculture and Food*, 9(1): 82-103.
- Friedland, William (2005), 'Commodity systems: forward to comparative analysis', in Niels Fold and Bill Pritchard (eds.), *Cross-continental Food Chains*, London: Routledge.
- Friedmann, Harriet (1992), 'Distance and Durability: Shaky Foundations of the World Food Economy', *Third World Quarterly*, 13(2): 371–83
- Friedmann, Harriet (1994), 'Distance and Durability: Shaky Foundations of the World Food Economy', in Philip McMichael (ed.), *The Global Restructuring of Agro-Food Systems*, London: Cornell University Press.
- Friedmann, Harriet (2008), Book Review: *The Global Food Economy*, by Tony Weis *Journal of Agrarian Change*, 8(4): 618–623.
- Friedmann, Harriet and Philip McMichael (1989), 'Agriculture and the States System: The rise and decline of national agricultures, 1970 to the present', *Sociologia Ruralis*, 29(2): 93-117.
- Fröbel, Folker, Jürgen Heinrichs and Otto Kreye (1978), 'The new international division of labour', *Social Sciences Information*, 71(1): 123-142.
- Frozen Food Europe* (2006), 'EU Heinz completes sale of seafood business', <http://www.frozenfoodeurope.com/viewNews.do?no=133>
- Gallick, Edward C. (1984), *Exclusive Dealing and Vertical Integration: The Efficiency of Contracts in the Tuna Industry*, Bureau of Economics Staff Report to the Federal Trade Commission, Washington DC: Federal Trade Commission.

- Garza-Gil, Dolores, Carlos Iglesias-Malvido, Juan C. Surís-Regueiro and Manuel M. Varela-Lafuente (1996), 'The Spanish case regarding fishing regulation', *Marine Policy*, 20(3): 249-259
- Gasiorek, Michael and L. Alan Winters (2004) 'What Role for the EPAs in the Caribbean?', *World Economy*, 27(9): 1335-1362
- Gasper, Philippe (2000), 'Satellite altimetry: A new tool to help tuna fishing', in S. Subasinghe and Sudari Pawiro (eds.), *Tuna 2000 Bangkok: Papers of the 6<sup>th</sup> World Tuna Trade Conference, 25-27 May, 2000, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- GATT (1979), 'Differential and More Favourable Treatment, Reciprocity and Fuller Participation of Developing Countries', Decision of 28 November 1979 (L/4903).
- Gaulier, Guillaume, Françoise Lemoine and Deniz Unal-Kesenci (2007), 'China's Integration in East Asia: Production Sharing, FDI & High-Tech Trade', *Economic Change*, 40(1-2): 27-63
- Geldart, C. and P. Lyon (1980), 'The Group of 77: A Perspective View', *International Affairs*, 57(1): 79-101.
- Gellert, Paul K. (2003), 'Renegotiating a Timber Commodity Chain: Lessons from Indonesia on the Political Construction of Global Commodity Chains', *Sociological Forum*, 18(1): 53-84
- Gereffi, Gary (1994), 'The Organization of Buyer-Driven Global Commodity Chains: How U.S. Retailers Shape Overseas Production Networks', in Gary Gereffi and Miguel Korzeniewicz (eds.), *Commodity Chains and Global Capitalism*, Westport, CT: Praeger.
- Gereffi, Gary (1995), 'Global Production Systems and Third World Development', in B. Stallings (ed.), *Global Change, Regional Response: The New International Context of Development*, Cambridge: Cambridge University Press.
- Gereffi, Gary (1999), 'International Trade and Industrial Up-Grading in the Apparel Commodity Chain', *Journal of International Economics*, 48(1): 37-70.
- Gereffi, Gary (2001a), 'Beyond the Producer-driven/Buyer-driven Dichotomy: The Evolution of Global Value Chains in the Internet Era', *IDS Bulletin – The Value of Value Chains: Spreading the Gains from Globalisation*, 32(3): 30-40.
- Gereffi, Gary (2001b), 'Shifting Governance Structures in Global Commodity Chains, With Special Reference to the Internet', *American Behavioral Scientist*, 44(10): 1616-1637
- Gereffi, Gary, John Humphrey, Raphael Kaplinsky and Timothy Sturgeon (2001), 'Introduction: Globalisation, Value Chains and Development', *IDS Bulletin – The Value of Value Chains: Spreading the Gains from Globalisation*, 32(3): 1-8.
- Gereffi, Gary, John Humphrey and Timothy Sturgeon (2005), 'The governance of global value chains', *Review of International Political Economy*, 12(1): 78-104.
- Gereffi, Gary and Miguel Korzeniewicz (eds.) (1994), *Commodity Chains and Global Capitalism*, Westport, CT: Praeger.
- Gereffi, Gary, Miguel Korzeniewicz and Roberto P. Korzeniewicz (1994), 'Introduction: Global Commodity Chains', in Gary Gereffi and Miguel Korzeniewicz (eds.), *Commodity Chains and Global Capitalism*, Westport, CT: Praeger.
- Gertel, Jörg (2005), 'Inscribed bodies within commodity chains: global wheat and local insecurity', in Niels Fold and Bill Pritchard (eds.), *Cross-continental Food Chains*, London: Routledge.
- Gibb, Richard (2000), 'Post-Lomé: The European Union and the South', *Third World Quarterly*, 21(3): 457-481
- Gibbon, Peter (1997), 'Of Saviours and Punks: The political economy of the Nile perch marketing chain in Tanzania', *CDR Working Paper 97.3* (June), Copenhagen: CDR.
- Gibbon, Peter (2000), "'Back to the Basics" through Delocalisation: The Mauritian Garment Industry at the End of the Twentieth Century', *CDR Working Paper 00.7* (October), Copenhagen: CDR.
- Gibbon, Peter (2001a), 'Upgrading Primary Production: A Global Commodity Chain Approach', *World Development*, 29(2): 345-363.
- Gibbon, Peter (2001b), 'At the Cutting Edge: UK Clothing Retailers and Global Sourcing', *CDR Working Paper 01.4* (August), Copenhagen: CDR.

- Gibbon, P. (2002), 'Present-day Capitalism, the New International Trade Regime & Africa', *Review of African Political Economy*, 29(91): 95-112
- Gibbon, Peter (2003), 'Value-chain Governance, Public Regulation and Entry Barriers in the Global Fresh Fruit and Vegetable Chain into the EU', *Development Policy Review*, 21(5-6): 615-625
- Gibbon, Peter (2008), 'Governance, Entry Barriers, Upgrading: A Re-Interpretation of Some GVC Concepts from the Experience of African Clothing Exports', *Competition and Change*, 12(1): 29-48.
- Gibbon, Peter and Stefano Ponte (2005), *Trading Down: Africa, Value Chains, and the Global Economy*, Philadelphia: Temple University Press
- Gibbon, Peter, Jennifer Bair and Stefano Ponte (2008), 'Governing global value chains: an introduction', *Economy and Society*, 37(3): 315-338
- Gill, Stephen (1999), 'The constitution of global capitalism', Paper presented to the British International Studies Association Conference – Manchester, December 1999
- Gillett, Robert (2005), 'Global Study of Non-Industrial Tuna Fisheries', in William H. Bayliff, Juan Ignacio de Leiva Moreno, and Jacek Majkowski (eds.), Second Meeting of the Technical Advisory Committee of the FAO Project 'Management of Tuna Fishing Capacity: Conservation and Socio-economics'. Madrid, Spain, 15–18 March 2004. *FAO Fisheries Proceedings*. No. 2. Rome: FAO.
- Gillett, Robert, and Christopher Lightfoot (2001), *The Contribution of Fisheries to the Economies of Pacific Island Countries*. Manila: Asian Development Bank.
- Gillett, Robert, Mike A. McCoy and David G. Itano (2002), 'Status of the United States Western Pacific Tuna Purse Seine Fleet and Factors Affecting its Future', SOEST/ University of Hawai'i and JIMAR.
- Gillet, Robert, Mike McCoy, Len Rodwell and Josie Tamate (2001), *Tuna: A Key Economic Resource in the Pacific Islands*, Manila: Asian Development Bank.
- Gillett, R. and G. van Santen (2008), *Optimizing Fisheries Benefits in the Pacific Islands: Major Issues and Constraints*, Washington DC: World Bank
- Giuliani, Elisa, Carlo Pietrobelli and Roberta Rabelotti (2005), 'Upgrading in Global Value Chains: Lessons from Latin American Clusters', *World Development*, 33(4): 549-573.
- Globefish (2006), *Tuna Commodity Update*, Rome: FAO.
- Globefish (August 2007), 'Tuna Market Report - US - August 2007'. Rome: FAO
- Globefish (2010), *Tuna Commodity Update*, Rome: FAO.
- Glynn, Andrew (2006), *Capitalism Unleashed: Finance, Globalization, and Welfare*, Oxford: Oxford University Press.
- Golding, Wayne (2008), 'Experiences of Selected EPA Signatories and Non-Signatories: Experience of the Papua New Guinea (PNG) Business Community'. Presentation to Commonwealth Secretariat Meeting, 7-8 April 2008, Cape Town, South Africa.
- Golub, Stephen and Ahmadou Aly Mbaye (2002), 'Obstacles and Opportunities for Senegal's International Competitiveness: Case Studies of the Peanut Oil, Fishing and Textile Industries', *Africa Region Working Paper Series No. 37*, Washington DC: World Bank.
- Gomez-Sanchez, Guillermo (2004), 'Market opportunities for sustainable tuna and tuna products', in S. Subasinghe, Sudari Pawiro and Shirlene Maria Anthonysamy (eds.), *Tuna 2004 Bangkok: 8<sup>th</sup> INFOFISH World Tuna Trade Conference and Exhibition, 3-5 June, 2004., Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Gordon, H. Scott. (1954), 'The Economic Theory of a Common Property Resource: The Fishery', *Journal of Political Economy*, 62(2):124-42.
- Gorez, Béatrice (2005), 'Policy Study: EU-ACP Fisheries Agreements', Programme of Advisory Support Services for Rural Livelihoods Department for International Development (DfID), AG0261/01
- Gorez, Béatrice (2007). 'Proposal by the European Commission for measures to combat Illegal, Unreported and Unregulated (IUU) fishing: CFFA Preliminary Comments', Coalition for Fair Fisheries Arrangements, 17 October 2007



- Gorez, Béatrice and Brian O’Riordan (2003), ‘The future of European-Union-ACP fisheries relations’, in Roman Grynberg (ed.), *Fisheries Issues in WTO and ACP-EU Trade Negotiations*, London: Commonwealth Secretariat
- Goss, Jasper, David Burch and Roy E. Rickson (2000), ‘Agri-Food Restructuring and Third World Transnationals: Thailand, the CP Group and the Global Shrimp Industry’, *World Development*, 28(3): 513-530.
- Goujon, M. and Y. Riva (2009), ‘Tropical tuna fishing and sustainability: challenges and perspectives for the EU operators’. Paper presented to the 2<sup>nd</sup> European Tuna Conference, Brussels 27 April 2009
- Goulding, Ian (2008), *Technical assistance to the Government of the Seychelles on legislation and procedures related to the inspection of and certification of fishery products for export*, ACP Sanifish/Megapesca
- Greboval, D.F. (1987), ‘Major Economic Considerations for the Preparation and Negotiation of Fisheries Joint Ventures (with special reference to African Fisheries)’. Report prepared under the Regional Project for the Development & Management of Fisheries in the Southwest Indian Ocean, SWIOP/WP/40,
- Greenaway, D. and C. Milner (1996). *The Uruguay Round and Developing Countries: An Assessment*. London: Commonwealth Secretariat
- Greenfield, Gerard (2004), ‘Bandung Redux: Imperialism and Anti-Globalization Nationalisms in Southeast Asia’, in Leo Panitch and Colin Leys (eds.), *Socialist Register 2004: The New Imperial Challenge*, London: Merlin Press.
- Greenpeace (2007), *Fishy Business: Stolen Pacific Tuna in the European Market*, Amsterdam: Greenpeace International
- Greenpeace (2010), *España: The destructive practices of Spain’s fishing armada*, Amsterdam: Greenpeace International
- Grilli, Enzo R. (1993), *The European Community and the Developing Countries*, Cambridge: Cambridge University Press.
- Grynberg, Roman and Natallie Rochester (2005), ‘The Emerging Architecture of a World Trade Organization Fisheries Subsidies Agreement and the Interests of Developing Coastal States’, *Journal of World Trade*, 39(3): 503-526.
- Grynberg, Roman and Martin Tsamenyi (1998), ‘Fisheries Subsidies, the WTO and the Pacific Island Tuna Fisheries’, *Journal of World Trade*, 32(6): 127-145.
- Guillotreau, Patrice and Frédéric Le Roy (2000), ‘Raising Rivals’ Costs in the Tuna Industry’, University of Nantes, Department of Economics and Management, France. [Online] Available from: <http://oregonstate.edu/dept/IIFET/2000/papers/guillotreau.pdf>
- Guillotreau, Patrice and Frédéric Le Roy (2001), ‘Raising Rivals’ Costs in the Tuna Industry’, in, *Microbehavior and Macroresults: Proceedings of the Tenth Biennial Conference of the International Institute of Fisheries Economics and Trade*, July 10-14, 2000, Corvallis, Oregon, USA. Edited by Richard S. Johnston and compiled by Ann L. Shriver. International Institute of Fisheries Economics and Trade (IIFET), Corvallis, OR, 2001.
- Guillotreau, Patrice, Rémi Mongruel and Ramon Jiménez-Toribio (2008), ‘Market Power and the European Tuna Oligopsony: Implications for Fisheries and Trade’, in, *Proceedings of the Fourteenth Biennial Conference of the International Institute of Fisheries Economics & Trade*, July 22-25, 2008, Nha Trang, Vietnam: *Achieving a Sustainable Future: Managing Aquaculture, Fishing, Trade and Development*. Compiled by Ann L. Shriver. International Institute of Fisheries Economics & Trade, Corvallis, Oregon, USA, 2008.
- Gullett, W. (2004), ‘Taiwan's engagement in the developing international legal regime for fishing: implications for Taiwanese officials and fishers’ *Taiwan Ocean Law Review*. 3(2): 163-216.
- Guthman, Julie (2004), ‘The ‘organic commodity’ and other anomalies in the politics of consumption’, in Alex Hughes and Suzanne Reimer (eds.), *Geographies of Commodity Chains*, London: Routledge.
- H. J. Heinz Company (2005), Form 10-K: Report to the United States Securities and Exchange Commission for the Fiscal Year Ended April 27, 2005. [Online] Available from: [http://www.heinz.com/2005annualreport/pdfs/heinz\\_05ar\\_10K.pdf](http://www.heinz.com/2005annualreport/pdfs/heinz_05ar_10K.pdf)
- Habour Act (2002), S.I. 20 of 2002, Harbour Act, *Supplement to Official Gazette* (Seychelles), 13 May 2002.

- Hache J-D. (1998), 'Towards a Political Approach to the Island Question', in Baldacchino G, Greenwood R. (eds.), *Competing Strategies of Socio-Economic Development for Small Islands: Volume 2: Proceedings - An Island Living: Patterns of Autonomy and Dependence in the Small Islands of the North Atlantic*, Charlottetown, PEI: Institute of Island Studies
- Hallier, Jean-Pierre and Daniel Gaertner (2008), 'Drifting fish aggregation devices could act as an ecological trap for tropical tuna species', *Marine Ecology Progress Series*, 353: 255-264
- Hamby, Joe (2009), 'The Future of Tuna – An Indication Based on Recent Investments', presentation to the European Tuna Conference, Brussels, 27 April 2009.
- Hamilton, Amanda, Antony Lewis, Mike A. McCoy, Elizabeth Havice and Liam Campling (2011), *Impact of industry and market drivers on the global tuna supply chain*, Honiara: Pacific Islands Forum Fisheries Agency.
- Hampton, John and Peter Williams, (2003), *The Western and Central Pacific Tuna Fishery: 2001 Overview and Status of Stocks*, Tuna Fisheries Assessment Report No. 4, Oceanic Fisheries Programme: Secretariat of the Pacific Community
- Hanich, Quentin and Martin Tsamenyi (2009), 'Managing fisheries and corruption in the Pacific islands region', *Marine Policy*, 33(2):386–92.
- Hanich, Quentin, Feleti Teo and Martin Tsamenyi (2010), 'A collective approach to Pacific islands fisheries management: Moving beyond regional agreements', *Marine Policy*, 34(1): 85-91
- Hannesson, Rögnvaldur (2008), 'The exclusive economic zone and economic development in the Pacific island countries', *Marine Policy*, 32(6): 886–897
- Harada, Y. (2002), 'Tuna Labelling: Tuning tuna', *Samudra*, (November) pp. 32-4
- Haralambides, Hercules E., Pierre Cariou and Marco Benacchio (2002), 'Costs, Benefits and Pricing of Dedicated Container Terminals', *International Journal of Maritime Economics*, 4(1): 21-34.
- Hardin, Garrett (1968), 'The Tragedy of the Commons', *Science*, 162: 1243-1248.
- Harris, Aubrey (1981), 'Longlining in Seychelles Exclusive Economic Zone 1980-81', *Fisheries Bulletin No. 17*, Fisheries Division, Seychelles Government
- Harris, Aubrey (1988), 'Fisheries', in R.T. Appleyard and R. N. Ghosh (eds.), *Indian Ocean Islands Development*, Canberra: Australian National University
- Hatcher, Aaron (2000), 'Subsidies for European fishing fleets: the European Community's structural policy for fisheries 1971-1999', *Marine Policy*, 24 (2) 129-140
- Havice, Elizabeth (2007), 'The State of Play of Access Agreements with Distant Water Fishing Partners: Implications and Options for Pacific Island Countries', Honiara, Forum Fisheries Agency: 52.
- Havice, Elizabeth (2009), *Shifting tides: the political economy of tuna extraction in the Western and Central Pacific Ocean* [doctoral dissertation] Berkeley: University of California-Berkeley.
- Havice, Elizabeth (2010), 'The structure of tuna access agreements in the Western and Central Pacific Ocean: Lessons for Vessel Day Scheme planning', *Marine Policy*, 34 (5): 979-87.
- Havice, Elizabeth and Liam Campling (2009), 'The continuing impact of piracy on Western Indian Ocean tuna fisheries', *FFA Fisheries Trade News*, 2(6) (June). Available at: [http://www.ffa.int/trade\\_news](http://www.ffa.int/trade_news)
- Havice, Elizabeth and Liam Campling (2010), 'Shifting Tides in the Western Central Pacific Ocean Tuna Fishery: The Political Economy of Regulation and Industry Responses', *Global Environmental Politics*, 9(1): 89-114.
- Haward, Marcus and Anthony Bergin (2000), 'Taiwan's distant water tuna fisheries', *Marine Policy*, 24(1): 33-43.
- Haward, Marcus and Anthony Bergin (2001), 'The political economy of Japanese distant water tuna fisheries', *Marine Policy*, 25(2): 91-101.
- Hayek, Friedrich A. (1945), 'The Use of Knowledge in Society', *American Economic Review*, XXXV(4): 519–30.
- Hayes, David (2005), 'What next for the future?', *CanTech* (December). Available at <<http://www.cantechonline.com>>

- Hedlund, Steven (2006), 'Top 10 Suppliers Represent \$7 billion in 2005 Sales', *Seafood Business*, May 2006. Available at: <http://seafoodbusiness.texterity.com/seafoodbusiness/200605/>
- Henderson J, P. Dicken, M. Hess, N. Coe, H.W-C Yeung (2002), 'Global production networks and the analysis of economic development', *Review of International Political Economy*, 9(3): 436-464.
- Hennart, Jean-François (2001), 'Theories of the Multinational Enterprise', in Alan Rugman and Tom L. Brewer (eds.), *Oxford Handbook of International Business*. London: Oxford University Press.
- Henson, S., A-M. Brouder and W. Mitullah (2000), 'Food safety requirements and food exports from developing countries: The case of fish exports from Kenya to the European Union', *American Journal of Agricultural Economics*, 82(5): 1159-1169.
- Henson, Spencer and Steven Jaffee (2006), 'Food Safety Standards and Trade: Enhancing Competitiveness and Avoiding Exclusion of Developing Countries', *The European Journal of Development Research*, 18(4): 593-621
- Heron, Tony (2004), 'Export Processing Zones and Policy Competition for Foreign Direct Investment: The Caribbean 'Offshore' Development Model', in Graham Harrison (ed.), *Global Encounters International Political Economy, Development and Globalization*, Basingstoke: Palgrave Macmillan.
- Herrick Jr, Samuel F., Byron Rader and Dale Squires (1997), 'Access fees and economic benefits in the Western Pacific United States purse seine tuna fishery', *Marine Policy*, 21(1): 83-96
- Hess, Martin and Henry Wai-Chung Yeung 2006, 'Guest Editorial: Whither global production networks in economic geography? Past, present, and future', *Environment and Planning A*, 38(7): 1193-1204.
- Hettne, Bjorn (1997), 'The Double Movement: global market versus regionalism', in Robert W. Cox (ed.), *The New Realism: Perspectives on Multilateralism and World Order*, London: MacMillan.
- Hill, Chris and M. Gregory Hammann (1998), 'Tuna location maps from space: A status report from Orbital Imaging Corporation', in K. P. P. Nambiar and Sudari Pawiro (eds.), *Tuna 97 Bangkok: Papers of the 5<sup>th</sup> World Tuna Trade Conference, 25-27 October, 1997, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Hillborn, Ray and John Sibert (1986), 'Is international management of tuna necessary?', *SPC Fisheries Newsletter Information Bulletin*, 39: 31-40. Available at <http://wwwx.spc.int/coastfish/sections/reef/Library/index.html> (last accessed 17 July 2010)
- Hinton, Michael G., (2007), 'Global Tuna Resources: Stock Status, Fishing Capacity, Management, Sustainability and Prospects', in S. Subasinghe, Susari Pawiro and Shirlene Maria Anthonyamy (eds.), *Proceedings of the Tuna 2006 Bangkok 9<sup>th</sup> World Tuna Trade conference, 25-27 May 2006*, INFOFISH.
- Hobden, Stephen and Richard Wyn Jones 2001, 'Marxist Theories of International Relations', in John Baylis and Steve Smith (eds). *The Globalization of World Politics: An Introduction to International Relations*, Oxford: Oxford University Press.
- Hoby, Hermione (2008), 'Raw tuna batters cod', *The Observer*, 3 August.
- Hoekman, Bernard (1993), 'Rules of Origin for Goods and Services: Conceptual Issues and Economic Considerations', *Journal of World Trade*, 127(4): 81-99
- Hollick, A. L. (1981), *US Foreign Policy and the Law of the Sea*, Princeton: Princeton University Press
- Holmquist, Richard (2002), 'Recent advances in satellite oceanography', in S. Subasinghe and Sudari Pawiro (eds.), *Global Tuna Industry Situation and Outlook: Resources, Production & Marketing Trends and Technological Issues*, Kuala Lumpur: INFOFISH.
- Honda, M. (2001), Status report of the World Tuna Purse Seine Organization (WTPO). Forum Fisheries Agency, Honiara, Solomon Islands (FT-7), paper presented at the FOURTEENTH MEETING OF THE [SPC] STANDING COMMITTEE ON TUNA AND BILLFISH, Noumea, New Caledonia, 9th-16 August 2001. Available at: <http://www.spc.int> (last accessed 26 July 2010)
- Hong, Seong-gul, Jeong-gon Ryu and Sun-pyo Kim (2000), 'Adjustment of fishing fleet capacity in Korea for sustainable resource exploitation: Programs and achievements', in FAO, 'Report of the KMI/ Africa/ FAO Regional Workshop on the Effects of Globalization and Deregulation on Marine Capture Fisheries in Asia and the Pacific, Pusan, Republic of Korea, 11-15 October 1999', *FAO Fisheries Report No. 624*, Rome: FAO.

- Hopkins, Terence K. and Immanuel Wallerstein (1986), 'Commodity Chains in the World Economy Prior to 1800', *Review* (Fernand Braudel Center), 10:1, pp.157-70.
- Hopkins, Terence K. and Immanuel Wallerstein (1994a), 'Commodity Chains: Construct and Research', in Gary Gereffi and Miguel Korzeniewicz (eds.), *Commodity Chains and Global Capitalism*, Westport, CT: Praeger.
- Hopkins, Terence K. and Immanuel Wallerstein (1994b), 'Conclusions About Commodity Chains', in Gary Gereffi and Miguel Korzeniewicz (eds.), *Commodity Chains and Global Capitalism*, Westport, CT: Praeger.
- Houbert, Jean (2009), 'Mauritius: A Seafood Hub?', in Dennis Rumley, Sanjay Chaturverdi and Vijay Sakhuja (eds.), *Fisheries Exploitation in the Indian Ocean: Threats and Opportunities*, Singapore: IORG and ISEAS
- Hu, Alfred Nien-Tsu (ed) (2006), [Special issue] 'The Concept of Fishing Entities in International Law: A Decade of Practice', *Ocean Development and International Law*, 37(2).
- Hudgins, Linda Lucas, and Linda Fernandez (1987), 'A Summary of International Business Operations in the Global Tuna Market', in David Doulman (ed.), *The Development of the Tuna Industry in the Pacific Islands Region: An Analysis of Options*, Honolulu: East-West Center
- Hughes, Alex (1996), 'Retail restructuring and the strategic significance of food retailers' own-labels: a UK-USA comparison', *Environment and Planning A*, 28(12):2201–26.
- Hughes, Alex (2004), 'Accounting for ethical trade: global commodity networks, virtualism and the audit economy', in Alex Hughes and Suzanne Reimer (eds.), *Geographies of Commodity Chains*, London: Routledge.
- Hughes, Alex (2005), 'Responsible retailers? Ethical trade and the strategic re-regulation of cross-continental food supply chains', in Niels Fold and Bill Pritchard (eds.) *Cross-continental Food Chains*, London: Routledge.
- Hughes, Alex and Leslie Reimer (2005), 'Introduction', in Alex Hughes and Suzanne Reimer (eds.), *Geographies of Commodity Chains*, London: Routledge.
- Humphery, John and Hubert Schmitz (2001), 'Governance in Global Value Chains', *IDS Bulletin – The Value of Value Chains: Spreading the Gains from Globalisation*, 32(3): 19-29.
- Humphrey, John (2007), 'The supermarket revolution in developing countries: tidal wave or tough competitive struggle?', *Journal of Economic Geography*, 7(4): 433–450
- Hunt, Colin (2003), 'Economic globalisation impacts on Pacific marine resources', *Marine Policy*, 27(1): 79-85
- Hurt, Stephen R. (2003), 'Co-operation and coercion? The Cotonou Agreement between the European Union and ACP States and the end of the Lomé Convention', *Third World Quarterly*, 24(1): 161-176
- Hymer, Stephen (1970), 'The Efficiency (Contradictions) of Multinational Corporations', *The American Economic Review*, 60(2): 441-448.
- Hymer, Stephen (1972), 'The Internationalization of Capital', *Journal of Economic Issues*, 6(1): 91-111.
- Hymer, Stephen (1975 [1972]), 'The Multinational Corporation and the Law of Uneven Development', in Hugo Radice (ed.), *International Firms and Modern Imperialism: Selected Readings*, Hamondsworth: Penguin.
- Hymer, Stephen (1979a [1971]), 'The multinational corporation and the international division of labour', in Robert B. Cohen, Nadine Felton, Morley Nkosi and Jaap van Liere (eds.), *The multinational corporation: A radical approach, Papers by Stephen Herbert Hymer*, Cambridge: Cambridge University Press.
- Hymer, Stephen (1979b [1972]), 'The United States multinational corporations and Japanese competition in the Pacific', in Robert B. Cohen, Nadine Felton, Morley Nkosi and Jaap van Liere (eds.), *The multinational corporation: A radical approach, Papers by Stephen Herbert Hymer*, Cambridge: Cambridge University Press.
- Hymer, Stephen (1979c [1975]), 'International politics and international economics: a radical approach', in Robert B. Cohen, Nadine Felton, Morley Nkosi and Jaap van Liere (eds.), *The multinational corporation: A radical approach, Papers by Stephen Herbert Hymer*, Cambridge: Cambridge University Press.

- Hymer, Stephen (1981 [1971]), 'Robinson Crusoe and the secret of primitive accumulation', in Edward J. Nell (ed.), *Growth, Profits and Property: Essays in the Revival of Political Economy*, Cambridge: Cambridge University Press.
- IATTC (2001), *Symposium on World Tuna Fisheries*, La Jolla, California: Inter-American Tropical Tuna Commission
- IATTC (Inter-American Tropical Tuna Commission), <[www.iattc.org](http://www.iattc.org)> (last accessed 10 June 2010).
- ICCAT (International Commission for the Conservation of Atlantic Tunas), <<http://www.iccat.es>> (last accessed 10 June 2010).
- Id Mer (2007), *Potentialités et Modalités de Valorisation des Produits de la Mer aux Seychelles*. Rapport Final, avril. Report for Seychelles Fishing Authority.
- IDDDRA UK Ltd. (2004) *Analysis of the impact of opening up the EU import market for canned tuna on ACP countries*, study commissioned by the Commonwealth Secretariat, London (full report).
- Idesk (Investment Desk of the Ministry of Finance, Government of Seychelles) (2004), <[www.idesk.sc](http://www.idesk.sc)> Last accessed 15 March 2004.
- Ietto-Gillies, Grazia (2005), *Transnational Corporations and International Production: Concepts, Theories and Effects*, Cheltenham: Edward Elgar
- Ietto-Gillies, Grazia (2007), 'Theories of international production: a critical perspective', *Critical Perspectives on International Business*, 3(3): 196-210.
- Ifremer (1999), 'Evaluation of the Fisheries Agreements Concluded by the European Community: Summary Report', Community Contract No 97/S 240-152919 of 10 December 1997
- Inama, Stefano (1995), 'A Comparative Analysis of the Generalized System of Preferences and Non-Preferential Rules of Origin in the Light of the Uruguay Round Agreement: Is it a Possible Avenue for Harmonization or Further Differentiation', *Journal of World Trade*, 29(1): 76-111.
- Indian Ocean Programme (1975), 'Some developments in the tuna fisheries in the Indian Ocean', *Technical Report of the Indian Ocean Programme No. 6*, IOP/TECH/75/6, Rome: FAO and UNDP.
- IntraFish 11 September 2009, 'John West back in the black', *Intrafish Media*.
- IntraFish 17 June 2010, 'Albacora hits back at U.S.', *Intrafish Media*.
- IntraFish 6 July 2010, 'Spanish boats nabbed for not reporting catch', *Intrafish Media*.
- IntraFish 9 July 2010, 'U.S. fines Spanish tuna firm \$5M', *Intrafish Media*.
- IntraFish 17 December 2010, 'Third Sapmer seiner ready', *Intrafish Media*.
- IntraFish 14 February 2011, 'Sapmer reaps tuna benefits with 45% growth', *Intrafish Media*.
- Iossa, Mariano, Papa Ndary Niang and Alexandre Polack (2008), *Hands off my fish! (SelFISH Europe): How the Economic Partnership Agreements will further contribute to the decline of fish stocks and exacerbate the food crisis in Senegal*, Johannesburg: Action Aid South Africa.
- IOT (2007), 'Competitive Benchmark', PowerPoint presentation, 8 May 2007.
- IOTC (2002), *Report of the Sixth Session of the Indian Ocean Tuna Commission Victoria, Seychelles, 10-14 December 2001*, Victoria: IOTC.
- IOTC (2008). Draft Report (including WPTT review comments v20nov2008). Report of the Tenth Session of the IOTC Working Party on Tropical Tunas. Bangkok, 23 – 31 October 2008
- IOTC (2009), *Report of the Twelfth Session of the Scientific Committee*. Victoria, Seychelles, 30 November-4 December, 2009. IOTC-2009-SC-R[E].
- IOTC (Indian Ocean Tuna Commission), <[www.iotc.org](http://www.iotc.org)> (last accessed 10 February 2010)
- Iverson, Robert T. B. (1987a) 'U.S. Tuna Processors', in David Douman (ed.), *The Development of the Tuna Industry in the Pacific Islands Region: An Analysis of Options*, Honolulu: East-West Center
- Iverson, Robert T. S. (1987b), 'US Tuna Processors', Mimeo, Pacific Islands Development Program, Honolulu, East-West Center, pp. 1-56.

- Jaffee, Steven (1992), 'Exporting High-Value Food Commodities: Success Stories from Developing Countries', *World Bank Discussion Papers*, 198, Washington DC: World Bank.
- Jenkins, Rhys 1984, 'Divisions over the international division of labour', *Capital and Class*, 8(1): 29-57.
- Jenkins, Rhys 1987, *Transnational Corporations and Uneven Development: The Internationalization of Capital and the Third World*, London: Routledge
- Jennings, Simon, Michael J. Kaiser and John D. Reynolds (2001), *Marine Fisheries Ecology*, Oxford: Blackwell.
- Jentoft, Svein, 2007. 'In the Power of Power: The Understated Aspect of Fisheries and Coastal Management'. *Human Organization*, 66 (4): 426-437.
- Jeon, Yongil, Christopher Reid and Dale Squires (2007), 'Is There a Global Market for Tunas? Policy Implications for Tropical Tuna Fisheries', *Ocean Development & International Law*, 39(1): 32-50
- Jeune Afrique* (2009), 'Thunnus se relance', 27 January 2009. Available at: <http://www.JeuneAfrique.com>
- JICA (2001), 'Tuna: the Political Fish Japanese Love'. *JICA Network / No Escape*, July. [http://www.jica.go.jp/english/publication/network/2001/net\\_vol12/food01.html](http://www.jica.go.jp/english/publication/network/2001/net_vol12/food01.html) [accessed on 9 August 2003]
- Jiménez-Toribio, Ramòn, Patrice Guillotreau and Rémi Mongruel (2010), 'Global integration of European tuna markets', *Progress in Oceanography*, 86(1-2): 166-175
- John West (2010), Company website, 'Our History'. Available at: <http://www.john-west.co.uk/about-john-west/history/> (last accessed 24 August 2010)
- Jones, Geoffrey (2005), *Multinationals and Global Capitalism: From the Nineteenth to the Twenty First Century*, Oxford: Oxford University Press.
- Joseph, James (1977), 'The Management of Highly Migratory Species: Some Important Concepts', *Marine Policy*, 1(4): 275-288.
- Joseph, James (1996), 'Tuna fisheries towards the 21<sup>st</sup> Century – An overview', in K. P. P. Nambiar and N. Krishnasamy (eds.), *Tuna 95 Manila. Papers of the 4<sup>th</sup> World Tuna Trade Conference, 25-27 October 1995, Manila, Philippines*, Kuala Lumpur: INFOFISH
- Joseph, James (2000), 'World tuna production: past, present and future', in S. Subasinghe and Sudari Pawiro eds., *Tuna 2000 Bangkok: Papers of the 6<sup>th</sup> World Tuna Trade Conference, 25-27 May, 2000, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Joseph, James (2003), 'Managing Fishing Capacity of the World Tuna Fleet', *FAO Fisheries Circular*. No. 982, Rome: FAO. Available at: <http://www.fao.org/> (last accessed 3 March 2005)
- Joseph, James (2004), 'The world tuna fishery: Status of the stocks, management issues and outlook for the future'. In: Subasinghe, S., Pawiro, S. and Anthonysamy, S. M. (eds.), *Tuna 2004 Bangkok: 8th INFOFISH World Tuna Trade Conference and Exhibition*, Bangkok: INFOFISH.
- Joseph, James, Dale Squires, William Bayliff and Theodore Groves (2007), 'Requirements and alternatives for the limitation of fishing capacity in tuna purse-seine fleets', in W.H. Bayliff and J. Majkowski (eds.), *Methodological Workshop on the Management of Tuna Fishing Capacity: Stock Status, Data Envelopment Analysis, Industry Surveys and Management Options*. La Jolla, California, United States of America, 8-12 May 2006, *FAO Fisheries Proceedings*. No. 8. Rome: FAO. Available at: <http://www.fao.org> (last accessed 26 July 2010)
- Josupeit, Helga (1993), 'Canned Tuna Markets in Europe', *FAO/GLOBEFISH Research Programme, Vol. 15*, Rome: FAO.
- Josupeit, Helga (1998), 'An overview on tuna markets', in K. P. P. Nambiar and Sudari Pawiro eds., *Tuna 97 Bangkok: Papers of the 5<sup>th</sup> World Tuna Trade Conference, 25-27 October, 1997, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Josupeit, Helga (2000), 'An overview of the global tuna trade', in S. Subasinghe and Sudari Pawiro eds., *Tuna 2000 Bangkok: Papers of the 6<sup>th</sup> World Tuna Trade Conference, 25-27 May, 2000, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.

- Josupeit, Helga (2002), 'An overview on world tuna trade', in S. Subasinghe and Sudari Pawiro (eds.), *Global Tuna Industry Situation and Outlook: Resources, Production & Marketing Trends and Technological Issues*, Kuala Lumpur: INFOFISH.
- Josupeit, Helga (2004), 'International fish trade regulatory framework', in S. Subasinghe, Sudari Pawiro and Shirlene Maria Anthonysamy eds., *Tuna 2004 Bangkok: 8<sup>th</sup> INFOFISH World Tuna Trade Conference and Exhibition, 3-5 June, 2004, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Josupeit, Helga (2006), *Tuna Market Report – EU June 2006*, GLOBEFISH (FAO). [Online] Available from: <http://www.eurofish.dk/indexSub.php?id=3260>
- Josupeit, Helga (2009a), 'Tuna – June 2009, EU', *Globefish*. Available at: <http://www.globefish.org>
- Josupeit, Helga (2009b), 'Is There Still Volume Growth in the European Tuna Market? With Special Reference to the Present Crisis', presentation to the European Tuna Conference, Brussels, 27 April 2009.
- Josupeit, Helga and Camillo Catarci (2003), *World Tuna Markets*, Fisheries Department FAO. Available at: <http://www.globefish.org> (last accessed 12 February 2004)
- Joyner, C.C. and Z. Tyler (2000), 'Marine Conservation versus International Free Trade: Reconciling Dolphins with Tuna and Sea Turtles with Shrimp', *Ocean Development & International Law*, 31(1-2):127-150
- Kaczynski, Vlad M. and David L. Fluharty (2002), 'European policies in West Africa: who benefits from fisheries agreements?', *Marine Policy*, 26(2): 75–93
- Kaplinsky, Raphael (1998), 'Globalisation, Industrialisation and Sustainable Growth: the Pursuit of the Nth Rent', *IDS Discussion Paper 365*, Brighton: IDS.
- Kaplinsky, Raphael (2000a), 'Globalisation and unequalisation: What can be learned from value chain analysis', *Journal of Development Studies*, 37(2): 118-146.
- Kaplinsky, Raphael (2000b), 'Spreading the Gains from Globalisation: what can be learned from value chain analysis?', *IDS Working Paper 110*, Brighton: IDS.
- Kaplinsky, Raphael (2005), *Globalization, Poverty and Inequality: Between a Rock and a Hard Place*, London: Polity.
- Kaplinsky, Raphael and Mike Morris (2001), *A Handbook for Value Chain Research*, Brighton: IDS.
- Kaplinsky, Raphael and Mike Morris (2008), 'Do the Asian Drivers Undermine Export-oriented Industrialization in SSA?', *World Development*, 36(2): 254–273.
- Kasprzyk, Z., A. Ralison, and S. Sweenarain (1996). Étude d'Impacts des Activités Thonières Industrielles sur l'Économie des États-Membres de la Commission de l'Océan Indien.
- Kautsky, Niels (2003), 'Resilience and sustainable development', Paper presented to Third Western Indian Ocean Marine Science Association (WIOMSA) Scientific Symposium. Advances in Marine Science in Eastern Africa: Multi trans-disciplinary Research for Improved Management of Resources, 15-18 October 2003, Rovuma Hotel, Maputo, Mozambique
- Kennelly, Steven J. and Matt K. Broadhurst (2002), 'By-catch begone: changes in the philosophy of fishing technology', *Fish and Fisheries*, 3(4): 340-355.
- Kennes, W. (2000), *Small Developing Economies and Global Markets: Competing in the Big League*, Basingstoke: MacMillan
- Keohane, Robert O. (ed.) (1986), *Neorealism and its Critics*, New York: Columbia University Press.
- Keplotrade (2007). "Rules of Origin in Fisheries: Submission from Kenya to the on-going negotiations on EU-ACP Fisheries Rules of Origin", Kenya Post Lomé Trade Negotiations Program (Keplotrade), Ministry of Trade and Industry (June)
- Key Note (2006), *Market Report Plus 2006: Canned Foods*, 15th Edition September 2006, Edited by Dominic Fern, Hampton, Middlesex: Key Note Ltd
- Key Note (2008), *Market Report Plus 2008: Canned Foods*, 16th Edition June 2008, Edited by Katie Hughes, Hampton, Middlesex: Key Note Ltd
- Key Note (2009), *Market Report Plus 2009: Canned Foods*, 17th Edition July 2009, Edited by Sophie Worth, Hampton, Middlesex: Key Note Ltd

- Kiely, Ray (1998), *Industrialization and Development: A Comparative Analysis*, London: UCL Press.
- Kiely, Ray (2006), *Empire in the Age of Globalisation: U.S. Hegemony and Neo-liberal Disorder*, London: Pluto.
- Kiely, Ray (2007), *The New Political Economy of Development: Globalization, Imperialism, Hegemony*, Basingstoke: Palgrave Macmillan.
- Kiely, Ray (2009), 'The globalization of manufacturing production: Warrenite fantasies and uneven and unequal realities', in A. Haroon Akram-Lodhi and Cristóbal Kay (eds.), *Peasants and Globalization: Political economy, rural transformation and the agrarian question*, London: Routledge.
- Kiely, Ray, (2010), *Rethinking Imperialism*, Basingstoke: Palgrave Macmillan.
- Kim, Kook Hyung and Su-Hoon Lee (1994), 'Commodity Chains and the Korean Automobile Industry', in Gary Gereffi and Miguel Korzeniewicz (eds.) 1994, *Commodity Chains and Global Capitalism*, Westport, CT: Praeger.
- King, Dennis M. (1986), 'The U.S. Tuna Market: A Pacific Island Perspective', mimeo, Pacific Islands Development Program, East-West Center, Honolulu.
- King, Dennis M. (1987a), 'Global Tuna Markets: A Pacific Island Perspective', in David Doullman (ed.), *Tuna Issues and Perspectives in the Pacific Islands Region*, Honolulu: East-West Center
- King, Dennis M. (1987b), 'The U.S. Tuna Market: A Pacific Islands Perspective', in David Doullman (ed.), *The Development of the Tuna Industry in the Pacific Islands Region: An Analysis of Options*, Honolulu: East-West Center
- Kingdom Zephyr (2010), Press Release: Kingdom Zephyr completes final closing on US \$492 million Pan-African Investment Partners II Fund, 11 February 2010
- Knutsen, Hege Merete (2000), 'Environmental practice in the commodity chain: the dyestuff and tanning industries compared', *Review of International Political Economy*, 7(2): 254-288.
- Korzeniewicz, Miguel (1994), 'Commodity Chains and Marketing Strategies: Nike and the Global Athletic Footwear Industry', in Gary Gereffi and Miguel Korzeniewicz (eds.) 1994, *Commodity Chains and Global Capitalism*, Westport, CT: Praeger.
- Korzeniewicz, Roberto and William Martin (1994), 'The Global Distribution of Commodity Chains', in Gary Gereffi and Miguel Korzeniewicz (eds.) 1994, *Commodity Chains and Global Capitalism*, Westport, CT: Praeger.
- Krampe, Paul (2000), 'Mergers and Competition in the US Tuna Industry', in S. Subasinghe and Sudari Pawiro (eds.), *Tuna 2000 Bangkok: Papers of the 6<sup>th</sup> World Tuna Trade Conference, 25-27 May, 2000, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Krampe, Paul (2006), 'Rising Fuel Prices and its Impact on the Tuna Industry', paper presented at the *INFOFISH Tuna 2006 conference, 25-27 May 2006, Bangkok, Thailand*.
- Kroepelien, T. (1981), 'Seychelles: Report on Seychelles EEZ Consultancy Project', Norway Funds-in-Transit FAO/GCP/SEY/002/NOR, Rome: FAO
- Kurlansky, Mark (1997), *Cod: A Biography of the Fish That Changed the World*, London: Vintage.
- Lablache-Carrara, G. (1989a), 'Recent Developments in the Tuna Fishery in of the Western Indian Ocean', in Michael G. Hinton (eds.), *Proceedings of the 40<sup>th</sup> Tuna Conference, May 1989*, La Jolla, CA: IATTC
- Lablache-Carrara, G. (1989b), Letter from Lablache-Carrara, Research Director at Seychelles Fishing Authority to Principal Secretary, Ministry of Administration and Manpower, dated 12 December 1989, Republic of Seychelles
- Lall, Vinod K. and Danial Khemchand (1997), *Encyclopaedia of International Law*, New Delhi: Anmol.
- Lang, Tim (2003), 'Food Industrialisation and Food Power: Implications for Food Governance', *Development Policy Review*, 21 (5-6): 555-568
- Langley, Adam, Andrew Wright, Glenn Hurry, John Hampton, Transform Aqorua and Len Rodwell (2009), 'Slow steps towards management of the world's largest tuna fishery', *Marine Policy*, 33(2): 271-279
- Lankester, Kees, Papa Samba Diouf and Shady Sané (eds.) (2002), *Fisheries Access in West Africa – Proceedings of two workshops held in Senegal and Mauritania*, WWF-WARPO, Senegal.



- Latham, R. (2001), 'Identifying the contours of transboundary political life', in T. Callaghy, R. Kassimir and R. Latham (eds.), *Intervention and Transnationalism in Africa: Global-Local Networks of Power*, Cambridge: Cambridge University Press
- Lawson, Timothy A., Ghislaine Lablache, Fernando Simeos and Ali Farah Ali (1986), 'The Western Indian Ocean Tuna Fishery from 1980 to 1985: A Summary of Data Collected by Coastal States', *Seychelles Fishing Authority Technical Report*, Victoria: SFA
- Le Heron, Richard (2005), 'Reconstituting New Zealand's agri-food chains for international competition', in Niels Fold and Bill Pritchard (eds.) *Cross-continental Food Chains*, London: Routledge.
- Le Roy, Frédéric (n.d.), 'Les strategies collectives "agglomerées": une analyse historique de l'industrie de la conserve de poissons', unpublished mimeo, Université de Montpellier.
- Le Roy, Frédéric (2008), 'The rise and fall of collective strategies: a case study', *International Journal of Entrepreneurship and Small Business*, 5(2): 127-142
- Le Roy, Frederic, Patrice Guillotreau and Saïd Yami (2008), 'Setting up an Industry with its Competitors: the Development of the French Tropical Tuna fishery', *Synergie Revista di studi e ricerche*, 26(75): 75-88.
- Lee, Kwang-Se (2006), 'Tuna industry situation and outlook in the Republic of Korea', in S. Subasinghe, Sudari Pawiro and S. M. Anthonysamy (eds.), *Proceedings of Tuna 2006: Ninth INFOFISH World Tuna Trade Conference and Exhibition 25-27 May 2006*, Kuala Lumpur: INFOFISH
- Lee, Naeyoung and Jeffrey Coon (1994), 'Automobile Commodity Chains in the NICs: A Comparison of South Korea, Mexico and Brazil', in Gary Gereffi and Miguel Korzeniewicz (eds.) 1994, *Commodity Chains and Global Capitalism*, Westport, CT: Praeger.
- Lehman Bros. (2006), 'Lehman Brothers Merchant Banking Agrees to Acquire Heinz's European Seafood Business for €425 Million', Press Release New York and London 21 February 2006. [Online] Available from: [http://www.lehman.com/press/pdf\\_2006/022106\\_heinz.pdf](http://www.lehman.com/press/pdf_2006/022106_heinz.pdf)
- Lequesne, Christian (2004), *The politics of fisheries in the European Union* (trans. Cynthia Schoch and Jayne Pilling), Manchester: Manchester University Press
- Lequesne, Christian (2005), 'Fisheries Policy: Letting the Little Ones Go?' in H. Wallace and W. Wallace (eds.) *Policy-Making in the European Union* [5<sup>th</sup> Edn], Oxford: Oxford University Press.
- Les Afriques* (2009), 'Opérations stratégiques chez Thunnus Overseas Group', No 60, 29 January – 4 February 2010. Available at: <http://www.lesafriques.com>
- Leslie, Deborah and Suzanne Reimer (1999), 'Spatializing commodity chains', *Progress in Human Geography*, 23(3): 401-420.
- Levitt-Polanyi, Kari (1982), 'A Memoir: Stephen Hymer on the Multinational Corporation', *Review* (Fernand Braudel Center), 6(2): 253-279.
- Levy, David (2008), 'Political contestation in global production networks', *Academy of Management Review*, 33(4): 943-963
- Levy, Felipe Charat (2000), 'Keynote address by conference chairman', in S. Subasinghe and Sudari Pawiro (eds.), *Tuna 2000 Bangkok: Papers of the 6<sup>th</sup> World Tuna Trade Conference, 25-27 May, 2000, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Lewis, Anthony (2005). *A Review of Current Access Arrangements in Pacific Developing Member Countries*, Indooroopilly: Asian Development Bank
- Leys, Colin (1996), *The Rise and Fall of Development Theory*, London: James Currey.
- Li, Charles Chia Pao (2000), 'Taiwan Deep Sea Tuna Boatowners and Exporters Association and the purse seine fishery, 1996-98', in S. Subasinghe and Sudari Pawiro (eds.), *Tuna 2000 Bangkok: Papers of the 6<sup>th</sup> World Tuna Trade Conference, 25-27 May, 2000, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Liewes, Evert (2010), 'Status of the Tuna Sector in the Indian Ocean'. Presentation at Tuna 2010 Bangkok, 11<sup>th</sup> INFOFISH World Tuna Trade Conference, 13-15 September 2010, Bangkok.
- Lillie, Nathan (2006), *A Global Union for Global Workers: Collective Bargaining and Regulatory Politics in Maritime Shipping*. New York: Routledge

- Lischewski, Christopher D. (1998), 'The US market for canned tuna', in K. P. P. Nambiar and Sudari Pawiro (eds.), *Tuna 97 Bangkok: Papers of the 5<sup>th</sup> World Tuna Trade Conference, 25-27 October, 1997, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Lischewski, Christopher D. (2000), 'The US market for canned tuna', in S. Subasinghe and Sudari Pawiro (eds.), *Tuna 2000 Bangkok: Papers of the 6<sup>th</sup> World Tuna Trade Conference, 25-27 May, 2000, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Lischewski, Christopher D. (2002), 'The US market for canned tuna', in S. Subasinghe and Sudari Pawiro (eds.), *Global Tuna Industry Situation and Outlook: Resources, Production & Marketing Trends and Technological Issues*, Kuala Lumpur: INFOFISH.
- Lischewski, Christopher (2004), 'Keynote Address by Conference Chairman – The Tuna Industry: A Challenging Decade of Change Ahead', in S. Subasinghe, Sudari Pawiro and Shirlene Maria Anthonysamy (eds.), *Tuna 2004 Bangkok: 8<sup>th</sup> INFOFISH World Tuna Trade Conference and Exhibition, 3-5 June, 2004, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Lischewski, Christopher (2006), 'The US Market for Shelf Stable Tuna: An Update', in S. Subasinghe, Sudari Pawiro and S. M. Anthonysamy (eds.), *Proceedings of Tuna 2006: Ninth INFOFISH World Tuna Trade Conference and Exhibition 25-27 May 2006*, Kuala Lumpur: INFOFISH
- Lister, Marjorie (1988) *The European Community and the Developing World*, Avebury: Gower Publishing.
- Lockie, Stewart (2005), 'Interpreting the Australian-Philippines food trade in the context of debates on food security', in Niels Fold and Bill Pritchard (eds.) *Cross-continental Food Chains*, London: Routledge.
- Lodge, Michael W., David Anderson, Terje Løbach, Gordon Munro, Keith Sainsbury and Anna Willock (2010), *Recommended Best Practices for Regional Fisheries Management Organizations: Report of an Independent Panel to Develop a Model for Improved Governance by Regional Fisheries Management Organizations*, London: Chatham House
- Loftas, Tony (1981), 'FAO's EEZ Programme: Assisting a new era in fisheries', *Marine Policy*, 5(3): 229-239
- Loftsson, E. (2003), 'Coastal Management with or without the state', Paper presented to Third Western Indian Ocean Marine Science Association (WIOMSA) Scientific Symposium. Advances in Marine Science in Eastern Africa: Multi trans-disciplinary Research for Improved Management of Resources, 15-18 October 2003, Rovuma Hotel, Maputo, Mozambique
- Longo, Stefano and Brett Clark (2012), 'The Commodification of Bluefin Tuna: The Historical Transformation of the Mediterranean Fishery', *Journal of Agrarian Change*, 12(2-3): 204–226
- Loubet, Michael (2010), 'African equity firm invests in Thunnus Overseas Group', *FIS*, 6 March 2010. Available at: <http://www.fis.com>
- Lough, Richard (2009), 'EU fishing boats suspended from Seychelles waters', *Reuters*, 17 January 2009.
- Lucas, V. and C. Assan (2009), 'Centre of gravity of Purse seine fishing activities in the western Indian Ocean from 2001 – 2006', SFA, May.
- Mackintosh, Maureen (1990), 'Abstract Markets and Real Needs', in Henry Bernstein et al. (eds), *The Food Question: Profits Versus People?*, London: Earthscan
- Maddison, Angus 2006, *The World Economy*, Paris: OECD
- Majkowski, Jacek (no date), *Tuna resources, fisheries and their management*, Rome: FAO. Available at: [ftp://ftp.fao.org/FI/excerpt/tuna\\_resources/tuna\\_resources.pdf](ftp://ftp.fao.org/FI/excerpt/tuna_resources/tuna_resources.pdf). (Last accessed 3 March 2005)
- Majkowski, Jacek (1998), 'Precautionary Approach and Tuna Research: Perspective from the 1995 UN Agreement', in P. Cayre and J-Y. Le Gall (eds.), *Tuna Prospects and Strategies for the Indian Ocean*, Paris: Editions de l'Orstom.
- Manchin, Miriam (2006), 'Preference Utilisation and Tariff Reduction in EU Imports from ACP Countries', *The World Economy*, 29(9): 1243-1266.
- Mandelson, Peter (2008a). Letter by EC Trade Commissioner Peter Mandelson to Cook Islands Minister of Foreign Affairs Wilkie Rasmussen. 27 March 2008. A scanned PDF copy of the letter (with Minister Rasmussen's response) is available to download from <http://www.bilaterals.org> and from the website of the Pacific Network on Globalisation based in Fiji <http://www.pang.org.fj>

- Mandelson, Peter (2008b). Remarks at the Commission seminar on economic partnership agreements, European Parliament, 17 April 2008. Obtained from: <http://www.europarl.europa.eu/news>
- Mangeni, F. (2008). 'North-South FTAs After all? A comprehensive and critical analysis of the Interim Economic Partnership Agreements and recommendations on how they could be made to really address Africa's developmental objectives', Trade and International Negotiations Section, Trade, Finance and Economic Development Division, Economic Commission for Africa
- Mansfield, Becky (2004a). 'Neoliberalism in the Oceans: "Rationalization", Property Rights, and the Commons Question', *Geoforum*, 35(3): 313–326.
- Mansfield, Becky (2004b), 'Rules of Privatization: Contradictions in Neoliberal Regulation of North Pacific Fisheries'. *Annals of the Association of American Geographers*, 94(3): 565–584.
- Manufacturer, The* (2005), 'Heinz serves up increased profits', 26 May 2005. Available at: [http://www.themanufacturer.com/us/content/3441/Heinz\\_serves\\_up\\_increased\\_profits](http://www.themanufacturer.com/us/content/3441/Heinz_serves_up_increased_profits) (last accessed 24 June 2005)
- Marashi, S.M. (1996), Summary information on the Role of International Fishery and other bodies with regard to the Conservation and Management of Living Resources of the High Seas, *FAO Fisheries Circular - C908*, Rome: FAO
- Marcille, J. M. (1987), 'Tuna Fisheries of the Indian Ocean: Recent Trends and Prospects', in *Proceedings of the INFOFISH Tuna Trade Conference, Bangkok, Thailand, 25-27 February 1986*, Penang: INFOFISH.
- Marguerite, Michel A. (2005), 'The Industrial Fishing Activity in the Indian Ocean: Impact on the Economy of Seychelles', *Report for the Year 2003*, Victoria: SFA
- Marsac, Francis (1988), 'Purse Seine Tuna Fishery in the Western Indian Ocean: Fishing Success in Relation to Hydrological Conditions', in *Proceedings of the 39<sup>th</sup> Tuna Conference, Lake Arrowhead, California, May 15-18, 1988*, La Jolla, CA: IATTC
- Marsac, Francis, Alain Fonteneau and Frédéric Ménard (2000), 'Potential Biological Effects of Drifting FADs on Tuna Populations: the Ecological Trap Hypothesis', working paper presented to the 13<sup>th</sup> Meeting of the Standing Committee on Tuna and Billfish, Secretariat of the Pacific Community, Noumea, New Caledonia 5-12 July 2000. Available at <http://www.spc.int/OceanFish/Html/SCTB/SCTB13/index.htm> (last accessed 25 July 2010)
- Massieu, Yolanda and Michelle Chauvert (2005), 'Contesting biotechnology: cross-continental concerns about genetically modified crops', in Niels Fold and Bill Pritchard (eds.) *Cross-continental Food Chains*, London: Routledge.
- Mata, Maria Eugénia (2009), 'Managerial strategies in canning industries: A case study of early twentieth century Portugal', *Business History*, 51(1): 45-58
- Mather, Charles and Bridget Kenny (2005), 'The difficulties of 'emerging markets': cross-continental investment in the South African dairy sector', in Niels Fold and Bill Pritchard (eds.) *Cross-continental Food Chains*, London: Routledge.
- Mather, Charles and Petrina Rowcroft (2004), 'Citrus, apartheid and the struggle to (re)present Outspan oranges', in Alex Hughes and Suzanne Reimer (eds.), *Geographies of Commodity Chains*, London: Routledge.
- Matsuda, Yoshiaki (1987), 'Postwar Development and Expansion of Japan's Tuna Fishery', in David Doullman (ed.), *Tuna Issues and Perspectives in the Pacific Islands Region*, Honolulu: East-West Center
- Matthews, A. D. (1981/2), 'Katsuobushi Production in the Seychelles', *Fisheries Bulletin No. 19*, Fisheries Division, Seychelles Government
- Maury, Frédéric (2009), 'Le thon africain se relance en Europe', *Jeune Afrique*, 05 February 2009. Available at: <http://www.JeuneAfrique.com>
- Max, Karl (1976), *Capital: A Critique of Political Economy. Volume I*, London: Penguin.
- Mayer, Jorg (2002), 'The Fallacy of Composition: A Review of the Literature', *The World Economy*, 25(6): 875-894
- Mbithi Mwikya, Stephen (2006), *Fisheries Access Agreements: Trade and Development Issues*, ICTSD Natural Resources, International Trade and Sustainable Development Series Issue Paper No. 2, Geneva: ICTSD

- McAteer, William, (2008), *To Be a Nation: The History of Seychelles 1920-1976*, Mahé: Pristine Books.
- McMichael, Philip (1996), *Development and Social Change: A Global Perspective*, London: Pin Forge.
- McQueen, M, C. Phillips, D. Hallam and A. Swinbank (1998), *ACP-EU Trade and Aid Cooperation: Post-Lomé IV*, Commonwealth Economic Paper Series No. 32, London: Commonwealth Secretariat.
- McQueen, M. and Christopher Stevens (1989), 'Trade Preferences and Lomé IV: Non-traditional ACP Exports to the EC', *Development Policy Review*, 7 (3): 239-260.
- MENR/MFA (2004), *Barbados Plan of Action+10 Review: Republic of Seychelles National Assessment, 2004*, Victoria: Ministry of Environment and Natural Resources/Ministry of Foreign Affairs. Government of Seychelles
- Meuriot, Eric (1986), 'Fishing fleet replacement: The French policy from 1945 to 1983', *Marine Policy*, 10(4): 294-309
- Mfodwo, Kwame (2008), *Negotiating equitable fisheries access agreements: A capacity-building and reference manual for developing coastal states*, Dakar: IUCN/SRFC
- Mfodwo, Kwame (2009), 'A New Approach to Maximize Economic Benefits from Tuna Resources – Development of the Concept', Honiara: Forum Fisheries Agency
- Mfodwo, Kwame and Martin Tsamenyi (2002), 'Responsible Fishing and Access Agreements in the Western Central Pacific: Issues of Law and Policy', (Confidential Version) Honiara: Forum Fisheries Agency
- Michaud, Philippe (1986), 'Seychelles' Response to Rapid Development in Industrial Tuna Fisheries', Paper presented to the Meeting of IOFC, Colombo, December 1986
- Michaud, Philippe (1990), 'An Overview of Seychelles Foreign Fishing Access Agreements', Victoria: Seychelles Fishing Authority
- Michaud, Philippe (1992), 'The Complementarity between the Western Indian Ocean Tuna Commission (WIOTC) and the Proposed Indian Ocean Tuna Commission (IOTC)'. Paper prepared for the Conference for the Adoption of a Draft Agreement on the Establishment of the Indian Ocean Tuna Commission, Rome, 22-26 June 1992.
- Michaud, Philippe (2000), 'Indian Ocean tuna fishing industry', in S. Subasinghe and Sudari Pawiro (eds.), *Tuna 2000 Bangkok: Papers of the 6<sup>th</sup> World Tuna Trade Conference, 25-27 May, 2000, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Mieu, Baudelaire (2010), 'Mohamad Khachab, un géant des mers', *Jeune Afrique*, 14 April 2010.
- Milanovic, Branko (2003), 'The Two Faces of Globalization: Against Globalization as We Know It', *World Development*, 31(4): 667-683.
- Milanovic, Branko (2006), 'Global income inequality: What it is and why it matters', *World Bank Policy Research Working Paper 3865*, Washington DC: World Bank. Available at: <http://www.worldbank.org>
- Milazzo, Matteo (1998), 'Subsidies in world fisheries: a re-examination', *World Bank Technical Paper No. 406* (Fisheries series), Washington DC: World Bank
- Miles, E.L. (2002), 'The Management of Tuna Fisheries in the West and Central and Southwest Pacific, in E. L. Miles *et al* (eds.), *Environmental Regime Effectiveness: Confronting Theory with Evidence*, Cambridge, Massachusetts: Massachusetts Institute of Technology
- Mills, Barry A. (2001), Statement of Barry A. Mills, submitted as part of Prehearing Statement of Starkist Samoa, Inc. to United States Department of Labor, Special Industry Committee No. 24 for American Samoa (June).
- Mina, X., J. Ariz, R. Prellezo, A. Delgado de Molina, I. Artetxe, P. Pallarés and H. Arrizabalaga (2002), 'Some aspects of the FAD fishery in the Indian Ocean from observers data analysis', in *Proceedings of the Fourth Session of the IOTC Working Party on Tropical Tunas*, Victoria: IOTC. Available at: <http://www.iotc.org> (last accessed 16 July 2010)
- Ministry of Fisheries, Mozambique (2010), 'Spanish catch reporting infringements settled by Mozambique, fishing company pays fine', 22 July 2010. Available at: <http://www.icsf.net>
- Ministry of Planning and External Relations (1981), 'Seychelles Fisheries Development: Perspective and Medium Term Plan of Action (1982-2000)', Victoria, Government of Seychelles.

- Mintz, Sidney (1986), *Sweetness and Power: The Place of Sugar in Modern History*, London: Penguin.
- MISD (1989-2003). *Republic of Seychelles Statistical Abstract* (various years), Victoria: Management and Information Systems Division.
- Miwako Takase, (2004). 'Problems of illegal, unreported and unregulated fishing and overcapacity of tuna fishing vessels', in William H. Bayliff, Juan Ignacio de Leiva Moreno and Jacek Majkowski (ed.) Second meeting of the Technical Advisory Committee of the FAO project, Management of tuna fishing capacity: conservation and socio-economics, 15-18 March 2004, Madrid, Spain, <http://www.fao.org/docrep/008/y5984e/y5984e00.htm#Contents>
- Miyake, Peter Makoto (2005a), 'A brief history of tuna fisheries of the world', in William H. Bayliff, Juan Ignacio de Leiva Moreno, and Jacek Majkowski (eds.), Second Meeting of the Technical Advisory Committee of the FAO Project 'Management of Tuna Fishing Capacity: Conservation and Socio-economics'. Madrid, Spain, 15–18 March 2004. *FAO Fisheries Proceedings*. No. 2. Rome: FAO.
- Miyake, Peter Makoto (2005b), 'A review of the fishing capacity of the longline fleets of the world', in William H. Bayliff, Juan Ignacio de Leiva Moreno, and Jacek Majkowski (eds.), Second Meeting of the Technical Advisory Committee of the FAO Project 'Management of Tuna Fishing Capacity: Conservation and Socio-economics'. Madrid, Spain, 15–18 March 2004. *FAO Fisheries Proceedings*. No. 2. Rome: FAO.
- Miyake, M.P., P. Guillotreau, C-H. Sun and G. Ishimura (2010). 'Recent Developments in the Tuna Industry: Stocks, Fisheries, Management, Processing, Trade and Markets'. *FAO Fisheries and Aquaculture Technical Paper, No. 543*. Rome: FAO.
- Miyake, Makoto Peter, Naozumi Miyabe and Hideki Nakano (2004), Historical trends of tuna catches in the world, *FAO Fisheries Technical Paper 467*, Rome: FAO.
- Moal, R. A. (1973), 'Criteria for a Fisheries Development Plan for the Seychelles', Societe Centrale Pour l'Equipement du Territoire International, Secretariat d'Etat aux Affaires Etrangeres, Republic Francaise
- Möller, Alda B. (2003), 'Studies on Seafood Value Addition: Frozen and fresh products from companies worldwide', *GLOBEFISH Special Market Study*, Rome: GLOBEFISH/ FAO.
- Mongruel, Rémi (2000), 'Économie politique de la rente générée par l'exploitation industrielle et commerciale d'une ressource naturelle renouvelable: les filières européennes du thon tropical', unpublished PhD thesis, National Agricultural School of Montpellier.
- Mongruel, Rémi (2002). 'The European regulation framework of tropical tuna supply chains: its impact on the tuna rent distribution between economic actors', in: Proceedings of the 14th EAFE Conference, Faro, 25–27 March 2002.
- Moore, Jason, (2010a), "'Amsterdam is Standing on Norway" Part I: The Alchemy of Capital, Empire and Nature in the Diaspora of Silver, 1545–1648, *Journal of Agrarian Change*, 10 (1): 33–68
- Moore, Jason, (2010b), "'Amsterdam is Standing on Norway" Part II: The Global North Atlantic in the Ecological Revolution of the Long Seventeenth Century', *Journal of Agrarian Change*, 10 (2): 188-227
- Moral, José a del (2008), 'Albacora y la potente industria pesquera vasca', *Cyber Euskadi*, 3 June 2008. Available at: <http://www.cybereuskadi.com>
- Morón, Julio (n.d.), 'Report on Management Measures for the European Tuna Purse Seine Fleet', mimeo by Assistant Director OPAGAC.
- Morón, Julio (2001), 'Report on management measures for the European tuna purse seine fleet [FT-9]'. Noumea, New Caledonia: SPC, Secretariat of the Pacific Community. Standing Committee on Tuna and Billfish, Noumea, New Caledonia, 9-16 August 2001, 14th. 10 p. Available at: [wwwx.spc.int/coastfish/sections/reef/Library/index.html](http://wwwx.spc.int/coastfish/sections/reef/Library/index.html) (last accessed 17 July 2010)
- Morón, Julio (2002a), 'The WTPO and its significance in the World tuna purse seine fishery [FTWG-6]'. Noumea, New Caledonia: SPC, Secretariat of the Pacific Community. Standing Committee on Tuna and Billfish, Honolulu, Hawaii, USA, 22-27 July 2002, 15th. 6 p. Available at: [wwwx.spc.int/coastfish/sections/reef/Library/index.html](http://wwwx.spc.int/coastfish/sections/reef/Library/index.html) (last accessed 17 July 2010)
- Morón, Julio (2002b), 'The world tuna purse seine fishery and the WTPO', in S. Subasinghe and Sudari Pawiro (eds.), *Global Tuna Industry Situation and Outlook: Resources, Production & Marketing Trends and Technological Issues*, Kuala Lumpur: INFOFISH.

- Morón, Julio Ayala. (2003), 'Review of the activities of the World Tuna Purse-Seine Organization (June 2002-June 2003) [FTWG-8]'. Noumea, New Caledonia: SPC, Secretariat of the Pacific Community. Standing Committee on Tuna and Billfish, Mooloolaba, Queensland, Australia, 9-16 July 2003, 16th. 5 p. Available at: [wwwx.spc.int/coastfish/sections/reef/Library/index.html](http://wwwx.spc.int/coastfish/sections/reef/Library/index.html) (last accessed 17 July 2010)
- Morón, Julio, Juan José Areso and Pilar Pallarés, (2001), 'Statistics and technical information about the Spanish purse seine fleet in the Pacific [FT-11]'. Noumea, New Caledonia: SPC, Secretariat of the Pacific Community. Standing Committee on Tuna and Billfish, Noumea, New Caledonia, 9-16 August 2001, 14th. 8 p. Available at: [wwwx.spc.int/coastfish/sections/reef/Library/index.html](http://wwwx.spc.int/coastfish/sections/reef/Library/index.html) (last accessed 17 July 2010)
- Morris, Carol and Craig Young (2004), 'New geographies of agro-food chains: an analysis of UK quality assurance schemes', in Alex Hughes and Suzanne Reimer (eds.), *Geographies of Commodity Chains*, London: Routledge.
- Moss, J and John Ravenhill (1987), 'The Evolution of Trade under the Lomé Conventions: The First Ten Years', in Christopher Stevens and J. Verloren van Thernatt (eds.), *Europe and the International Division of Labour*, London: Hodder and Stoughton.
- Mulvad, Nils and Jack Thurston 2009, *Fishing for subsidies: Uncovering who gets what from the Common Fisheries Policy*, EU Transparency. Available at: <http://fishsubsidy.org> (downloaded on 29 October 2009).
- Munoz, Jr., Jose E. 1996, 'The US Tuna Industry – 1995', in K. P. P. Nambiar and N. Krishnasamy (eds.), *Tuna 95 Manila. Papers of the 4<sup>th</sup> World Tuna Trade Conference, 25-27 October 1995, Manila, Philippines*, Kuala Lumpur: INFOFISH
- Murdoch, Jonathan and Mara Miele (2004), 'Culinary networks and cultural connections: a conventions perspective', in Alex Hughes and Suzanne Reimer (eds.), *Geographies of Commodity Chains*, London: Routledge.
- Murias, Analia (2010a), 'Venture capital fund invests in Conservas Garavilla', *FIS*, 21 July 2010
- Murias, Analia (2010b), 'Calvo to enter Colombian market', *FIS*, 31 August 2010
- Murphy, Craig N. (1983), 'What the Third World Wants: An Interpretation of the Development and Meaning of the New International Economic Order Ideology', *International Studies Quarterly*, 27:1.
- Mussell, Dennis, (2004), 'Issues in the US Tuna Market', in S. Subasinghe, Sudari Pawiro and Shirlene Maria Anthonysamy (eds.), *Tuna 2004 Bangkok: 8<sup>th</sup> INFOFISH World Tuna Trade Conference and Exhibition, 3-5 June, 2004, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Muszynski, Alicja (1996), *Cheap Wage Labour: Race and Gender in the Fisheries of British Columbia*, London: McGill-Queen's University Press.
- Mutume, Gumisai (2006), 'New Barriers Hinder African Trade', *Africa Renewal*, 12 January.
- MW Brands (2008), 'NEWS September 2008: arrival of Jean-Luc Pardessus as Group Chief Operating Officer. Disposal of shares in Cobrecaf. Two new boats joining the fleet.' Available at: <http://www.mwbrands.com> (last accessed 26 July 2010)
- MW Brands (2011), company website. Available at: <http://www.mwbrands.com> (last accessed 25 April 2011)
- Myers, Hayley and Nicholas Alexander (2007), 'The role of retail internationalisation in the establishment of a European retail structure', *International Journal of Retail & Distribution Management*, 35(1): 6-19.
- Myrseth, Albert (1985), 'Planning and engineering data 2. Fish Canning', *FAO Fisheries Circular No. 784*, Available at <<http://www.fao.org/DOCREP/003/R6918E/R6918E00.HTM>> Accessed on 1 September 2007.
- Nageon de Lestang, Joel (1986), 'The Present Status and Future Prospects of the Fisheries in Seychelles', Victoria: Seychelles Fishing Authority
- Nageon de Lestang, Joel (1988a), 'The fisheries of Seychelles', in R.T. Appleyard and R. N. Ghosh (eds.) *Indian Ocean Islands Development*, Canberra: Australian National University
- Nageon de Lestang, Joel (1988b), 'Tuna Longlining in Seychelles 1984-1986', Paper prepared for the Expert Consultation on the Stock Assessment of Tuna in the Indian Ocean, Mauritius, 22-27 June 1988.
- Nageon de Lestang, Joel (2004), 'Report on the Mission in Mauritius to assess how Seychelles can benefit from the Mauritian experience in the fisheries sector', unpublished mimeo, Victoria: Seychelles Fishing Authority

- Nageon de Lestang, Joel and G. Lablache (1989), 'The S. W. Indian Ocean Tuna Fishery', unpublished mimeo, Victoria: Seychelles Fishing Authority
- Nash, Andrew (2004), 'Third Worldism', unpublished mimeo.
- Nathanson, Ari (2006), 'Lehman Buys Seafood Division From Heinz', *Thomson Venture Economics*, 6 March 2006.
- Nation, The*, 17 September 2004, 'Delegation back from European fishing talks'.
- Nation, The*, 19 November 2004, 'Spanish fishing vessel owners to visit'.
- Nation, The*, 27 September 2006, 'Seychelles, EU sign new fisheries deal'.
- Nation, The*, 29 January 2005, 'Opagac reinforces fishing ties with Seychelles'.
- National Statistics Bureau (2009). Statistical Bulletin. Seychelles National Accounts Estimates 2004 – 2008. April.
- National Statistics Bureau (2010). *Seychelles in Figures*. Victoria: Government of Seychelles.
- Naumann, E. (2005). 'Rules of Origin under EPAs: Key Issues and New Directions', *tralac Working Paper No 9*, December 2005.
- Naumann, E. (2008). "A general overview of proposed changes to the Rules of Origin in ACP-EU Economic Partnership Agreements", *tralac Trade Brief 3*, Obtained from: <http://www.tralac.org>.
- Naumann, Eckart (2010). *Rules of Origin in EU-ACP Economic Partnership Agreements*, Geneva: International Centre for Trade and Sustainable Development
- Nayyar, Deepak (2006), 'Globalisation, history and development: a tale of two centuries', *Cambridge Journal of Economics*, 30(1): 137–159.
- NEDECO, Arup and Ascon (1981), 'Feasibility Study of a Port and Reclamation Project, Seychelles: Fishing Port Study Volume 3', report commissioned by Ministry of Planning and Development, Government of Seychelles.
- Neilson, Jeffrey (2005), 'The politics of place: geographical identities along the coffee supply chain from Toraja to Tokyo', in Niels Fold and Bill Pritchard (eds.) *Cross-continental Food Chains*, London: Routledge.
- Nishida, T (1995), 'Influence of Purse-Seine Fisheries on Longline Fisheries for Yellowfin Tuna (*Thunnus Albacares*) in the Western Indian Ocean', Paper prepared for the 6th Expert Consultation on Indian Ocean Tunas, 25-29 September 1995, Colombo, Sri Lanka, Indian Ocean Tuna Commission (FAO), EC602-14
- No author (1987), 'Floating Dry Dock: Project Outline and Economic Rationale', mimeo at Seychelles Fishing Authority Documentation Centre
- NOAA (1981a), 'The Tuna Fisheries of Cape Verde and Senegal', *Marine Fisheries Review*, 43(12): 23-25.
- NOAA (1981b), 'The Tuna Fishery of the Ivory Coast', *Marine Fisheries Review*, 43(10): 23-24.
- NOAA (2010a), 'NOAA Protects U.S. Waters From Illegal, Unreported and Unregulated Fishing', 11 June 2010. National Oceanic and Atmospheric Administration, United States department of Commerce. Available at: [http://www.noaanews.noaa.gov/stories2010/20100611\\_fishing.html](http://www.noaanews.noaa.gov/stories2010/20100611_fishing.html)
- NOAA (2010b), '\$5M Settlement Boosts Marine Conservation Plans in the Pacific', 7 July 2010. National Oceanic and Atmospheric Administration, United States department of Commerce. Available at: [http://www.noaanews.noaa.gov/stories2010/20100707\\_albacora.html](http://www.noaanews.noaa.gov/stories2010/20100707_albacora.html)
- Nolan, Peter (2002), 'China and the global business revolution', *Cambridge Journal of Economics*, 26(1): 119-137.
- Nolan, Peter, Dylan Sutherland and Jin Zhang (2002), 'The Challenge of the Global Business Revolution', *Contributions to Political Economy*, 21(1): 91–110.
- Nolan, Peter, Jin Zhang and Chunhang Liu (2008), 'The global business revolution, the cascade effect, and the challenge for firms from developing countries', *Cambridge Journal of Economics*, 32(1): 29–47.
- NORPLAN (1981), 'Seychelles' Fisheries Feasibility Study: Volume I – Present Situation, Potentials, Objectives, Development Plan', report commissioned by Ministry of Planning and Development, Government of Seychelles.

- Nunn, Alex and Sophia Price (2004), 'Managing Development: EU and African Relations through the Evolution of the Lomé and Cotonou Agreements', *Historical Materialism*, 12: 4, pp.51–66.
- O'Riordan, Brian (2000), 'Fisheries agreements: Socializing costs, privatizing benefits', *Samudra*, (August): 16-22
- Oceanic Développement (2008), *Study on the European External Fleet* (Executive Summary), Contract FISH/2006/02, Final Report (January),
- Oceanic Développement-Megapesca (2007), *Rules of Origin in Preferential Trade Arrangements: New Rules for the Fishery Sector*. Draft Final Report—Contrat Cadre FISH/2006/20
- Oceanic Développement, Poseidon and Megapesca (2005), *The European Tuna Sector: Economic Situation, Prospects and Analysis of the Impact of the Liberalisation of Trade*, Specific Convention SC 12, Project Fish/ 2003/02, Final Report.
- ODI (2006), 'Creating Development Friendly Rules of Origin in the EU', London: Overseas Development Institute
- OECD (1983), *The Generalised System of Preferences: Review of the First Decade – Report by Secretary-General*, Paris: OECD.
- OECD (2005), *Subsidies: A Way Towards Sustainable Fisheries?*, Policy Brief, Paris: OECD
- Ogley, Roderick C. (1977), Book Review: Arvid Pardo and Elisabeth Mann Borgese (1976), *The New International Economic Order and the Law of the Sea, Marine Policy*, 1(1): 82-4
- OLAF (European Anti-Fraud Office) 2006, [http://europa.eu.int/comm/anti\\_fraud](http://europa.eu.int/comm/anti_fraud)
- ONA Group (2010), company website, <<http://www.ona.ma>>
- Orsini, Antonio (2010), 'The EU non-canned tuna market'. Presentation at Tuna 2010 Bangkok, 11<sup>th</sup> INFOFISH World Tuna Trade Conference, 13-15 September 2010, Bangkok.
- Owen, Anthony David (1998), 'Measurement and Collection of Economic Rent in a Managed Tuna Fishery', in P. Cayre and J-Y. Le Gall (eds.), *Tuna Prospects and Strategies for the Indian Ocean*, Paris: Editions de l'Orstom.
- Oxfam (2006). 'The Devil's in the Details: Oxfam discussion document on Rules of Origin (ROO)', Oxford: Oxfam International.
- Page, Sheila, and Adrian Hewitt (2002), 'The New European Trade Preferences: Does Everything But Arms (EBA) Help the Poor?' *Development Policy Review*, 21(1): 91-102.
- Palpacuer, Florence (2008), 'Bringing the social context back in: governance and wealth distribution in global commodity chains', *Economy and Society*, 37(3): 393-419
- Palpacuer, Florence and Aurelio Parisotto (2003), 'Global production and local jobs: can global enterprise networks be used as levers for local development?', *Global Networks*, 3(2): 97-120.
- Pálsson, Gísli (1991), *Coastal Economies, Cultural Accounts: Human Ecology and Icelandic Discourse*, Manchester: Manchester University Press.
- Pan, Chengxin (2009), 'What is Chinese about Chinese Businesses? Locating the 'rise of China' in global production networks', *Journal of Contemporary China*, 18(58): 7–25.
- Panitch, Leo and Sam Gindin (2003), 'Global Capitalism and American Empire', *The Socialist Register 2004*, London: Merlin
- Panitch, Leo and Sam Gindin (2004), 'Finance and American Empire', *The Socialist Register 2005*, London: Merlin
- Park, In Keun (2004), 'Tuna industry situation and outlook in the Republic of Korea', in S. Subasinghe, Sudari Pawiro and Shirlene Maria Anthonysamy (eds.), *Tuna 2004 Bangkok: 8<sup>th</sup> INFOFISH World Tuna Trade Conference and Exhibition, 3-5 June, 2004., Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Parker, David (1986), 'Economic Activity in the Seychelles Industrial Fisheries Sector 1986', Victoria: Seychelles Fishing Authority
- Parkinson, F. (1956), 'Bandung and the Underdeveloped Countries', in *The Year Book of World Affairs: 1956*, London: Stevens and Sons.



- Parris, Hannah and Quentin Grafton (2006), 'Can Tuna Promote Sustainable Development in the Pacific?' *The Journal of Environment & Development*, 15 (3): 269–296
- Patel-Campillo, Anouk (2010), 'Rival commodity chains: Agency and regulation in the US and Colombian cut flower agro-industries', *Review of International Political Economy*, 17(1): 75-102.
- Pauly, Daniel (1995), 'When is Fisheries Management Needed?', Noumea, New Caledonia: South Pacific Commission. 14 p. Available at: [wwwx.spc.int/coastfish/sections/reef/Library/index.html](http://wwwx.spc.int/coastfish/sections/reef/Library/index.html) (last accessed 17 July 2010)
- Pauly, Daniel (2009), 'Beyond duplicity and ignorance in global fisheries', *Scientia Marina*, 73(2): 215-224
- Payet, A. (2008). 'Economic Development in Seychelles', Paper presented by Chairman of Seychelles Chamber of Commerce at Consultation Conference on Profiling Economic Vulnerability and Resilience, Commonwealth Secretariat, Seychelles, 25–26 June.
- Payne, Anthony (2004), 'Rethinking Development inside International Political Economy', in Anthony Payne (ed.), *The New Regional Politics of Development*, Basingstoke: Palgrave Macmillan.
- Payne, Robert L., and Michel Savini 1978, 'Development of Fisheries in the Exclusive Economic Zone of the Seychelles', *Technical Report of the Indian Ocean Programme No. 20*, IOP/TECH/78/20, Rome: FAO and UNDP.
- Pearce, Robert and Marina Pananastassiou 2006, 'To “almost see the world”: Hierarchy and strategy in Hymer’s view of the multinational', *International Business Review*, 15(2): 151-165.
- Pearson, Mark (2005). 'Negotiating an Economic Partnership Agreement for Eastern and Southern Africa', (October). Obtained from: <http://www.rtfp.org>
- Pearson, Mark (2007a), 'Possible Scenarios with EU Market Access and Rules of Origin for Tuna from ACP Countries in the Western Indian Ocean', Regional Trade Facilitation Programme, Durban.
- Pearson, Mark (2007b), 'Rules of Origin for Fish and Fish Products for the Eastern and Southern Africa Region Economic Partnership Agreement with the European Union, Second Draft, Regional Trade Facilitation Programme', Durban.
- Pearson, Mark (2007c), 'EPA Rules of Origin for Fish and Fish Products'. Presentation prepared for the ESA Dedicated Session on Fisheries, 23-24 March 2007, Indian Resort, Le Morne, Mauritius.
- Pêche et Froid (2010), company website, [www.pecheetfroid.com](http://www.pecheetfroid.com) (accessed 10 June 2010)
- Peckham, Charles J. (1996), 'Recent trends in United States tuna production and usage', in K. P. P. Nambiar and N. Krishnasamy (eds.), *Tuna 95 Manila. Papers of the 4<sup>th</sup> World Tuna Trade Conference, 25-27 October 1995, Manila, Philippines*, Kuala Lumpur: INFOFISH
- Peoples, James and Roger Sugden (2001), 'Divide and rule by transnational corporations', in C. N. Pitelis and R. Sugden (eds.), *The Nature of the Transnational Firm* [2<sup>nd</sup> edn.], London: Routledge.
- Peretz, D., R. Faruqi and E.J. Kisanga (eds.) (2001), *Small States in the Global Economy*, London: Commonwealth Secretariat
- Pérez Sainz, Juan Pablo (2003), 'Globalization, Upgrading, and Small Enterprises: A View from Central America', *Competition and Change*, 7: 4, pp. 205-221.
- Petersen, Elizabeth (2002), 'Economic policy, institutions and fisheries development in the Pacific', *Marine Policy*, 26(5): 315-324
- Petersen, Elizabeth (2003), 'The catch in trading fishing access for foreign aid', *Marine Policy*, 27(3): 219-228
- Petersen, Elizabeth (2006), *Institutional Economics and Fisheries Management: The Case of Pacific Tuna*, Cheltenham: Edward Elgar
- Pianet, R., V. Nordstrom and P. Dewals (2009), 'French purse-seine tuna fisheries statistics in the Indian Ocean, 1981-2008', IOTC-2009-WPTT-23. Victoria: Indian Ocean Tuna Commission.
- Pitelis, Christos N. (2002), 'Stephen Hymer: Life and the Political Economy of Multinational Corporate Capital', *Contributions to Political Economy*, 21(1): 9–26.
- Pitelis, Christos N. and Roger Sugden (eds.) 2000, *The Nature of the Transnational Firm*, (2<sup>nd</sup> Edn.), London: Routledge

- Plows, D. M. 1982, 'The Establishment and Operations of the Seychelles Exclusive Economic Zone from 1980 to 1982', Unpublished mimeo by Chief Co-ordinator EEZ Control Centre, Victoria, the Seychelles.
- Ponte, Stefano (2002a), 'The "Latte Revolution"? Regulation, Markets and Consumption in the Global Coffee Chain', *World Development*, 30(7): 1099-1122.
- Ponte, Stefano (2002b), 'Brewing a Bitter Cup? Deregulation, Quality and the Re-Organization of Coffee Marketing in East Africa', *Global Commodity Chains and African Export Agriculture*, Benoit Daviron and Peter Gibbon (eds.), special issue of *Journal of Agrarian Change*, 2(2): 248-272.
- Ponte, Stefano and Peter Gibbon (2005), 'Quality standards, conventions and the governance of global value chains', *Economy and Society*, 34(1): 1-31.
- Ponte, Stefano, Jesper Raakjær Nielsen and Liam Campling (2007) 'Swimming upstream: Market access for African fish exports in the context of WTO and EU negotiations and regulation', *Development Policy Review*, 25(1): 113-138.
- Pontecorvo, Giulio (1988), 'The enclosure of the marine commons: Adjustment and redistribution in world fisheries', *Marine Policy*, 12(4): 361-372.
- Porter, Michael (1985), *Competitive Advantage: Creating and Sustaining Superior Performance*, New York: Free Press.
- Porter, Michael (1990), *The Competitive Advantage of Nations*, New York: Free Press.
- Poseidon (2010), *FIFG 2000–2006 Shadow Evaluation: Final Report*, commissioned by the Pew Environment Group
- Prado, Joel (2000), 'Responsible tuna fisheries', in S. Subasinghe and Sudari Pawiro (eds.), *Tuna 2000 Bangkok: Papers of the 6<sup>th</sup> World Tuna Trade Conference, 25-27 May, 2000, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Prasch, Robert E. (1996), 'Reassessing the Theory of Comparative Advantage', *Review of Political Economy*, 8(1): 37-55
- Pretes, Michael and Elizabeth Petersen (2004), 'Rethinking fisheries policy in the Pacific', *Marine Policy*, 28(4): 297-309
- PricewaterhouseCoopers (2000), *Study Into the Nature and Extent of Subsidies in the Fisheries Sector of APEC Member Economies*, CTI 07/99T, Singapore: APEC Secretariat
- Princes (n.d.), *Princes Food and Drink Group* (company brochure)
- Pritchard, Bill (2005), 'The world steer revisited: Australian cattle production and the Pacific Basin beef complex', in Niels Fold and Bill Pritchard (eds.) *Cross-continental Food Chains*, London: Routledge.
- Quadros, Ruy (2002), 'Global Quality Standards, Chain Governance and the Technological Upgrading of Brazilian Auto-Components Producers', *IDS Working Paper*, (May) Brighton: IDS.
- Rabach, Eileen and Eun Mee Kim (1994), 'Where is the Chain in Commodity Chains? The Service Sector Nexus', in Gary Gereffi and Miguel Korzeniewicz (eds.) 1994, *Commodity Chains and Global Capitalism*, Westport, CT: Praeger.
- Radice, Hugo (ed.) (1975), *International Firms and Modern Imperialism: Selected Readings*, Hamondsworth: Penguin.
- Raghuram, Parvat (2004), 'Initiating the commodity chain: South Asian women and fashion in the diaspora', in Alex Hughes and Suzanne Reimer (eds.), *Geographies of Commodity Chains*, London: Routledge.
- Raikes, Philip, Michael Friis Jensen and Stefano Ponte (2000), 'Global Commodity Chain Analysis and the French Filière Approach: Comparison and Critique', *Economy and Society*, 29:3, pp. 903-23.
- Ramamurthy, Priti (2000), 'The Cotton Commodity Chain, Women Work and Agency in India and Japan: The Case for Feminist Agro-Food Systems Research', *World Development*, 28: 3, pp. 551-578.
- Ram-Bidesi, Vina (2003), Domestication of the tuna industry in the Pacific islands: an analysis of national and regional strategies, PhD Thesis. Centre for Maritime Policy, University of Wollongong.
- Rampa, Francesco (2004). 'Tuna Rules of Origin – Papua New Guinea', paper prepared for the Commonwealth Secretariat.

- Ravenhill, John (1980), 'Asymmetrical Interdependence: Renegotiating the Lomé Convention', in Frank Long (ed.), *The Political Economy of EEC Relations with African, Caribbean and Pacific States: Contributions to the Understanding of the Lomé Convention on North-South Relations*, Oxford: Pergamon Press.
- Ravenhill, John (1985), *Collective Clientalism: The Lomé Conventions and North-South Relations*, New York: Columbia University Press.
- Raynolds, Laura (1994), 'Institutionalizing Flexibility: A Comparative Analysis of Fordist and Post-Fordist Models of Third World Agro-Export Production', in Gary Gereffi and Miguel Korzeniewicz (eds.), *Commodity Chains and Global Capitalism*, Westport, CT: Praeger.
- Raynolds, Laura (2003), 'The Global Banana Trade', in Steve Striffler and Mark Moberg (eds.), *Banana Wars: Power, Production, and History in the Americas*, London: Duke University Press.
- Razeen Sally (2007), 'Looking East: The European Union's New FTA Negotiations in Asia', *Jan Tumliar Policy Essays No. 03*, p.7.
- Read, Robert (2001), 'Growth, Economic Development and Structural Transition in Small Vulnerable States', *UNU/WIDER Discussion paper No. 2001/59*.
- Read, Robert (2004), 'The Implications of Increasing Globalization and Regionalism for the Economic Growth of Small Island States', *World Development*, 32(2): 365-378
- Real, Natalia (2010), 'Food groups, private equity go after seafood company', *FIS*, 4 June 2010.
- Reardon, Thomas and Rose Hopkins (2006), 'The Supermarket Revolution in Developing Countries: Policies to Address Emerging Tensions Among Supermarkets, Suppliers and Traditional Retailers', *European Journal of Development Research*, 18(4): 522-545.
- Regar (2010), 'Seychelles Seeks To Renegotiate IOT Agreement', 16 July 2010.
- Reid, Chris, James E. Kirkley, Dale Squires and Jun Ye (2005), 'An analysis of the fishing capacity of the global tuna purse-seine fleet', in William H. Bayliff, Juan Ignacio de Leiva Moreno, and Jacek Majkowski (eds.), *Second Meeting of the Technical Advisory Committee of the FAO Project 'Management of Tuna Fishing Capacity: Conservation and Socio-economics'*. Madrid, Spain, 15–18 March 2004. *FAO Fisheries Proceedings*. No. 2. Rome: FAO.
- Reid, Christopher, Dale Squires, Yongil Jeon, Len Rodwell and Raymond Clarke (2003), 'An analysis of fishing capacity in the western and central Pacific Ocean tuna fishery and management implications', *Marine Policy*, 27(6): 449-469.
- Reimer, Suzanne and Deborah Leslie (2004), 'Knowledge, ethics and power in the home furnishings commodity chain', in Alex Hughes and Suzanne Reimer (eds.), *Geographies of Commodity Chains*, London: Routledge.
- René, France Albert (1982), *Budget Address 1983*, (28 December 1982), Victoria: Seychelles National Printing Company.
- René, France Albert (1983), *Budget Address 1984*, (28 December 1983), Victoria: Seychelles National Printing Company.
- René, France Albert (1984), *Budget Address 1985*, (28 December 1984), Victoria: Seychelles National Printing Company.
- René, France Albert (1985), *Budget Address 1986*, (30 December 1985), Victoria: Seychelles National Printing Company.
- René, France Albert (1986), *Budget Address 1987*, (30 December 1986), Victoria: Seychelles National Printing Company.
- Ribot, Jesse C., and Nancy Lee Peluso, (2003), 'A Theory of Access', *Rural Sociology*, 68(2): 153-181
- Ridings, Penelope J. (1983), 'Resource use arrangements in Southwest Pacific Fisheries', mimeo, Honolulu: Pacific Islands Development Program, East-West Center
- Roberto, Sarralde, Alicia Delgado de Molina, Javier Ariz and J. Carlos Santana (2007), 'Preliminary data obtained from supply logbooks implemented by the Spanish fleet since 2004'. IOTC-2007-WPTT-07
- Robinson J., P. Guillotreau, R. Jiménez-Toribio, F. Lantz, L. Nadzon, J. Dorizo, C. Gerry and F. Marsac (2010), 'Impacts of climate variability on the tuna economy of Seychelles', *Climate Research*, 43(3): 149-162

- Robinson, William I. and Jerry Harris (2000), 'Towards a Global Ruling Class? Globalization and the Transnational Capitalist Class', *Science & Society*, 64(1): 11-54
- Rockland, Steven (1978), 'The San Diego Tuna Industry and Its Employment Impact on the Local Economy', *Marine Fisheries Review*, 40(7):5-11.
- Rodriguez, Sebastian (2010), 'The market for seafood in Spain: Consumption of fish and seafood shows marked increase', *Eurofish Magazine*, 4.
- Rodrik, Dani (2001), 'The Global Governance of Trade As If Development Really Mattered'. Background paper to the UNDP project on Trade and Sustainable Human Development. New York: UNDP
- Rosalie, Michel W. and Liam Campling (2004), 'Socio-economic development in Seychelles: an overview', *Seychelles Medical and Dental Journal*, 7(1): 7-12.
- Rowe, J. W. F. (1959), *The Economy of the Seychelles and its Future Development*, Colony of Seychelles, Victoria: Government Printer
- Rugman, Alan (1986), 'New theories of the multinational enterprise: An assessment of the internalization theory', *Bulletin of Economic Research*, 38(2): 101-118.
- Rugman, Alan and Tom L. Brewer (eds.) (2001), *Oxford Handbook of International Business*, London: Oxford University Press.
- Russell, David, Ashok Patel, G. J. Wilkinson-Riddle (2001), *Cost Accounting: An Essential Guide*, London: Financial Times/ Prentice Hall;
- SADC (2007). 'SADC EPA Non-paper on Rules of Origin' (21 June), unpublished mimeo.
- Safina, Carl (2001), 'Tuna Conservation', in B.A. Block and E. Donald Stravens (eds.), *Tuna: Physiology, Ecology and Evolution*, San Diego: Academic Press.
- Saint Ange, Perin L., (1988), 'The Developing Tuna Fishery of the Seychelles: Constraints and Policy Issues', *Occasional Papers in Economic Development*, Faculty of Economic Studies, University of New England, Australia
- Salz, Pavel, Ellen Hoefnagel and Carlos Vale (2007), 'State of the art of European fisheries research in economics and other social sciences', MariFish Working Document (Project no.: CA025989)
- Savini, Michel with Barry Hart Dubner (1979), 'Legal and Institutional Aspects of Fisheries Management and Development in the Exclusive Economic Zone of the Republic of Seychelles', *Technical Report of the Indian Ocean Programme No. 30*, IOP/TECH/79/30, Rome: FAO and UNDP.
- Scarr Derryck (2000), *Seychelles since 1770: History of a Slave and Post-Slave Society*, London: Hurst & Co.
- Schapira, D. David (2009), The Italian tuna market, ANFACO-CECOPECA, IV Worldwide Conference of Tuna, Book of Papers, Vigo 2009, 14-15 September 2009.
- Schmidt, Carl-Christian (2003), 'Globalisation, Industry Structure, Market Power and Impact on Fish Trade Opportunities and Challenges for Developed (OECD) Countries', paper prepared for the FAO Industry and Expert Consultation on International Trade, Rio de Janeiro, 3-5 December 2003.
- Schmitz, Hubert and Peter Knorringa (2000), 'Learning from Global Buyers', *Journal of Development Studies*, 37(2): 177-205.
- Schneider, Jan (1977), 'Something Old, Something New: Some Thoughts on Grotius and the Marine Environment', *Virginia Journal of International Law*, 18(1): 147-164.
- Schoenberger, Erica (1994), 'Competition, Time, and Space in Industrial Change', in Gary Gereffi and Miguel Korzeniewicz (eds.), *Commodity Chains and Global Capitalism*, Westport, CT: Praeger.
- Schorr, David (2004), *Healthy Fisheries, Sustainable Trade: Crafting New Rules on Fishing Subsidies in the World Trade Organization*, Gland: WWF
- Schug, Donald M., and Alfonso P. Galea'i (1987), 'American Samoa: The Tuna Industry and the Economy' in David Douman (ed.), *Tuna Issues and Perspectives in the Pacific Islands Region*, Honolulu: East-West Center
- Schurman, Rachel A. (1998), 'Tuna Dreams: Resource Nationalism and the Pacific Islands' Tuna Industry', *Development and Change*, 29(1): 107-136.

- Scott, Anthony (1955), 'The Fishery: The Objectives of Sole Ownership', *Journal of Political Economy*, 63(2): 116-24
- SDD (Social Development Division), (July 2003) *Republic of Seychelles Country Report: Ten-Year Review and Appraisal of the Dakar/Ngor Declaration and the International Conference on Population and Development+10 Programme of Action*, Victoria: Ministry of Social Affairs and Employment
- SEAFDEC (2003), *Pelagic Longline*, Samutpraken: Training Department/Southeast Asian Fisheries Development Centre
- SEAFDEC (2004), *Tuna Purse Seine*, Samutpraken: Training Department/Southeast Asian Fisheries Development Centre
- Seafish (2008), 'CO2 Emissions: Case Studies in Selected Seafood Product Chains', *Seafish Briefing Paper*, (Spring). Available at: <http://www.seafish.org/co2emissions/>
- Seafish (2008a), *Seafood Export Profiles: Spain*, Edinburgh: Seafish
- Seafish (2008b), *Seafood Export Profiles: France*, Edinburgh: Seafish
- Seafish (2008c), *Seafood Export Profiles: Germany*, Edinburgh: Seafish
- Seafish (2008d), *Seafood Export Profiles: Italy*, Edinburgh: Seafish
- Seafish (2008f), *Seafood Export Profiles: Netherlands*, Edinburgh: Seafish
- Seafish (2008g), *Focus on the Sushi Market*, Edinburgh: Seafish
- Seafish (2008h), *Seafish Guide to the Responsible Sourcing of Tuna* (July), Edinburgh: Seafish
- Seafish (2009), *Selling to France*, Workshop Grimsby, 22 October 2009. UK Department of Trade & Investment, p.12
- Seafish (2010), Context Report: Total GB Coverage, Data to 26/12/2009, Source: Nielsen Scantrack, Edinburgh: Seafish, 15 January 2010
- SEC(2009) 1137 final, Report from the Commission to the Council, The European Parliament, The European Economic and Social Committee and the Committee of the Regions: EU 2009 Report on Policy Coherence for Development', Commission of the European Communities, Brussels, 17.09.2009
- SEC(2010) 428 final, Commission Staff Working Document Synthesis of the Consultation on the Reform of the Common Fisheries Policy, Commission of the European Communities, Brussels, 16.4.2010
- Selwyn, Ben 2007, 'Export Grape Production and Development in North East Brazil'. London: SOAS. PhD Thesis.
- Serdy, Andrew (2004), 'One fin, two fins, red fins, bluefins: some problems of nomenclature and taxonomy affecting legal instruments governing tuna and other highly migratory species', *Marine Policy*, 28(3): 235-247.
- Seth, Andrew and Geoffrey Randall (1999), *The Grocers: The rise and rise of the supermarket chains*, London: Kogan Page
- Seychelles Today* (2000), 'Lifting fish to No. 1', December 2000, Volume 2: 18-19.
- SFA (1987-2004), *Seychelles Fishing Authority Annual Report* (various years), Victoria: SFA
- SFA (1996), 'The Industrial Tuna Fishing Activity in Seychelles – Report for the Year 1995', unpublished mimeo, Seychelles Fishing Authority, Port Victoria.
- Shaikh, Anwar (2007), 'Globalization and the myth of free trade', in A. Shaik (ed.) *Globalization and the Myths of Free Trade: History, theory, and empirical evidence*, London: Routledge.
- Shephard, Sue (2000), *Pickled, Potted and Canned: How the Art and Science of Food Preserving Changed the World*, London: Simon & Schuster.
- Sibert, John (1987), 'Biological Perspectives on Future Development of Industrial Tuna Fisheries', in David Doullman (ed.), *Tuna Issues and Perspectives in the Pacific Islands Region*, Honolulu: East-West Center
- Sibert, John (1998), 'Creating an Agenda for Research to Support management of Fisheries for Highly Migratory Species', in P. Cayre and J-Y. Le Gall (eds.), *Tuna Prospects and Strategies for the Indian Ocean*, Paris: Editions de l'Orstom

- Sibert, John and John Hampton (2003), 'Mobility of tropical tunas and the implications for fisheries management', *Marine Policy*, 27(1): 87-95
- Sikor, Thomas and Christian Lund (eds.) (2009), *The Politics of Possession: Property, Authority and Access to Natural Resources*, London: Wiley-Blackwell.
- Sikor, Thomas, and Christian Lund (2009), 'Access and Property: A Question of Power and Authority', *Development and Change*, 40(1): 1-22
- Sitthipongpanich, Thitima (2002), 'The Dynamics of the Thai Tuna Industry', *Rabobank International: Industry Note – Food & Agribusiness Research*, February.
- SITZ (1995), International Trade Zone Act, 1995, *Supplement to Official Gazette* (Seychelles), 20 June 1995.
- SITZ (1997), International Trade Zone (Employment) Regulations, 1997, *Supplement to Official Gazette* (Seychelles), 10 February 1997.
- Skaladany, Mike, Ben Bolton and Rebecca Clausen (2005), 'Out of Sight and Out of Mind: A New Oceanic Imperialism', *Monthly Review*, 56(9): 14-24.
- Skaladany, Mike, Ben Bolton and Rebecca Clausen (2005), 'Out of Sight & Out of Mind: A New Oceanic Imperialism', *Monthly Review*, 56(9): 14-24
- Sklair, Leslie (2001), *The transnational capitalist class*, Oxford: Blackwell.
- Slack, Brian, Claude Comtois, and Robert McCalla (2002), 'Strategic alliances in the container shipping industry: a global perspective', *Maritime Policy Management*, 29: 1, pp.65-76.
- Smidt, Steffen (2001), Speech: International fisheries agreements and the CFP, Fishmongers' Hall, London, 11 May 2001, DG FISH, European Commission
- Smith, Adrian, Al Rainnie, Mick Dunford, Jane Hardy, Ray Hudson and David Sadler (2002), 'Networks of value, commodities and regions: reworking divisions of labour in macro-regional economies', *Progress in Human Geography*, 26(1): 41-63.
- Smith, David A. and Matthew C. Mahutga (2009), 'Trading Up the Commodity Chain? The Impact of Extractive and Labor-Intensive Manufacturing Trade on World-System Inequalities', in Jennifer Bar (ed.), *Frontiers of Commodity Chain Research*, Stanford: Stanford University Press.
- Smith, Hance D. (2000), 'The industrialisation of the world ocean', *Ocean & Coastal Management*, 43(1): 11-28
- Smithers, Rebecca (2011), 'Heinz left playing tomato catch-up after ketchup taste trouncing', *The Guardian*, 26 May 2011.
- SNI (2006), *Société Nationale d'Investissement Annual Report 2005*, Casablanca: SNI. Available at: <http://www.ona.ma>
- South Centre (2008). "Fact Sheet N°7: Market Access for Trade in Goods in Economic Partnership Agreements (EPAS)", *Analytical Note*, SC/AN/TDP/EPA/14, Geneva: South Centre
- Southwest Fisheries Center (1985), *Director's Report to the Thirty-sixth Tuna Conference on Tuna and Tuna-related Activities at the Southwest Fisheries Center, La Jolla, California. For the Period May 1, 1984 to April 30, 1985*, Administrative Report LJ-85-17, La Jolla: National Marine Fisheries Service.
- Sporrong, Niki, and Kate Bevins (2002), 'Subsidies to the European Union Fisheries Sector', (commissioned by the WWF European Fisheries Campaign), London: Institute for European Environmental Policy
- Spruyt, Nick (2000), 'Private labels vs. supermarket brands in the UK', in S. Subasinghe and Sudari Pawiro (eds.), *Tuna 2000 Bangkok: Papers of the 6<sup>th</sup> World Tuna Trade Conference, 25-27 May, 2000, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Squires, Dale, Taekwon Kim, Yongil Jeon and Raymond Clarke (2006), 'Price linkages in Pacific tuna markets: implications for the South Pacific Tuna Treaty and the Western and Central Pacific region', *Environmental and Development Economics*, 11(6): 747-767.
- Sribhibhadh, Arpona (1993), 'Thailand: Tuna Situation and Prospects', in Henri de Saram and N. Krishnasamy (eds.), *Tuna 93 Bangkok: Papers of the 3<sup>rd</sup> INFOFISH Tuna Trade Conference, 26-28 October, 1993, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.

- Standing, André (2008), *Corruption and industrial fishing in Africa*, Bergen: U4 Anti-Corruption Resource Centre. Available at: <http://www.U4.no> (last accessed 10 January 2010)
- Standing, André (2011), 'Corruption and the Political Economy of Fisheries: Some Considerations from Africa'. Unpublished mimeo.
- StarKist (2001), 'Prehearing statement of StarKist Samoa, Inc.', Special Industry Committee No. 24 for All Industries in American Samoa, US Department of Labor, Wage and Hour Division (June).
- StarKist (2010), company website. Available at: <http://www.starkist.com/>
- Starosta, Guido (2010), 'Global Commodity Chains and the Marxian Law of Value', *Antipode*, 42(2): 433-465.
- Stevens, C., M. Meyn, J. Kennan, S. Bilal, C. Braun-Munzinger, F. Jerosch, D. Makhan and F. Rampa (2008), *The new EPAs: comparative analysis of their content and the challenges for 2008 –Final Report*, London and Maastricht: ODI and ECDPM.
- Stevens, Christopher (2005), 'An Alternative Strategy for Free Trade Areas: The Generalized System of Preferences', in Olufemi Babarinde and Gerrit Faber (eds.), *The European Union and the Developing Countries: The Cotonou Agreement*, Leiden: Martinus Nijhoff
- Stevens, Christopher (2008). 'Economic Partnership Agreements: What Can We Learn?' *New Political Economy*, 13(2): 211-223.
- Stevens, Christopher and Ann Weston (1984), 'Trade Diversification: Has Lomé Helped?' in Christopher Stevens (ed.) *EEC and the Third World: A Survey 4 – Renegotiating Lomé*, London: Hodder and Stoughton.
- Stilwell, Jonathan, Alassane Samba, Pierre Failler and Francis Laloë (2010), 'Sustainable development consequences of European Union participation in Senegal's Marine Fishery', *Marine Policy*, 34(3): 616–623
- Strange, Roger and James Newton (2006), 'Stephen Hymer and the externalization of production', *International Business Review*, 15(2): 180–193.
- Streetham, Paul (1993), 'The Special Problems of Small Countries', *World Development*, 21(2): 197-202
- Striffler, Steve and Mark Moberg (eds.) (2003), *Banana Wars: Power, Production, and History in the Americas*, London: Duke University Press.
- Stromsta, Karl-Erik (2008), 'Re-imagining the food miles debate', *Intrafish.com*, 26 June
- Sturgeon, Timothy J. (2001), 'How Do We Define Value Chains and Production Networks?' *IDS Bulletin – The Value of Value Chains: Spreading the Gains from Globalisation*, 32(3): 9-18.
- Sturgeon, Timothy J. (2002), 'Modular Production Networks: A New American Model of Industrial Organization', *Industrial and Corporate Change*, 11(3): 451-496.
- Sturgeon, Timothy J. and Richard K. Lester (2003), 'The New Global Supply-Base: New Challenges for Local Suppliers in East Asia', *IPC Working Papers Series*, Industrial Performance Center, Massachusetts Institute of Technology (MIT). Available at: <http://web.mit.edu/ipc/publications/pdf/03-006.pdf>
- Subhapholsiri, Sally Achaya (2000a), 'Petfood markets – strategies for success', in S. Subasinghe and Sudari Pawiro (eds.), *Tuna 2000 Bangkok: Papers of the 6<sup>th</sup> World Tuna Trade Conference, 25-27 May, 2000, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Subhapholsiri, Sally Achaya (2000b), 'Thai tuna industry situation – surviving the Bhat', in S. Subasinghe and Sudari Pawiro (eds.), *Tuna 2000 Bangkok: Papers of the 6<sup>th</sup> World Tuna Trade Conference, 25-27 May, 2000, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Sumaila, Ussif Rashid and Daniel Pauly (eds.) (2006), 'Catching More Bait: A Bottom-Up Re-Estimation of Global Fisheries Subsidies', *Fisheries Centre Research Reports* 14(6): 1-114
- Sumaila, U. Rashid, A. Dale Marsden, Reg Watson and Daniel Pauly (2007a), 'A Global Ex-vessel Fish Price Database: Construction and Applications', *Journal of Bioeconomics*, 9(1): 39-51
- Sumaila, Ussif Rashid, Gordon R. Munro, and Jon G. Sutinen (2007b), 'Recent Developments in Fisheries Economics: An Introduction', *Land Economics*, 83(1): 1-5
- Surís-Regueiro, Juan C., Manuel M. Varela-Lafuente and M. Dolores Garza-Gil (2002), 'Profitability of the fishing fleet and structural aid in the European Union', *Marine Policy*, 26 (2): 107–119

- Surís-Regueiro, Juan C., Manuel M. Varela-Lafuente and Carlos Iglesias-Malvido (2003), 'Effectiveness of the structural fisheries policy in the European Union', *Marine Policy* 27(6): 535–544
- Sutcliffe, Bob (2001), *100 Ways of Seeing an Unequal World*, London: Zed.
- Swedish Society for Nature Conservation (2009), *To Draw the Line: EU fisheries agreements in West Africa*, Stockholm: Swedish Society for Nature Conservation
- Symes, David (1997), 'The European Community's Common Fisheries Policy', *Ocean & Coastal Management*, 35(2-3): 137-155
- Szentes, Tamas (2005), 'Development in the History of Economics', in *The Origins of Development Economics: How School of Economic thought Have Addressed Development*, edited by Jomo K.S. and Erik S. Reinert, London: Zed.
- Tan, Marfenio Yong (2006), 'WTPO's commitment to sustainable tuna management', in S. Subasinghe, Sudari Pawiro and S. M. Anthonysamy (eds.), *Proceedings of Tuna 2006: Ninth INFOFISH World Tuna Trade Conference and Exhibition 25-27 May 2006*, Kuala Lumpur: INFOFISH
- Taplin, Ian M. (1994), 'Strategic Restructuring of U.S. Apparel firms', in Gary Gereffi and Miguel Korzeniewicz (eds.), *Commodity Chains and Global Capitalism*, Westport, CT: Praeger.
- Tarte, Sandra (2002), 'The European Union and the Western and Central Pacific Tuna Fishery', Paper prepared for the Thirteenth Europe Pacific Solidarity Seminar, 11-13 October 2002, Strasbourg, France. pp. 1-12. Available at: <<http://www.antenna.nl/ecsiep/fish/steupac.htm>> (last accessed 25 January 2005)
- Tarte, Sandra (2004), 'Managing Tuna Fisheries in the Pacific: A Regional Success Story?', paper presented at the 39th University of Otago Foreign Policy School, 25-28 June 2004
- Task Force (2004), 'Report of the Industrial Tuna Fishing Task Force' (minutes of 13 July 2004 meeting and Terms of Reference), mimeo, Seychelles.
- Taylor, Marcus (2007), 'Rethinking the Global Production of Uneven Development', *Globalizations*, 4(4): 529-542
- Taylor, Marcus (2008), 'Power, conflict and the production of the global economy', in Marcus Taylor (ed.), *Global Economy Contested: Power and conflict across the international division of labour*, London: Routledge
- Tecichova, Alice, Maurice Lévy-Leboyer and Helga Nussbaum (1986), *Multinational enterprise in historical perspective*, Cambridge: Cambridge University Press.
- Teiwaki, Roniti (1987), 'Access agreements in the South Pacific: Kiribati and the distant water fishing nations 1979-1986', *Marine Policy*, 11(4): 273-284
- Thai Customs Department, Thailand. Available at: <http://www.customs.go.th/Statistic/StatisticIndex.jsp>
- Thande, George (2009), 'EU and Seychelles reach new tuna fishing deal', *Reuters*, 9 February 2009.
- Thrupp, Lori Ann (1995), *Bittersweet Harvests for Global Supermarkets: Challenges in Latin America's Agricultural Export Boom*, Washington: World Resources Institute.
- Tiller, Simon (2005), 'On or Beyond the Horizon: A Discussion Paper on Options for Improving Economic Outcomes from the Western and Central Pacific Tuna Fishery', paper prepared with support from the Asian Development Bank
- Tilly, Charles (2006), 'Wal-Mart Goes South: Sizing Up the Chain's Mexican Success Story', in S. D. Brunn (ed.), *Wal-Mart World: The World's Biggest Corporation in the Global Economy*, Abingdon: Routledge
- Tiu-Laurel, Francisco P. (2002), 'The Philippine tuna industry situation and outlook', in S. Subasinghe and Sudari Pawiro (eds.), *Global Tuna Industry Situation and Outlook: Resources, Production & Marketing Trends and Technological Issues*, Kuala Lumpur: INFOFISH.
- Tiu-Laurel, Francisco P. (2006), 'Philippines tuna industry situation and outlook', in S. Subasinghe, Sudari Pawiro and S. M. Anthonysamy (eds.), *Proceedings of Tuna 2006: Ninth INFOFISH World Tuna Trade Conference and Exhibition 25-27 May 2006*, Kuala Lumpur: INFOFISH
- TN/RL/W/213, Negotiating Group on Rules, Chairs Draft Text, Annex C - Fisheries Subsidies, 30 November 2007
- TN/RL/W/236, New Draft Consolidated Chair Texts of the AD and SCM Agreements, 18 December 2008



- Toye, John (1987), *Dilemmas of Development: Reflections on the Counter-Revolution in Development Theory and Policy*, Oxford: Basil Blackwell.
- Tripis, Stavros (2008), 'Superfrozen ULT-Tuna', paper presented at the Tuna 2008: Tenth INFOFISH World Tuna Trade Conference and Exhibition 28-30 May 2008.
- Trovamala, Ernesto (2004), 'The Southern European Market for Canned Tuna', in S. Subasinghe, Sudari Pawiro and Shirlene Maria Anthonysamy (eds.), *Tuna 2004 Bangkok: 8<sup>th</sup> INFOFISH World Tuna Trade Conference and Exhibition, 3-5 June, 2004,, Bangkok, Thailand*, Kuala Lumpur: INFOFISH.
- Tsai, James T. P. (2002), 'Voluntary reduction and the future of the purse seine fishery in Taiwan', in S. Subasinghe and Sudari Pawiro (eds.), *Global Tuna Industry Situation and Outlook: Resources, Production & Marketing Trends and Technological Issues*, Kuala Lumpur: INFOFISH.
- Tsamenyi, B. Martin (1986), 'The South Pacific states, the USA and sovereignty over highly migratory species', *Marine Policy*, 10(1): 29-41
- Tsamenyi, Martin, and Transform Aquorau (1998), 'Institutional Framework for Tuna Management in the Western Central Pacific: Achievements and Constraints', in P. Cayre and J-Y. Le Gall (eds.), *Tuna Prospects and Strategies for the Indian Ocean*, Paris: Editions de l'Orstom.
- Tsamenyi, Martin and Quentin Hanich (2008), 'Addressing corruption in Pacific Island Fisheries', Report prepared for the IUCN Profish Law Enforcement, Corruption and Fisheries Project. Available at <http://www.iucn.org>
- Tyedmers, Peter H., Reg Watson and Daniel Pauly (2005), 'Fueling Global Fishing Fleets', *Ambio*, 34(8): 635-638
- UK Competition Commission (2000), *Supermarkets: A Report on the Supply of Groceries from Multiple Stores in the United Kingdom*, London: Department of Trade and Industry
- UK Competition Commission (2007), *The Supply of Groceries in the UK market investigation: Provisional findings report*, London: Competition Commission
- UNCLOS (1982), United Nations Convention on the Law of the Sea of 10 December 1982. Available at: [http://www.un.org/Depts/los/convention\\_agreements/texts/unclos/closindx.htm](http://www.un.org/Depts/los/convention_agreements/texts/unclos/closindx.htm) (last accessed 25 February 2011)
- UNCTAD (1996), 'Development challenges facing island developing countries: basic issues and prospects in the context of trade liberalization and globalization', Paper prepared by UNCTAD for the Commission on Sustainable Development, High-level Panel Meeting on Island Developing Countries, 22-23 April 1996, UNCTAD/LLDC/IDC/2
- UNCTAD (1997), *Review of Maritime Transport 1997*, Geneva: UNCTAD.
- UNCTAD (2003), *Trade Preferences for LDCs: An Early Assessment of Benefits and Possible Improvements*, New York and Geneva: United Nations
- UNCTAD (2004), *Review of Maritime Transport 2004*, Geneva: UNCTAD
- UNCTAD (2005), *Review of Maritime Transport 2005*, Geneva: UNCTAD
- UNEP (2008), *Fisheries Subsidies: A Critical Issue for Trade and Sustainable Development at the WTO - An Introductory Guide*, Geneva: United Nations Environment Programme
- United Tuna Cooperative (2001), Letter to the Food & Drug Administration, 17 September 2001.
- US Embassy Port Louis (2008), 'Where's The Tuna? Lehman Brothers' Bankruptcy And Pirates Affects Seychelles'. Leaked cable from US Embassy Port Louis, Mauritius to US State Department, Washington DC, 17 September 2008. Cable ID: 08PORTLOUIS316. Wikileaks ID: #170166. Available at: <http://www.wikileaks.lu/cablegate.html>
- US Energy Information Administration. Available at: [http://tonto.eia.doe.gov/dnav/pet/pet\\_pri\\_spt\\_s1\\_m.htm](http://tonto.eia.doe.gov/dnav/pet/pet_pri_spt_s1_m.htm)
- USITC (1998), *Industry & Trade Summary, Canned Fish, Except Shellfish*, Washington DC: United States International Trade Commission.  
[http://hotdocs.usitc.gov/docs/pubs/industry\\_trade\\_summaries/PUB3083.PDF](http://hotdocs.usitc.gov/docs/pubs/industry_trade_summaries/PUB3083.PDF)
- Vallée, Thomas and Patrice Guillotreau (2008), 'Fishing agreements and macroeconomic dependence: a game theory approach of the EU-ACP framework', IIFET 2008 Vietnam Proceedings

- Valsecchi, Adolfo (2006), 'Analysis of the Tuna Market at European and World-Wide Level', paper presented at III European Conference of Tuna, Vigo 11-12 September. 2006.
- Valsecchi, Adolfo (2007), 'European Markets for Canned Tuna' in S. Subasinghe, Susari Pawiro and Shirlene Maria Anthonysamy (eds.), *Proceedings of the Tuna 2006 Bangkok 9<sup>th</sup> World Tuna Trade conference*, 25-27 May 2006, Kuala Lumpur: INFOFISH.
- Valsecchi, Adolfo (2008), 'EU27 market for canned tuna', paper presented at the INFOFISH Tuna 2008 conference, 28-30 May 2008, Bangkok, Thailand.
- Van Anrooy, R., I. U. Ahmad, T. Hart, M. Hotta, Y. Ping, W. Yang, T. Shipton, C. Benoit, R. Ruchismita, S. Upare and S.V. Siar (2000), 'Review of the current state of world capture fisheries insurance', *FAO Fisheries and Aquaculture Technical Paper. No. 510*, Rome: FAO.
- van Nieuwkerk, Anthoni (2003), 'Democracy and security in the Seychelles', Paper presented to the conference, *Seychelles in the 21st Century: understanding legacies and facing future challenges*, National Institute of Education, Mont Fleuri, Mahé, Seychelles, 21-22 March, 2003.
- Vannuccini, Stefania (2003), *Overview of Fish Production, Utilization, Consumption and Trade*, Rome: FAO.
- Vellema, Sietze (2005), 'The local cultures of contract farming: the export of fresh asparagus from the Philippines to Japan', in Niels Fold and Bill Pritchard (eds.) *Cross-continental Food Chains*, London: Routledge.
- Vernon, Raymond (1966), 'International Investment and International Trade in the Product Cycle', *Quarterly Journal of Economics*, 80(2): 190-207.
- Vernon, Raymond (1979), 'The Product Cycle Hypothesis in a New International Environment', *Oxford Bulletin of Economics & Statistics*, 41(4): 255-267
- Villasante, Sebastian (2010), 'Global assessment of the European Union fishing fleet: An update', *Marine Policy*, 34(3): 663–670
- Villasante, Sebastian and Ussif Rashid Sumaila (2010), 'Estimating the effects of technological efficiency on the European fishing fleet', *Marine Policy*, 34(3): 720–722
- Vorley, Bill (2003a), *Food, Inc.: Corporate concentration from farm to consumer*, London: UK Food Group. Available at: <http://www.ukfg.org.uk/docs/UKFG-Foodinc-Nov03.pdf>
- Vorley, Bill (2003b), Briefing Paper – Producers Module: Benchmarking and tracking supermarkets' terms of trade with primary producers', *Race to the Top*, London: IIED. Available at: <http://www.racetothetop.org>
- Wallace, H. (2005). 'An Institutional Anatomy and Five Policy Modes', in H. Wallace, W. Wallace and M. A. Pollock (eds.), *Policy-Making in the European Union* [5<sup>th</sup> Edn], Oxford: Oxford University Press.
- Walmsley, S.F., Barnes, C.T., Payne, I.A., Howard, C.A. (2007), 'Comparative Study of the Impact of Fisheries Partnership Agreements – Technical Report', London: MRAG, CRE & NRI.
- Wang, Shuguang and Yongchang Zhang (2006), 'Penetrating the Great Wall, Conquering the Middle Kingdom: Wal-Mart in China', in S. D. Brunn (ed.), *Wal-Mart World: The World's Biggest Corporation in the Global Economy*, Abingdon: Routledge
- Warne, Darian (1988), 'Manual on Fish Canning', *FAO Fisheries Technical Paper 285*. Available at: <<http://www.fao.org/docrep/003/T0007E/T0007E00.HTM>> (last accessed 1 September 2007)
- Watts, Michael (2004), 'Are hogs like chicken? Enclosure and mechanization in two 'white meat' filières', in Alex Hughes and Suzanne Reimer (eds.), *Geographies of Commodity Chains*, London: Routledge.
- Weis, Tony (2007), *The Global Food Economy: The Battle for the Future of Farming*, London: Zed.
- Weston, Ann, Vincent Cable and Adrian Hewitt (1980), *The EEC's Generalised System of Preferences—Evaluation and Recommendations for Change*, London: Overseas Development Institute.
- Wiggins, Jenny (2005), 'Heinz to sell Europe units and non-core brands', *Financial Times*, 26 May 2005. Available at: <http://news.ft.com/cms/s/f76580e2-cde1-11d9-9a8a-00000e2511c8.html> (last accessed 24 June 2005)
- Wilkinson, Rorden (2000), *Multilateralism and the World Trade Organisation: The Architecture and Extension of International Trade Regulation*, London: Routledge
- Willets, Peter (1981), *The Non-Aligned in Havana*, London: Frances Pinter.

- Williams, Steve (1992), 'Understanding Japanese seafood markets: History and tradition', *Australian Fisheries*, (February): 32-36
- Williamson, Oliver E. (1981), 'The Modern Corporation: Origins, Evolution, Attributes', *Journal of Economic Literature*, XIX(December): 1537-1568.
- Williamson, Oliver E. (1995), 'Hierarchies, Markets and Power in the Economy: An Economic Perspective', *Industrial and Corporate Change*, 4(1): 21-49.
- Winters, L. Alan, and Pedro M. G. Martins (2004), 'When comparative advantage is not enough: business costs in small remote economies', *World Trade Review*, 3(3): 347-383
- WIOTO (1990), 'Record of Discussion: Second Consultative Meeting on Tuna Management and Development Strategies for Western Indian Ocean Coastal States', Mahé, Seychelles, 28-31 1990
- WIOTO (1991), 'Western Indian Ocean Tuna Organisation Convention', Mahé, Seychelles, June.
- Wolfgang, S. (2005), 'Are EU access agreements harming Africa's artisanal fisheries?', *Agriculture & Rural Development*, 2:38-40.
- Wood, Adrian (2001), 'Value Chains: An Economist's Perspective', *IDS Bulletin – The Value of Value Chains: Spreading the Gains from Globalisation*, 32(3): 41-45.
- Wood, Ellen Meiksins (1999), *The Origin of Capitalism*, New York: Monthly Review Press
- Wood, Ellen Meiksins (2005), *Empire of Capital*, London: Verso
- World Bank (1981), *Accelerated Development in Sub-Saharan Africa: An Agenda for Action*, Washington DC: World Bank.
- World Bank (1997), *World Development Report 1997: The State in a Changing World*, Oxford: Oxford University Press.
- World Bank (2010), *The Hidden Harvests: The Global Contribution of Capture Fisheries* (conference edition). Washington DC: World Bank
- Wright, Stephen (2005), 'Negotiating Economic Partnership Agreements: Contexts and Strategies', in Olufemi Babarinde and Gerrit Faber (eds.), *The European Union and the Developing Countries: The Cotonou Agreement*, Leiden: Martinus Nijhoff
- Wrigley, Neil (2001), 'The Consolidation Wave in U.S. Food Retailing: A European Perspective', *Agribusiness*, 17(4): 489-513.
- Wrigley, Neil, Neil M. Coe and Andrew Currah (2005), 'Globalizing retail: conceptualizing the distribution-based transnational corporation (TNC)', *Progress in Human Geography*, 29(4): 437-457.
- WT/CTE/W/51, 1997, Environmental and Trade Benefits of Removing Subsidies in the Fishing Sector- Submission by the United States.
- WT/MIN(01)/Dec/1, 2001, Ministerial Declaration, World Trade Organization Ministerial Conference (Doha).
- WT/MIN(05)/DEC, 22 December 2005. 6th Ministerial Conference, Hong Kong, Doha Work Programme, Ministerial Declaration: Annex D: Rules, Adopted on 18 December 2005.
- WTO (No date), 'The Definition of Small Economies', (Draft), WTO Work Programme on Small Economies, unpublished mimeo, Geneva: World Trade Organization
- WTPO (2002), 'WTPO Resolution, WTPO Declaration (2nd Interim Evaluation Meeting, Kaohsiung, Taiwan, 18 June 2002) [FTWG-7]'. Noumea, New Caledonia: SPC, Secretariat of the Pacific Community. Standing Committee on Tuna and Billfish, Honolulu, Hawaii, USA, 22-27 July 2002, 15th. 6 p. Available at: [wwwx.spc.int/coastfish/sections/reef/Library/index.html](http://wwwx.spc.int/coastfish/sections/reef/Library/index.html) (last accessed 17 July 2010)
- WWF (1997), *Subsidies and Depletion of World Fisheries: Case Studies*, Washington, DC: WWF
- WWF (2001), *Hard Facts, Hidden Problems: A Review of Current Data on Fishing Subsidies*, Gland and Washington DC: WWF
- Yamao, Masahiro (2000), 'The impact of the Asian economic crisis on fisheries: The expansion and decline of export-orientated fisheries in Thailand', in FAO, 'Report of the KMI/ Africa/ FAO Regional Workshop on the Effects of Globalization and Deregulation on Marine Capture Fisheries in Asia and the Pacific, Pusan, Republic of Korea, 11-15 October 1999', *FAO Fisheries Report No. 624*, Rome: FAO.

- Yamin, Mohammad (2000), 'A critical re-evaluation of Hymer's contribution to the theory of the transnational corporation', in Christos N. Pitelis and Roger Sugden (eds.), *The Nature of the Transnational Firm*, (2<sup>nd</sup> Edn.), London: Routledge
- Yang, Chun (2007), 'Divergent Hybrid Capitalisms in China: Hong Kong and Taiwanese Electronics Clusters in Dongguan', *Economic Geography*, 83(4): 395–420.
- Yin, Robert K. (2003), *Case Study Research: Design and Methods*, London: Sage
- Young, Margaret A. (2008), 'Fragmentation or interaction: the WTO, fisheries subsidies, and international law', *World Trade Review*, 8(4): 477–515
- Young, William (2004), *Sold Out: The True Cost of Supermarket Shopping*, London: Vision.
- Yu, Wusheng and Trine Vig Jensen (2005), 'Tariff Preferences, WTO Negotiations and the LDCs: The Case of the 'Everything But Arms' Initiative', *The World Economy*, 28:3, pp. 375-405.
- Zhang, Kevin Honglin (2007), 'International Production Networks and Export Performance in Developing Countries: Evidence from China', *The Chinese Economy*, 40(6): 83–96.
- Zhao, Zhongxiu and Kevin Honglin Zhang (2007), 'China's Industrial Competitiveness in the World', *The Chinese Economy*, 40(6): 6–23.
- Zuijdggeest, N. (2003) 'Emptying the Ocean: The Threatened Fisheries of West Africa', *Africa Geographic*, (June): 46-55

## APPENDIX 1A

### INTERVIEWEES AND MEETING ATTENDANCE

#### **Meetings and conferences in which I attended or participated**

Brussels, European Tuna Conference, European Tuna Conference, 27 April 2009, Belgium.

Windhoek, ICTSD-Commonwealth Secretariat *Regional Dialogue on Fisheries Aspects of the ACP-EU Economic Partnership Agreements*, 28-29 August 2008, Windhoek Country Club, Namibia

Brussels, PACP-EU Interim Economic Partnership Agreement negotiations, 17-19 and 24-26 September 2008, Belgium.

Geneva, multiple meetings at WTO fisheries subsidies multilateral clusters and bilateral meeting at Negotiating Group on Rules, December 2007 to February 2011, Switzerland.

Port Louis, East and Southern Africa (ESA) meeting convened by Commonwealth Secretariat on Trade and Sustainable Approaches to Fisheries Negotiations under WTO and EPA, 2-4 May 2007, Mauritius

Grand Bay, ESA Economic Partnership Agreement Fisheries meeting, 23-24 March 2007, Mauritius

Port Villa, Pacific Islands Forum Fisheries Agency Fisheries Trade Studies Workshop, 19–20 March 2007, Vanuatu

Brussels, ACP Consultative Process on a Trade and Sustainable Development Approach to Negotiation of Fisheries under the EPA, 22–24 January 2007, Belgium.

Port Villa, Ministerial and Senior Officials workshop ‘Pacific–EU Economic Partnership Agreements: Opportunities and Challenges for the Private Sector of New Trading Arrangements’, 27–28 November 2006, Vanuatu

Port Villa, Joint Pacific ACP Trade and Fisheries Ministers and Officials Meeting, 13-14 November 2006, Vanuatu

Bangkok, Tuna 2006: Ninth INFOFISH World Tuna Trade Conference and Exhibition 25-27 May 2006, Thailand.

In addition to participant observation in these trade negotiations and informal discussions at industry conferences and meetings, the thesis is based upon transcripts of semi-structured interviews with 512 interviewees (see the following table). Of these, 13 interviews were not done by me and instead I used transcripts recorded by others (indicated below).

Country	Entity (firm, government agency, etc)	Name	Date(s) of interview	Category of interviewee
<b>Belgium (Brussels)</b>	Centre for the Development of Enterprise (CDE)	Eric Rotsaert, Expert, Sectoral and Programme Operations Unit	2006 (May)	International agency
<b>Belgium</b>	Centre for the Development of Enterprise (CDE)	Vana Catsica, Regional Coordinator, Regional Operations Unit	2006 (May)	International agency
<b>Belgium</b>	Centre for the Development of Enterprise (CDE)	Michel de San, Marine Biologist, Fisheries Consultant	2006 (May)	International fisheries specialist
<b>Belgium</b>	Coalition for Fair Fisheries Agreements (CFFA)	Beatrice Gorez,	2006 (May)	NGO
<b>Belgium</b>	Directorate-General Development, European Commission	Francisco Affinito,	2006 (May)	EU government official
<b>Belgium</b>	Directorate-General Development, European Commission	Norbert Probst, Fisheries Policy Officer	2006 (May)	EU government official
<b>Belgium</b>	Directorate-General for Fisheries and Maritime Affairs, European Commission	Fabrizio Donatella, Bilateral Agreements	2006 (May)	EU government official
<b>Belgium</b>	Directorate-General for Fisheries and Maritime Affairs, European Commission	Staffan Ekwall, Principal Administrator, International and Regional Agreements	2006 (May)	EU government official
<b>Belgium</b>	Directorate-General for Fisheries and Maritime Affairs, European Commission	Barbara Focquet, Administrateur Accords Bilatéraux	2006 (May)	EU government official
<b>Belgium</b>	Directorate-General for Fisheries and Maritime Affairs, European Commission	Juan José Ronco Zapatero, Principal Administrator Markets and Trade	2006 (May)	EU government official
<b>Belgium</b>	Directorate-General for Taxation and Customs Union (TaxUD), European Commission	Jean Michel Gravé, Rules of Origin	2006 (May)	EU government official
<b>Belgium</b>	Directorate-General Trade, European Commission	Fabrice D'Aprile,	2006 (May)	EU government official
<b>Belgium</b>	Directorate-General Trade, European Commission	Martin Dihm,	2006 (May)	EU government official
<b>Belgium</b>	Directorate-General Trade, European Commission	Niel McDonald,	2006 (May)	EU government official
<b>Belgium</b>	Europeche	Guy Vernaeve	2006 (May)	EU industry representative
<b>Belgium</b>	Europeche (Scottish Fishermen's Federation)	Mike Park, President	2006 (May)	EU industry representative
<b>Belgium</b>	Europeche (Swedish Fishermen's Federation)	Henrik Svenberg, President	2006 (May)	EU industry representative
<b>Belgium</b>	Independent	Tony Lewis	Brussels (July 2011; person comm. 2010)	International fisheries specialist
<b>Belgium</b>	International Collective in Support of Fishworkers (ICSF) Brussels	Brian O'Riordan	2006 (May)	NGO
<b>Belgium</b>	Pro-Invest, Management Unit	Bruno van Eeckhout, Matchmaking Activities	2006 (May)	EU government official
<b>Belgium</b>	Secretariat of the African, Caribbean and Pacific	Ahmed Ndysobola, Global Economics and	2006 (May)	International agency

	Group of States (ACP Group)	Finance		
<b>Belgium</b>	Strengthening Fishery Products Health Conditions in ACP/OCT Countries (SFP)	Oliver Ledoux, Project Leader	2006 (May)	EU government official
<b>Belgium</b>	Syndicat National Des Armateurs de Thoniers-Congelateurs/ Orthongel (Organisation des Producteurs de thon Congelé)	Michel Dion, Délégué Général/ Directeur	2006 (May)	EU industry representative
<b>Fiji (Suva and surrounds unless otherwise specified)</b>	Asian Development Bank	Thomas Gloerfelt-Tarp, Head – Project Administration Unit	2006 (Feb)	International agency
<b>Fiji</b>	Asian Development Bank	Tina Seniloli, Assistant Project Analyst	2006 (Feb)	International agency
<b>Fiji</b>	Australian High Commission	Stephen McMillan, First Secretary	2005 (Dec)	ANZ government official
<b>Fiji</b>	Celtrock Holdings	Adrian Chute, General Manager	2006 (Feb; Interview transcript V. Ram-Bidesi)	PIC industry representative
<b>Fiji</b>	Celtrock Holdings	Avichal Raj, Production Manager	2006 (Feb; Interview transcript V. Ram-Bidesi)	PIC industry representative
<b>Fiji</b>	Center-PAC Agency	James Movick	2006 (Feb)	PIC industry representative
<b>Fiji</b>	CNFC Overseas Fishery Co., Ltd	Jing Chunde, General Manager (Lami)	2006 (March)	Asia industry representative
<b>Fiji</b>	Department of Commerce, Government of Fiji Islands	Mau Alipate	2006	Fiji government official
<b>Fiji</b>	Department of Fisheries, Ministry of Fisheries & Forests	Stan Qalovaki, Senior Researcher/Trade and Policy Advisor	2006 (Feb)	Fiji government official
<b>Fiji</b>	Department of Fisheries, Ministry of Fisheries & Forests	Apolosi Turaganivalu, Principal Fisheries Officer, Management Services	2006 (Feb)	Fiji government official
<b>Fiji</b>	Embassy of Japan	Shlendra Prasad Bilash, Economic & Aid Researcher	2005 (Dec)	Japan government official
<b>Fiji</b>	Embassy of Japan	Shigeki Takaya, First Secretary	2005 (Dec)	Japan government official
<b>Fiji</b>	Embassy of the People's Republic of China	Chen Dao Yun, Economic & Commercial Counsellor	2005 (Dec)	East Asia government official
<b>Fiji</b>	Embassy of the Republic of Korea	Jason Chandra, Research Associate/Special Assistant	2006 (March)	East Asia government official
<b>Fiji</b>	Embassy of the Republic of Korea	Yeonjean Yoon, Counsellor	2006 (March)	East Asia government official
<b>Fiji</b>	Embassy of the United States of America	Nirmal Singh, Political & Public Affairs Specialist	2005 (Dec)	US government official
<b>Fiji</b>	Delegation of the European Commission for the Pacific	Michele Gauché, First Counsellor Natural Resources	2006 (Feb)	EU government official
<b>Fiji</b>	FCF Fishery Co. Ltd	Yao Lin (Levuka)	2006 (Feb)	Asia industry representative
<b>Fiji</b>	FCF Fishery Co. Ltd	Jeff Tseng, Chief Representative Fiji Operation	2006 (March)	Asia industry representative

<b>Fiji</b>	Fiji Development Bank	Anjna Deb, Manager, Planning Research & Marketing Division	2005 (Dec)	Fiji government official
<b>Fiji</b>	Fiji Development Bank	Rudra Singh, Senior Business Manager	2005 (Dec)	Fiji government official
<b>Fiji</b>	Fiji Fish Marketing Group	Grahame Southwick, Executive Chairman (Lami)	2006 (Feb)	PIC industry representative
<b>Fiji</b>	Fiji Islands Bureau of Statistics	Davendan Kumar, Trade Section	2006 (March)	Fiji government official
<b>Fiji</b>	Fiji Islands Bureau of Statistics	Nalima Lal, Divisional Manager, Economic Statistics	2006 (March)	Fiji government official
<b>Fiji</b>	Fiji Islands Bureau of Statistics	Ronald Bali, Establishment Section	2006 (March)	Fiji government official
<b>Fiji</b>	Fiji Islands Customs and Revenue	Gopal Naiker, Tariff and Trade Section	2006 (Feb)	Fiji government official
<b>Fiji (Levuka)</b>	Fiji Islands Customs and Revenue Dept	Joseva Utovou	2006 (Feb)	Fiji government official
<b>Fiji (Levuka)</b>	Fiji Islands Customs and Revenue Dept	Jovesa Drega	2006 (Feb)	Fiji government official
<b>Fiji</b>	Fiji Islands Trade and Investment Bureau	Villame Volavola, Deputy General Manager	2006 (March)	Fiji government official
<b>Fiji</b>	Gillett, Preston & Associates	Bob Gillett	2005 (Dec)	International fisheries specialist
<b>Fiji</b>	Gourmet Foods	Robert Stone	2005 (Dec)	International fisheries specialist
<b>Fiji</b>	Great Ocean Enterprise	Min Sik Park, Managing Director	2006 (Feb)	PIC industry representative
<b>Fiji</b>	Greenpeace Australia and Pacific Ltd	Lai Waqanisau, Oceans Campaigner	2006 (March)	NGO
<b>Fiji</b>	Hangton Pacific Co. Ltd.	Jitendra Mohan	2005 (Dec)	PIC industry representative
<b>Fiji</b>	Hans Marine	Han Sang Nam, Managing Director	2006 (Feb)	Asia industry representative
<b>Fiji</b>	Japan International Cooperation Agency (JICA)	Hisashi Suzuki, Assistant Resident Representative	2005 (Dec)	Japan government official
<b>Fiji</b>	Jiko Fisheries	Babra Seema, Accountant	2006 (March)	PIC industry representative
<b>Fiji</b>	Ministry of Foreign Affairs and External Trade	Namita Khatri, Economic Planning Officer, External Trade and Sustainable Development Division	2005 (Dec)	Fiji government official
<b>Fiji</b>	Ministry of Labour, Industrial Relations and Productivity	Tavite Racumu	2006 (Feb)	Fiji government official
<b>Fiji</b>	New Zealand High Commission	Michael Greenslade, Trade Commissioner	2006 (Feb)	ANZ government official
<b>Fiji</b>	New Zealand High Commission	Richard Kay, Second Secretary	2006 (March)	ANZ government official
<b>Fiji</b>	Overseas Fishery Cooperation Foundation (OFCF)	Katsuji Fujita, Fishery Advisor	2006 (March)	Japan government official
<b>Fiji</b>	Overseas Fishery Cooperation Foundation (OFCF)	Takashi Nagura, Resident Representative	2006 (March)	Japan government official
<b>Fiji</b>	Overseas Fishery Cooperation Foundation (OFCF)	Tomohide Yamada, Assistant Resident Representative	2006 (March)	Japan government official



<b>Fiji</b>	Pacific Fishing Company Limited (Pafco)	Chandra Prakash, General Manager	2006 (March)	PIC industry representative
<b>Fiji</b>	Pacific Islands Forum Secretariat	Roman Grynberg, Director Economic Governance	2005-2007 (multiple person. comms.)	International agency
<b>Fiji</b>	Pacific Islands Forum Secretariat	David Primack, EPA consultant	2005-2007 (multiple person. comms.)	International agency
<b>Fiji</b>	Pacific Islands Forum Secretariat	Judith Fessahalie, ODI Fellow	2005-2007 (multiple person. comms.)	International agency
<b>Fiji</b>	Pacific Islands Forum Secretariat	James Gosselin, Regional Trade Policy Advisor	2005 (Dec)	International agency
<b>Fiji</b>	Pacific Islands Forum Secretariat	Laura Chappell, ODI Fellow	2005-2006 (multiple person. comms.)	International agency
<b>Fiji</b>	Pacific Islands Forum Secretariat	Mere Falemaka, EPA Consultant	2006 (Feb)	International agency
<b>Fiji</b>	Pacific Islands Forum Secretariat	Moses Mose	2006 (Feb)	International agency
<b>Fiji</b>	Pacific Islands Forum Secretariat	Peter Forau, Deputy Secretary General	2006 (Feb)	International agency
<b>Fiji (Levuka)</b>	Pafco	Ashok Kumar Raj, Production Manager	2006 (Feb)	PIC industry representative
<b>Fiji (Levuka)</b>	Pafco	Gerald B. Kontoh, Quality Assurance Manager	2006 (Feb)	PIC industry representative
<b>Fiji (Levuka)</b>	Pafco	William Gounder, Raw Materials & Logistics Manager	2006 (Feb)	PIC industry representative
<b>Fiji (Levuka)</b>	Pafco	Jean Claude Guenegan, General Manager	2006 (Feb)	US industry representative or PIC industry representative
<b>Fiji</b>	PAFCO Employees' Union	Tomasi Tokalauvere, Trade Unionist	2006 (Feb)	NGO
<b>Fiji</b>	Seafresh (Fiji) Ltd	Sheldon Xu, Deputy General Manager	2006 (Feb; Interview transcript V. Ram-Bidesi)	PIC industry representative
<b>Fiji</b>	Solander Pacific	Radhika Kumar, Business Manager	2006 (March)	PIC industry representative
<b>Fiji</b>	Solander Pacific	David Lucas, Director	2005 (Dec); 2006 (March)	PIC industry representative
<b>Fiji</b>	Tai-Fi Shipping Agencies	Johnny Wang, Director	2006 (March)	PIC vessel services
<b>Fiji</b>	Tosa Bussan (Fiji) Ltd	Toru Nakano, Director (Lami)	2005 (Dec x2)	Japan industry representative
<b>Fiji</b>	Trade Mission of the Republic of China	Adnan C. Y. Tu	2006 (March)	East Asia government official
<b>Fiji</b>	Tripacific Marine Limited	Uttam Kumar, Manager Finance	2006 (Feb)	PIC industry representative
<b>Fiji</b>	University of the South Pacific	Sandra Tarte, Senior Lecturer	2006 (March)	International fisheries specialist
<b>Fiji</b>	World Wildlife Fund (WWF) Regional Office	Kesaia Tabunakawai	2006 (March)	NGO
<b>Fiji</b>	World Wildlife Fund (WWF) Regional Office	Penina Solomona	2006 (March)	NGO
<b>Fiji</b>	World Wildlife Fund (WWF) Regional Office	Louise Heaps	2006 (March)	NGO
<b>France (Concarneau unless</b>	CMB (Ets Chevannes-Merceron-Ballery) (Concarneau)	Jean-Yves Labbe, President	2009 (March Concarneau); 2010 and 2011 (person.	EU industry representative

<b>otherwise specified)</b>			comm.)	
<b>France (Paris)</b>	Eurothon	Pierre Commere	2007 (March Paris); 2009 (March Paris)	EU industry representative
<b>France</b>	IRD	Alain Fonteneau	Person. comm. (various years, 2002-2011)	International fisheries specialist
<b>France (Paris)</b>	MW Brands	Adolfo Valsecchi, CEO	2009 (March Paris; March telephone interview)	EU industry representative
<b>France (Paris)</b>	MW Brands	Philippe de Saint Pern, General Manager Fish Procurement and Fleet	2007 (March Paris; June telephone interview) and 2009 (March Paris)	EU industry representative
<b>France</b>	Piriou Shipyards	Pascal Piriou, President du Directoire	2009 (March Concarneau)	EU industry representative
<b>France</b>	Saupiquet	Yvon Riva, Fleet and fishing dept manager (Saupiquet) and President of ORTHONGEL	2009 (March Concarneau)	EU industry representative
<b>Italy (Rome)</b>	Commodities and Trade Division, Economic and Social Department, FAO	J. R. Deep Ford, Senior Economist, Trade and Commodity Policy Group	2006 (May)	International agency
<b>Italy</b>	Commodities and Trade Division, Economic and Social Department, FAO	Ramesh Sharma, Senior Economist, Commodity Policy and Projections Service	2006 (May)	International agency
<b>Italy</b>	Fisheries Department, FAO	Ezzeddine Boutrif, Chief, Food Quality and Standards Service	2006 (May)	International agency
<b>Italy</b>	Fishery Industries Division, Fisheries Department, FAO	Dr. Lahsen Ababouch, Chief, Fish Utilization and Marketing Service	2006 (May)	International fisheries specialist
<b>Italy</b>	Fishery Industries Division, Fisheries Department, FAO	William Emerson, Senior Fishery Industry Officer (International Trade), Fish Utilization and Marketing Service	2006 (May)	International fisheries specialist
<b>Italy</b>	Fishery Industries Division, Fisheries Department, FAO	Dr Audun Lem, Fishery Industry Officer, Fish Utilization and Marketing Service	2006 (May)	International fisheries specialist
<b>Italy</b>	Fishery Industries Division, Fisheries Department, FAO	Grimur Valdimarsson, Director	2006 (May)	International fisheries specialist
<b>Italy</b>	Fishery Industries Division, Fisheries Department, Food and Agricultural Organization of the United Nations (FAO)	Camillo Catarchi, Consultant	2006 (May); multiple person. comms. 2006-07	International fisheries specialist
<b>Italy</b>	Fishery Information, Data and Statistics Unit (FIDI), Fisheries Department, FAO	Stefania Vannuccini, Fishery Statistician (Fishery Commodities),	2006 (May)	International fisheries specialist
<b>Italy</b>	Fishery Policy and Planning Division, Fisheries Department, FAO	Dr David J. Doullman, Senior Fishery Liaison Officer, International Institutions and Liaison Service	2006 (May)	International fisheries specialist
<b>Italy</b>	Legal Department, FAO	Blaise Kuemlangan, Legal Officer, Development Law Service	2006 (May)	International fisheries specialist
<b>Italy</b>	Legal Department, FAO	Victor Mosoti, Associate Legal Officer, Development Law Service	2006 (May)	International fisheries specialist
<b>Japan (Tokyo)</b>	Fisheries Agency, Ministry of Agriculture,	Koichi Tahara, Assistant Director, Fisheries	2006 (June)	Japan government official

<b>unless otherwise specified)</b>	Forestry and Fisheries	Processing Industries and Marketing Division		
<b>Japan</b>	Fisheries Agency, Ministry of Agriculture, Forestry and Fisheries	Ryo Omori, Section Chief, Far Seas Fisheries Division, Resources Management Dept	2006 (June)	Japan government official
<b>Japan</b>	Fisheries Agency, Ministry of Agriculture, Forestry and Fisheries	Shingo Ota, Assistant Director, Office of Overseas Fisheries Cooperation	2006 (June)	Japan government official
<b>Japan</b>	Fisheries Agency, Ministry of Agriculture, Forestry and Fisheries	Shuya Nakatsuka, Fisheries Processing Industries and Marketing Division	2006 (June)	Japan government official
<b>Japan</b>	Fisheries Agency, Ministry of Agriculture, Forestry and Fisheries	Takaaki Sakamoto, Assistant Director, International Affairs Division	2006 (June)	Japan government official
<b>Japan</b>	Fisheries Agency, Ministry of Agriculture, Forestry and Fisheries	Yosuke Yasumuro, Office of Overseas Fisheries Cooperation, International Affairs Division	2006 (June)	Japan government official
<b>Japan</b>	Fisheries Agency, Ministry of Agriculture, Forestry and Fisheries	Hayato Shirase, Office of Overseas Fisheries Cooperation	2006 (June)	Japan government official
<b>Japan (Yaizu)</b>	Hagoromo Foods Corporation	Etsuo Matsumura, Director and Plant Manager Yaizu Plant	2006 (June)	Japan industry representative
<b>Japan (Yaizu)</b>	Hagoromo Foods Corporation	Noriyuki Yamanashi, Deputy General Manager, Product Dept No. 2, Procurement Group	2006 (June)	Japan industry representative
<b>Japan</b>	Itochu Corporation	Tsuyoshi Akiyama, Manager of Marine Products Section No. 1, Marine Products Dept, Food Company	2006 (June)	Japan industry representative
<b>Japan</b>	Itochu Corporation	Kenichi Hayashi, General Manager of Marine Products Dept, Fresh Food & Businesses Solutions Division, Food Company	2006 (June)	Japan industry representative
<b>Japan</b>	Itochu Corporation	Tsuyoshi Kawano, Tuna Team No.1, Marine Products Dept, Fresh Food & Businesses Solutions Division, Food Company	2006 (June)	Japan industry representative
<b>Japan</b>	Kaimaki: Japan Far Seas Purse Seine Fishing Association	Kazuo Shima, President	2006 (June)	Japan industry representative
<b>Japan</b>	Kaimaki: Japan Far Seas Purse Seine Fishing Association	Minoru Honda, Executive Secretary	2006 (June)	Japan industry representative
<b>Japan</b>	Kinkatsu, National Offshore Tuna Fisheries Association of Japan	Akihiko Yatsuzuka, Manager	2006 (June)	Japan industry representative
<b>Japan (Shida)</b>	Kyokuyo Suisan Co., Ltd.	Hideto Chiba, Director and General Manager, Fisheries Dept. Purse Seining Section	2006 (June)	Japan industry representative
<b>Japan (Shida)</b>	Kyokuyo Suisan Co., Ltd.	Ikuo Muratani, Preident	2006 (June)	Japan industry representative
<b>Japan (Shida)</b>	Kyokuyo Suisan Co., Ltd.	Shinya Yoshimoto, Sub Manager, Fisheries Dept. Purse Seining Section	2006 (June)	Japan industry representative
<b>Japan (Shida)</b>	Kyokuyo Suisan Co., Ltd.	Tai Nozaki, Fisheries Dept. Purse Seining Section	2006 (June)	Japan industry representative

<b>Japan (Shida)</b>	Kyokuyo Suisan Co., Ltd.	Taro Kawamoto, Manager, Fisheries Dept. Purse Seining Section	2006 (June)	Japan industry representative
<b>Japan</b>	Luen Thai Fishing Venture Ltd. Japan Branch	Gen Takekata, General Manager	2006 (June)	Japan industry representative
<b>Japan</b>	Ministry of Agriculture, Forestry and Fisheries	Satoru Goto, Special Advisor to the Minister of Agriculture, Forestry and Fisheries on International Affairs (Fisheries)	2006 (June)	Japan government official
<b>Japan</b>	Ministry of Foreign Affairs	Mayumi Kobayashi, Oceania Division, Asian and Oceania Affairs Bureau	2006 (June)	Japan government official
<b>Japan</b>	Ministry of Foreign Affairs	Yujiro Akatsuka, Grant Aid Division, Economic Cooperation Bureau	2006 (June)	Japan government official
<b>Japan</b>	Nikkatsu: Japan Tuna Fisheries Cooperative Association	Hisao Masuko, Director	2006 (June)	Japan industry representative
<b>Japan</b>	Nikkatsu: Japan Tuna Fisheries Cooperative Association	Kazushige Hazama, International Division	2006 (June)	Japan industry representative
<b>Japan</b>	Nikkatsu: Japan Tuna Fisheries Cooperative Association	Masaaki Nakamura, Advisor	2006 (June)	Japan industry representative
<b>Japan</b>	OFCF: Overseas Fishery Cooperation Foundation	Hideobu Eguchi, Managing Director, Planning and Coordination Dept.	2006 (June)	Japan government official
<b>Japan</b>	OFCF: Overseas Fishery Cooperation Foundation	Jun Takahashi, Director Planning and Research Division	2006 (June)	Japan government official
<b>Japan</b>	OFCF: Overseas Fishery Cooperation Foundation	Masaru Suzuki, Vice President	2006 (June)	Japan government official
<b>Japan</b>	OFCF: Overseas Fishery Cooperation Foundation	Shigeru Kuramochi, Director, Pacific Islands Division	2006 (June)	Japan government official
<b>Japan</b>	OFCF: Overseas Fishery Cooperation Foundation	Shogo Sugiura, Vice President	2006 (June)	Japan government official
<b>Japan</b>	OFCF: Overseas Fishery Cooperation Foundation	Toshio Tsukahara, Special Advisor	2006 (June)	Japan government official
<b>Japan</b>	OPRT (Organization for the Promotion of Responsible Tuna Fisheries)	Yuichiro Harada, Managing Director	2006 (June)	NGO
<b>Japan</b>	T & F Co. Ltd.	Kenneth H. Banwell, Manager, Import Division	2006 (June)	Japan industry representative
<b>Japan</b>	T & F Co. Ltd.	Teruyo Watanabe, President	2006 (June)	Japan industry representative
<b>Japan</b>	Taiyo A&F Co., Ltd	Akio Fukuma, Team Leader, Purse Seine Fishery Group	2006 (June)	Japan industry representative
<b>Japan</b>	Taiyo A&F Co., Ltd	Hironobu Imamura, President	2006 (June)	Japan industry representative
<b>Japan</b>	Taiyo A&F Co., Ltd	Masakazu Sonobe, Manager Purse Seine Fishery Group	2006 (June)	Japan industry representative
<b>Japan</b>	Taiyo A&F Co., Ltd	Tadashi Iijima, Advisor	2006 (June)	Japan industry representative
<b>Japan</b>	Taiyo A&F Co., Ltd	Takashi Furukatsu, Group Manager, Purse Seine Fishery Group	2006 (June)	Japan industry representative

<b>Japan</b>	Taiyo A&F Co., Ltd	Yoshimi Tateno, Manager, Purse Seine Fishery Group	2006 (June)	Japan industry representative
<b>Japan (Yaizu)</b>	Taiyo A&F Co., Ltd	Akira Hashiguchi, Sub-leader, Purse Seine Fishery Group, Tuna Trade Team	2006 (June)	Japan industry representative
<b>Japan (Yaizu)</b>	Taiyo A&F Co., Ltd	Toshio Mukaigawato, Team Leader, Purse Seine Fishery Group, Tuna Trade Team	2006 (June)	Japan industry representative
<b>Japan</b>	Tohto Suisan Co., Ltd	Yoku Oshikata, Managing Director	2006 (June)	Japan industry representative
<b>Japan</b>	Tokyo Central Wholesale Market, Tokyo Metropolitan Government	Yoshihiro Yamada, Public Relations Official	2006 (June)	Japan industry representative
<b>Japan</b>	Toshou Trading Co, Ltd.	S. Watanabe, President	2006 (June)	Japan industry representative
<b>Japan (Yaizu)</b>	Yaizu Fisheries Cooperative Association	Misao Hirata, Department Manager, Fish Market Dept,	2006 (June)	Japan industry representative
<b>Japan (Yaizu)</b>	Yaizu Fisheries Cooperative Association	Keitaro Katayama, Director in Charge of Fish Market Dept.	2006 (June)	Japan industry representative
<b>Japan (Yaizu)</b>	Yaizu Fishery Processing Centre Cooperative	Hiroyuki Kawamura, Director	2006 (June)	Japan industry representative
<b>Mauritius</b>	Indian Ocean Commission	Raj Mohabir, Task Manager	2007 (May and July and person. comms.)	International agency
<b>Mauritius</b>	Indian Ocean Commission	David Ardill, Regional Coordinator, MCS Project (former Executive Secretary, Indian Ocean Tuna Commission)	2007 (May); 2006 (Sept informal)	International fisheries specialist
<b>Mauritius</b>	Government of Mauritius, Ministry of Agro-Industry, Food Production and Security	Daroomalingum Mauree, Principal Fisheries Officer	2007 (informal May and July)	International fisheries specialist
<b>Mauritius</b>	Princes Tuna Mauritius	Evert Liewes, Managing Director	2007 (May, May videoconference, July informal, and person. comms.)	EU industry representative
<b>Mauritius</b>	Princes Tuna Mauritius	Rob Laird, Financial Controller	2007 (May and May videoconference)	EU industry representative
<b>Netherlands (Amsterdam)</b>	Greenpeace International	Sari Tolvanen	2007-2011 (multiple informal communications)	NGO
<b>Netherlands (Rotterdam)</b>	Princes Group	Misja de Schepper, Head of buying and sales	2010 (June)	EU industry representative
<b>New Zealand (Wellington)</b>	Ministry of Fisheries	David Marx, Senior International Advisor	2006 (March)	ANZ government official
<b>New Zealand</b>	Ministry of Fisheries	Mathew Bartholomew, International Advisor	2006 (March)	ANZ government official
<b>New Zealand</b>	Ministry of Foreign Affairs and Trade	David Evans, Senior Legal Advisor	2006 (March)	ANZ government official
<b>New Zealand</b>	Ministry of Foreign Affairs and Trade	Jennifer McDonald, Deputy Director	2006 (March)	ANZ government official
<b>New Zealand</b>	Ministry of Foreign Affairs and Trade	John Riley Non-Agricultural Products Technical Barriers to Trade Trade Negotiations	2006 (March)	ANZ government official

		Division		
<b>New Zealand</b>	Ministry of Foreign Affairs and Trade	Brian Smythe, Pacific Regional Trade Advisor	2006 (March)	ANZ government official
<b>New Zealand</b>	Ministry of Foreign Affairs and Trade	Mark Talbott, Senior Policy Officer	2006 (March)	ANZ government official
<b>New Zealand</b>	Ministry of Foreign Affairs and Trade	Michelle Wanwimolruk, Policy Officer	2006 (March)	ANZ government official
<b>New Zealand</b>	New Zealand Aid	Paul Wallis, Programme Manager Pacific Group	2006 (March)	ANZ government official
<b>New Zealand</b>	Seafood Industry Council	Alastair Macfarlane, General Manager Trade and Information	2006 (March)	ANZ government official (industry representative, but only ANZ one so anonymised under 'government')
<b>Niue</b>	Canoe owners (Vaka) association	Taumafai Fuhiniu	2005 (Nov)	PIC industry representative
<b>Niue</b>	Department of Agriculture, Fisheries and Forestry	Brendan Pasisi, Director of Fisheries	2005 (Nov)	Niue government official
<b>Niue</b>	Department of Agriculture, Fisheries and Forestry	Fiafia Rex, Fisheries Officer	2005 (Nov)	Niue government official
<b>Niue</b>	Economic Planning and Development Section, Premier's Dept.	Frank Sioneholo, e-business Development Officer	2005 (Nov)	Niue government official
<b>Niue</b>	Government of Niue	Bill V. Motufoou, Minister for Department of Agriculture, Fisheries and Forestry	2005 (Nov)	Niue government official
<b>Niue</b>	New Zealand High Commission	Heather Wright, NZAID Manager and Deputy High Commissioner	2005 (Nov)	Niue government official
<b>Niue</b>	Niue Chamber of Commerce	Lofa Rex, President	2005 (Nov)	Niue government official
<b>Niue</b>	Niue Development Bank	Kathy Sofaea, Manager	2005 (Nov)	Niue government official
<b>Niue</b>	Niue Fish Processors (NFP)	Eddie Watts, Manager	2005 (Nov)	PIC industry representative
<b>Niue</b>	Niue Fishermans Association	Tau Pasisi	2005 (Nov)	PIC industry representative
<b>Niue</b>	Premier's Dept, Economic Planning and Development Section,	Sonny Liuvaie	2005 (Nov)	Niue government official
<b>Niue</b>	Premier's Dept.	Josie Tamate, Secretary to Premier	2005 (Nov)	Niue government official
<b>Niue</b>	Reef Group Ltd.	Angela McNicholl, General Manager Niue	2005 (Nov)	PIC industry representative
<b>Niue</b>	Revenue Section, Treasury Department,	Sione P. Sionetama, Collector of Customs	2005 (Nov)	Niue government official
<b>Niue</b>	Treasury Department	Eddie McEachan, Financial Secretary	2005 (Nov)	Niue government official
<b>Papua New Guinea (Port Moresby unless otherwise specified)</b>	AusAID	Hannah Birdsey, Second Secretary	2006 (March)	ANZ government official
<b>Papua New Guinea</b>	Austrade	John Brand, Senior Trade Commissioner	2006 (March)	ANZ government official

<b>Papua New Guinea</b>	Australia Foreign Affairs and Trade	Deahne Turnbull, Third Secretary	2006 (March)	ANZ government official
<b>Papua New Guinea</b>	Delegation to the European Commission to Papua New Guinea, Solomon Islands and Vanuatu	Lars Gronvald, Second Secretary	2006 (March)	EU government official
<b>Papua New Guinea</b>	Department of National Planning and Monitoring	Jerry Huekwahin, Programme Officer	2006 (March)	PNG government official
<b>Papua New Guinea</b>	Department of Trade and Industry	Seline Leo-Lohia	2006 (March)	PNG government official
<b>Papua New Guinea</b>	Department of Trade and Industry	Andrew Lilivra, Industry Division	2006 (March)	PNG government official
<b>Papua New Guinea</b>	Department of Trade and Industry	Ronald George Maru, Policy Division	2006 (March)	PNG government official
<b>Papua New Guinea</b>	Department of Trade and Industry	Vincent Kisso, PTO-APEC	2006 (March)	PNG government official
<b>Papua New Guinea</b>	Department of Trade and Industry	Elise Mcauley, ODI Fellow	2006 (March)	PNG government official
<b>Papua New Guinea</b>	Department of Trade and Industry	Karo Rupa	2006 (March)	PNG government official
<b>Papua New Guinea</b>	Department of Trade and Industry	Darlie Tony, Policy Division	2006 (March)	PNG government official
<b>Papua New Guinea</b>	Department of Trade and Industry	Jacinta Warakai-Manua, Trade Division	2006 (March)	PNG government official
<b>Papua New Guinea</b>	Department of Treasury	Allan Kapi Gipis, Economic Fiscal	2006 (March)	PNG government official
<b>Papua New Guinea</b>	Department of Treasury	Alfred Mokae, Acting Principle Economist Forecasting	2006 (March)	PNG government official
<b>Papua New Guinea</b>	Department of Treasury	Andrew Oaeke, Acting Principle Economist GEP	2006 (March)	PNG government official
<b>Papua New Guinea (Wewak)</b>	Division of Fisheries	Willie Sangi, Acting Provincial Fisheries Officer	2006 (March)	PNG government official
<b>Papua New Guinea</b>	Fairwell Fishery	Francis Houji	2006 (March)	Asia industry representative
<b>Papua New Guinea (Lae)</b>	Frabelle (PNG) Limited	Alex R. Bernadino, General Manager	2006 (March)	PIC and Philippine industry representative
<b>Papua New Guinea (Lae)</b>	Frabelle (PNG) Limited	Jun Cuanan, Assistant Plant Manager	2006 (March)	PIC and Philippine industry representative
<b>Papua New Guinea (Lae)</b>	Frabelle (PNG) Limited	Nestor Depensor, Resident Director	2006 (March)	PIC and Philippine industry representative
<b>Papua New Guinea (Lae)</b>	Frabelle (PNG) Limited	Dexter Patrick N. Martinez, Quality Assurance Manager	2006 (March)	PIC and Philippine industry representative
<b>Papua New Guinea</b>	Gillett, Preston and Associates	Gary Preston, Consultant	2006 (March)	International fisheries specialist
<b>Papua New Guinea</b>	International Finance Corporation	Peter Cusack, Papua New Guinea Coordinator	2006 (March)	International agency
<b>Papua New Guinea</b>	International Food Corporation Ltd	Luke B. Supro, Personnel and Public Affairs Manager	2006 (March)	Asia industry representative
<b>Papua New Guinea</b>	Investment Promotion Authority	Clarence M. Hoot, Director	2006 (March)	PNG government official

<b>Papua New Guinea</b>	Investment Promotion Authority	Yave Yarita, Investment Officer	2006 (March)	PNG government official
<b>Papua New Guinea</b>	Japan International Cooperation Agency	Tony Ombo, Development Officer	2006 (March)	Japan government official
<b>Papua New Guinea</b>	Latitude 8/Industry Assn	Maurice Brownjohn	2006 (March)	PIC industry representative
<b>Papua New Guinea (Lae)</b>	Maps Tuna	Paul Akop	2006 (March)	PIC industry representative
<b>Papua New Guinea (Lae)</b>	Maps Tuna	Angelito Mangubat	2006 (March)	PIC industry representative
<b>Papua New Guinea</b>	National Fisheries Authority	Aquina Kango	2006 (March)	PNG government official
<b>Papua New Guinea</b>	National Fisheries Authority	Justin Ilakini , Industry Liaison Officer	2006 (March)	PNG government official
<b>Papua New Guinea</b>	National Fisheries Authority	Leka Pitoi, Project Coordinator	2006 (March)	PNG government official
<b>Papua New Guinea</b>	National Fisheries Authority	Sylvester Pokajam , Acting Managing Director	2006 (March)	PNG government official
<b>Papua New Guinea</b>	National Fisheries Authority	Jerome Tioti, Assistanct Economic Research Officer	2006 (March)	PNG government official
<b>Papua New Guinea</b>	National Statistical Office	Nick Suvulo, National Statistician	2006 (March)	PNG government official
<b>Papua New Guinea</b>	National Statistical Office	Tony Waisa, Statistician	2006 (March)	PNG government official
<b>Papua New Guinea</b>	Neptune Fishing	Sir Henry Chow, Managing Director	2006 (March)	PIC industry representative
<b>Papua New Guinea (Madang)</b>	RD Tuna Cannery Ltd.	Pete Celso, Executive Vice President/ Managing Director	2006 (March)	PIC and Philippine industry representative
<b>Papua New Guinea (Madang)</b>	RD Tuna Cannery Ltd.	Genevieve C. Fernando, Quality Control Manager	2006 (March)	PIC and Philippine industry representative
<b>Papua New Guinea (Madang)</b>	RD Tuna Cannery Ltd.	Elmer A. Mordeno, Vice President	2006 (March)	PIC and Philippine industry representative
<b>Papua New Guinea (Madang)</b>	RD Tuna Cannery Ltd.	Philip Sanchez, Vice President Sales and Marketing	2006 (March)	PIC and Philippine industry representative
<b>Papua New Guinea</b>	Rural Development Bank	Rodney Hoffman, Executive Manager – Lending Divison	2006 (March)	PNG government official
<b>Papua New Guinea</b>	Rural Development Bank	Luke Ambu, Branch Manager – Boroko	2006 (March)	PNG government official
<b>Papua New Guinea</b>	Rural Development Bank	Garima Tongia, Project Officer, Microfinance Divison	2006 (March)	PNG government official
<b>Papua New Guinea (Wewak)</b>	Sepik Coastal Agencies	Paul Martin	2006 (March)	PIC vessel services
<b>Papua New Guinea (Wewak)</b>	Sepik Coastal Agencies	Foeng Tjoeng, Director	2006 (March)	PIC vessel services
<b>Papua New Guinea (Wewak)</b>	Sepik Coastal Agencies	Mathew Watson, Shipping Manager	2006 (March)	PIC vessel services
<b>Papua New Guinea (Wewak)</b>	Sepik Coastal Agencies	Caspar Kwaindu, Administration Manager	2006 (March)	PIC vessel services



<b>Papua New Guinea (Wewak)</b>	Southseas Tuna Corporation	Ian Boatwood, General Manager	2006 (March)	Asia industry representative
<b>Papua New Guinea (Wewak)</b>	Southseas Tuna Corporation	Francis Sumanop, Manager/ Community and Government Liason	2006 (March)	Asia industry representative
<b>Papua New Guinea (Wewak)</b>	Wewak Agencies Limited	Jillyanne Sengi, Manageress	2006 (March)	PIC vessel services
<b>Papua New Guinea (Wewak)</b>	Wewak Agencies Limited	Shiela Sengi,	2006 (March)	PIC vessel services
<b>Samoa</b>	Albacorp Investments Limited and Vice-President of the Tuna Exporters Association	Robert Ripley, Managing Director	2005 (Nov; Interview transcript V. Ram-Bidesi)	PIC industry representative
<b>Samoa</b>	Apia Export Fish Packers Ltd.	John Luff, Managing Director	2005 (Nov)	PIC industry representative
<b>Samoa</b>	Apprenticeship and Labour, Ministry of Commerce, Industry and Labour	Elisapeta Eteuati, Asst. CEO	2005 (Nov)	Samoa government official
<b>Samoa</b>	Census and Survey Section, Statistical Services Division, Ministry of Finance	Taiaopo Faumuina, Senior Statistician	2005 (Nov)	Samoa government official
<b>Samoa</b>	Census and Survey Section, Statistical Services Division, Ministry of Finance	Sefo Taulealo, Senior Statistician	2005 (Nov)	Samoa government official
<b>Samoa</b>	Central Bank of Samoa	Arona Alosina, Senior Economist	2005 (Nov)	Samoa government official
<b>Samoa</b>	Central Bank of Samoa	Karras Lui, Assistant Manager	2005 (Nov)	Samoa government official
<b>Samoa</b>	Central Bank of Samoa	Tanya Tuisuga, Senior Exchange Control Officer	2005 (Nov)	Samoa government official
<b>Samoa</b>	CJ Exports and Imports	Rob Willis	2005 (Nov)	PIC industry representative
<b>Samoa</b>	Dept of Customs, Ministry for Revenue	Sina Laumea, Customs IT Manager	2005 (Nov)	Samoa government official
<b>Samoa</b>	Dept of Customs, Ministry for Revenue	Ray Pereira, D/CEO	2005 (Nov)	Samoa government official
<b>Samoa</b>	Dept of Customs, Ministry for Revenue	Tanuvasa Iosefa Kalolo, Asst. CEO, Trade & Technical,	2005 (Nov)	Samoa government official
<b>Samoa</b>	Development Bank of Samoa	Fuimaono Falefa Lima, General Manager	2005 (Nov)	Samoa government official
<b>Samoa</b>	Economic Policy and Planning Division, Ministry of Finance	Paul Meredith, Asst. CEO	2005 (Nov)	Samoa government official
<b>Samoa</b>	Economic Policy and Planning Division, Ministry of Finance	Benjamin Pereira, Principal Planning Officer	2005 (Nov)	Samoa government official
<b>Samoa</b>	Economic Policy and Planning Division, Ministry of Finance	Penelope Tevita-Tuatagaloa, Principal Macroeconomic Officer	2005 (Nov)	Samoa government official
<b>Samoa</b>	Fisheries Division, Ministry of Agriculture and Fisheries	Antonio P. Mulipola,	2005 (Nov)	Samoa government official
<b>Samoa</b>	Fisheries Division, Ministry of Agriculture and Fisheries	Savali Gu Time	2005 (Nov)	Samoa government official
<b>Samoa</b>	Fisheries Division, Ministry of Agriculture and Fisheries	Ueta Faasili (Jnr)	2005 (Nov)	Samoa government official

<b>Samoa</b>	Industry, Investment and Fair Trading, Ministry of Commerce, Industry and Labour	Iulia Petelo, Asst. CEO	2005 (Nov)	Samoa government official
<b>Samoa</b>	JICA Samoa Office	Ichiro Mimura, Asst. Resident Representative	2005 (Nov)	Japan government official
<b>Samoa</b>	Ministry of Agriculture and Fisheries	Frank Fong, Asst. CEO Policy, Planning & Communication	2005 (Nov)	Samoa government official
<b>Samoa</b>	Ministry of Commerce, Industry and Labour	Belinda Filo	2005 (Nov)	Samoa government official
<b>Samoa</b>	Ministry of Foreign Affairs and Trade	Aida Faumui, Principal Trade Officer	2005 (Nov)	Samoa government official
<b>Samoa</b>	Ministry of Foreign Affairs and Trade	Nella Tavita-Levy, Principal Trade Officer	2005 (Nov)	Samoa government official
<b>Samoa</b>	NZAID Manager, First Secretary	Philip Hewitt,	2005 (Nov)	ANZ government official
<b>Samoa</b>	Pacific Corporate Services	John Boyle, Managing Director	2005 (Nov)	PIC industry representative
<b>Samoa</b>	Policy, Planning & Communication, Ministry of Agriculture and Fisheries	Jasmine Sila, Senior Planning Officer	2005 (Nov)	Samoa government official
<b>Samoa</b>	Research and Statistics Dept, Central Bank of Samoa	Alavine Sua, Assistant Manager	2005 (Nov)	Samoa government official
<b>Samoa</b>	Sub-Regional Office for the Pacific Islands, FAO	Massimo Diomedi, Associate Professional Officer for Agricultural Trade Policy	2005 (Nov)	International agency
<b>Samoa</b>	Sub-Regional Office for the Pacific Islands, FAO	Masanami Izumi, Fishery Officer	2005 (Nov)	International fisheries specialist
<b>Samoa</b>	Tradewinds Fishing Company	Bev Levy, Managing Director	2005 (Nov)	PIC industry representative
<b>Seychelles</b>	Aquarius Shipping Agency	Anthony Savy de St. Maurice, General Manager	2009 (January)	Seychelles vessel services
<b>Seychelles</b>	Aquarius Shipping Agency	Claude Robert, Accountant	2009 (January)	Seychelles vessel services
<b>Seychelles</b>	Atunsa	Peter Padayachy, local agent	2006 (Sept)	EU industry representative
<b>Seychelles</b>	Central Bank of Seychelles	Francis Chang Leng, Governor	2006 (Aug)	Seychelles government official
<b>Seychelles</b>	Central Bank of Seychelles	Caroline Abel, Head of Division, Monetary Analysis and Statistics (2009); Head of Research (2006)	2006 (Sept); 2009 (Jan)	Seychelles government official
<b>Seychelles</b>	Central Bank of Seychelles	Hilda Falconit, Economist	2009 (January)	Seychelles government official
<b>Seychelles</b>	CMB (Ets Chevannes-Merceron-Ballery),	Frederic Rivalain	2009 (January)	EU industry representative
<b>Seychelles</b>	CMB (Ets Chevannes-Merceron-Ballery),	Bertrand Monpert	2009 (January)	EU industry representative
<b>Seychelles</b>	Consultant to Spanish government	Juan Jose Areso, Spanish Fisheries Office	2006 (Sept); 2009 (Jan)	EU government official
<b>Seychelles</b>	Department of Legal Affairs	Ronny Govinden, Attorney General	2009 (January)	Seychelles government official
<b>Seychelles</b>	Echebatar/ Hartswater Ltd.	Gaetan Pierre, Inspector	2006 (Sept); 2009 (Jan)	EU industry representative
<b>Seychelles</b>	Echebatar/ Hartswater Ltd.	Itxaso Echevarria, sister of owner	2009 (January)	EU industry representative

<b>Seychelles</b>	Fishing Boat Owners Association	Beatty Hoareau, (Head, 2006; member, 2009)	2006 (Sept); 2009 (Jan)	Seychelles industry representative
<b>Seychelles</b>	Hunt, Deltel & Co Ltd	Edmond H. Houareau, Managing Director	2006 (Sept); 2009 (Jan)	Seychelles vessel services or Seychelles industry representative
<b>Seychelles</b>	Hunt, Deltel & Co Ltd	Mike C. King-Harman, CEO	2006 (Sept)	Seychelles vessel services or Seychelles industry representative
<b>Seychelles</b>	IFREMER	Patrick Berthou, Responsable du programme SIDEPECHE	2009 (January; Interview transcript C. Barnes)	EU industry representative
<b>Seychelles</b>	Impress	Danilo A. Banga, Plant Manager	2009 (January)	EU industry representative
<b>Seychelles</b>	Impress	Name not recorded (plant manager)	2006 (Sept)	EU industry representative
<b>Seychelles</b>	Impress	'Dan' (health and safety manager)	2006 (Sept)	EU industry representative
<b>Seychelles</b>	Indian Ocean Tuna (IOT) Ltd	Alain Olivieri, (temp) IOT General Manager, MWB Manufacturing Director	2009 (January)	EU industry representative
<b>Seychelles</b>	Indian Ocean Tuna (IOT) Ltd	Cecile Holtzhausen, IOT Quality Manager	2009 (January)	EU industry representative
<b>Seychelles</b>	Indian Ocean Tuna (IOT) Ltd	Gaëta le Colleter, MWB Group Quality Manager	2009 (January)	EU industry representative
<b>Seychelles</b>	Indian Ocean Tuna (IOT) Ltd	David Bentley, Managing Director IOT and PFC and IOT Board Member	2006 (Sept x2 interviews); 2003	EU industry representative
<b>Seychelles</b>	Indian Ocean Tuna (IOT) Ltd	Joe S. Madnack, head of finance and IOT Board Member	2006 (Sept)	EU industry representative
<b>Seychelles</b>	Inpesca and Pevasa	Gorka Ugarte, local representative	2006 (Sept)	EU industry representative
<b>Seychelles</b>	IOTC (Indian Ocean Tuna Commission)	Alejandro Anganuzzi, Executive Secretary	2006 (Sept); 2009 (Jan); multiple informal comms	International fisheries specialist
<b>Seychelles</b>	IOTC (Indian Ocean Tuna Commission)	Julien Million, IOTC Tagging Assistant	2006 (Sept); multiple informal comms	International fisheries specialist
<b>Seychelles</b>	IOTC (Indian Ocean Tuna Commission)	Michael Stockwell, Financial and Administrative Officer, Regional Tuna Tagging Project - Indian Ocean	2006 (Sept); multiple informal comms	International fisheries specialist
<b>Seychelles</b>	Island Development Company Ltd (IDC)	Glenny Savy, Executive Chairman	2009 (January)	Seychelles government official
<b>Seychelles</b>	Land Marine	David Monthy	2006 (Sept); 2009 (Jan)	Seychelles vessel services
<b>Seychelles</b>	Land Marine	Eugene Harkoon	2006 (Sept)	Seychelles vessel services
<b>Seychelles</b>	Land Marine	Hughes Adam	2006 (Sept); 2009 (Jan)	Seychelles vessel services or Seychelles government official
<b>Seychelles</b>	Mahe Shipping Co. Ltd.,	Gerry Adam, Managing Director	2009 (January; Interview transcript C. Barnes)	Seychelles vessel services
<b>Seychelles</b>	Mahe Shipping Co. Ltd.,	Joe Morin, Operations Manager	2009 (January; Interview transcript C. Barnes)	Seychelles vessel services
<b>Seychelles</b>	Marine and Engineering Works	Charlie Marzocchi	2009 (January; Interview transcript C. Barnes)	Seychelles vessel services

<b>Seychelles</b>	Ministry of Finance	Sitna César, Head of Budget	2009 (January)	Seychelles government official
<b>Seychelles</b>	Ministry of Finance	Melanie Stravens	2006 (Aug); 2009 (Jan)	Seychelles government official
<b>Seychelles</b>	Ministry of Finance	Michelle Tomkinson	2009 (January)	Seychelles government official
<b>Seychelles</b>	Ministry of Finance	Jacqueline Pierre	2009 (January)	Seychelles government official
<b>Seychelles</b>	Ministry of Finance	Steve Jardine, Commissioner of Taxes	2009 (January)	Seychelles government official
<b>Seychelles</b>	Ministry of Finance	Ronald Cafrine, Director General, Policy and Strategy Division	2009 (January)	Seychelles government official
<b>Seychelles</b>	Ministry of Finance	Charles A. Morin, Technical Advisor (Trade)	2006 (Aug)	Seychelles government official
<b>Seychelles</b>	Ministry of Finance	Nadir Hussein	2006 (Aug)	Seychelles government official
<b>Seychelles</b>	Ministry of Finance	Hugh Watts	2009 (Jan 2009)	Seychelles government official or International fisheries specialist
<b>Seychelles</b>	Ministry of Foreign Affairs	Philippe Michaud, Technical Advisor (2009); special advisor, Fisheries Policy Unit, Ministry of Environment and Natural Resources (2006); SFA (2003)	2006 (Sept); 2009 (Jan); 2003	Seychelles government official
<b>Seychelles</b>	Ministry of Foreign Affairs	Vivienne Fock-Tave, Special Advisor (2009) and Principal Secretary, Department for International Cooperation (2006)	2006 (Sept); 2009 (Jan); (2003)	Seychelles government official
<b>Seychelles</b>	Ministry of Natural Resources, Environment and Transport	Joel Morgan, Minister (meetings, not formal interviews)	2009 (January and July)	Seychelles government official
<b>Seychelles</b>	Ministry of Natural Resources, Environment and Transport	Walter C. Talma, Principal Secretary, Department of Natural Resources [then] Ministry of Environment and Natural Resources	2006 (Sept)	Seychelles government official
<b>Seychelles</b>	Ministry of Natural Resources, Environment and Transport	Dr. Bernard Moulinie, Director General Animal Health and Development, [then] Ministry of Environment and Natural Resources	2006 (Sept)	Seychelles government official
<b>Seychelles</b>	Ministry of Natural Resources, Environment and Transport	Joël Nageon de Lestang, Principal Fisheries Officer, Fisheries Policy Unit, Department of Natural Resources	2006 (Aug)	Seychelles government official
<b>Seychelles</b>	National Statistics Bureau (NSB)	Laura Ah Tim, Director	2009 (January; Interview transcript C. Barnes)	Seychelles government official
<b>Seychelles</b>	Naval Services (1994) Ltd	Captain Morgan, Managing Director	2009 (January)	Seychelles vessel services
<b>Seychelles</b>	Oceana Fisheries Co. Ltd.	Radley Weber, co-owner [prior Managing Director of COI and, subsequent, IOT cannery]	2006 (Sept); 2009 (Jan)	EU industry representative or Seychelles industry representative
<b>Seychelles</b>	Oceana Fisheries Co. Ltd.	Joseph Tirant, Managing Director	2009 (January)	Seychelles industry representative
<b>Seychelles</b>	Oceana Fisheries Co. Ltd.	Jean Claude Houareau, Quality Assurance Manager	2009 (January)	Seychelles industry representative

<b>Seychelles</b>	OPAGAC	Julian Rica, local representative	2006 (Sept)	EU industry representative
<b>Seychelles</b>	President's Office	Rolph Payet, Special Advisor on Environment to the President	2009 (January; Interview transcript C. Barnes); misc. informal, 2004.	Seychelles government official
<b>Seychelles</b>	President's Office	Jean-Paul Adam	2006 (Sept)	Seychelles government official
<b>Seychelles</b>	Sea Harvest	Eugene Albert, Managing Director	2009 (January)	Seychelles industry representative
<b>Seychelles</b>	Sea Harvest	Evans Mellon, Quality Assurance Manager	2009 (January)	Seychelles industry representative
<b>Seychelles</b>	Sea Harvest	Marc Houreau, owner	2006 (Aug)	Seychelles industry representative
<b>Seychelles</b>	Sea Harvest	Guy Houreau, owner	2006 (Aug)	Seychelles industry representative
<b>Seychelles</b>	Sea Harvest	Travis Jensen, General Manager	2006 (Aug)	Seychelles industry representative
<b>Seychelles</b>	Seychelles Bureau of Standards (SBS)	Amy C. Quatre, CEO	2009 (January)	Seychelles government official
<b>Seychelles</b>	Seychelles Bureau of Standards (SBS)	Andy Ally, Manager	2009 (January)	Seychelles government official
<b>Seychelles</b>	Seychelles Bureau of Standards (SBS)	Mohit Kamble, Senior Standards Officer	2009 (January)	Seychelles government official
<b>Seychelles</b>	Seychelles Bureau of Standards (SBS)	Mariam Kante, Principal Chemist	2009 (January)	Seychelles government official
<b>Seychelles</b>	Seychelles Chamber of Commerce and Industry (SCCI)	Nicole Tirant-Gheradi	2006 (Sept); 2009 (Jan)	Seychelles industry representative
<b>Seychelles</b>	Seychelles Electronic Maritime Co. Ltd (SEYCMi)	John R. Tregarthen, Executive Chairman	2009 (January)	Seychelles vessel services
<b>Seychelles</b>	Seychelles Electronic Maritime Co. Ltd (SEYCMi)	Allen Houareau, General Manager	2009 (January)	Seychelles vessel services
<b>Seychelles</b>	Seychelles Fishing Authority	Vincent Lucas	2009 (January)	Seychelles government official
<b>Seychelles</b>	Seychelles Fishing Authority	Juliette Dorizo	2009 (January)	Seychelles government official
<b>Seychelles</b>	Seychelles Fishing Authority	Florian Giroux, Fisheries Technical Adviser	2009 (January)	Seychelles government official
<b>Seychelles</b>	Seychelles Fishing Authority	Veronique Herminie, Chairperson	2009 (January)	Seychelles government official
<b>Seychelles</b>	Seychelles Fishing Authority	Michel A. Marguerite, Project Manager (2009); Senior Manager, Policy Planning (2006)	2009 (January and July)	Seychelles government official
<b>Seychelles</b>	Seychelles Fishing Authority	Carol Low, Senior Fish Inspector, Fish Inspection Unit	2009 (January)	Seychelles government official
<b>Seychelles</b>	Seychelles Fishing Authority	Finley J. Racombo, Chairperson	2006 (Sept)	Seychelles government official
<b>Seychelles</b>	Seychelles Fishing Authority	Rondolph Payet, Managing Director	2006 (Sept); 2008 (telephone interview); 2009 (Jan x3 and July)	Seychelles government official or International fisheries specialist
<b>Seychelles</b>	Seychelles Fishing Authority	Jan Robinson, [acting] Head of Research (2009)	2006 (Sept); 2009 (Jan); (2003); multiple informal comms	Seychelles government official or International fisheries specialist

<b>Seychelles</b>	Seychelles Investment Bureau (SIB)	Sherin Renaud, CEO	2009 (January; Interview transcript C. Barnes)	Seychelles government official
<b>Seychelles</b>	Seychelles Investment Bureau (SIB)	Maria Morel, Promotion Development Officer	2009 (January; Interview transcript C. Barnes)	Seychelles government official
<b>Seychelles</b>	Seychelles Licensing Authority (SLA)	Michael Walleamby, CEO	2009 (January)	Seychelles government official
<b>Seychelles</b>	Seychelles Licensing Authority (SLA)	Francis Carota, Financial Controller	2009 (January)	Seychelles government official
<b>Seychelles</b>	Seychelles Licensing Authority (SLA)	Robert Daymyre, Manager Licence Processing	2009 (January)	Seychelles government official
<b>Seychelles</b>	Seychelles Petroleum Company (SEPEC)	Guy Adam, CEO	2006 (Sept); 2009 (Jan)	Seychelles vessel services or Seychelles industry representative
<b>Seychelles</b>	Seychelles Port Authority (SPA)	Lt Col. Andre Ciseau, CEO	2006 (Sept); 2009 (Jan)	Seychelles government official
<b>Seychelles</b>	Seychelles Port Authority (SPA)	David Biamchi, Economic and Finance Manager	2006 (Sept); 2009 (Jan)	Seychelles government official
<b>Seychelles</b>	Seychelles Port Authority (SPA)	Captain Percy Laporte, Harbour Master	2009 (January)	Seychelles government official
<b>Seychelles</b>	Seychelles Port Authority (SPA)	Franky Laporte, Project Manager	2009 (January)	Seychelles government official
<b>Seychelles</b>	Société de Contrôle d'Expertise Maritime et Pêche (SOCOMEPE)	Jean-Marc Perrin, Consultant [and former French fleet manager]	2009 (January x2)	EU industry representative or Seychelles vessel services
<b>Seychelles</b>	Société de Contrôle d'Expertise Maritime et Pêche (SOCOMEPE)	Isabella Lablache, Operation Director	2009 (January)	Seychelles vessel services
<b>Seychelles</b>	Southern Ocean Shiphandlers (Pty) Ltd.	Albert Gonzague d'Offay, Director	2009 (January; Interview transcript C. Barnes)	Seychelles vessel services
<b>Singapore</b>	Tri Marine International	Phil Roberts	2009 (June); 2006 (May x2, Bangkok); multiple person. comms.	EU industry representative or Asia industry representative
<b>Solomon Islands</b>	Dept of Finance & Treasury, Ministry of Finance, National Reform & Planning	Harry Greenwell, Economic Reform Unit	2005 (Nov)	Solomon Islands government official
<b>Solomon Islands</b>	Embassy of Japan	Izumi Iwaoka, Researcher/Advisor	2005 (Nov)	Japan government official
<b>Solomon Islands</b>	European Union	Henry Pranker, Chargé d'Affaires	2005 (Nov)	EU government official
<b>Solomon Islands</b>	Fisheries Department	Sylvester Diaka, Under Secretary	2005 (Nov)	Solomon Islands government official
<b>Solomon Islands</b>	Forum Fisheries Agency	Mike Batty, Fisheries Development Policy Specialist	2005 (Nov)	International fisheries specialist
<b>Solomon Islands</b>	Forum Fisheries Agency	Len Rodwell, Head Fisheries Development Division	2005 (Nov); multiple person. comms. until 2011	International fisheries specialist
<b>Solomon Islands</b>	Forum Fisheries Agency	Transform Aqorau, Legal Counsel	2005 (Nov)	International fisheries specialist
<b>Solomon Islands</b>	Forum Fisheries Agency	Masao Nakada, OFCF advisor, General Manager, Port Relief Engineering Co. Ltd. Tokyo, and former Operations Manager at Solomon Taiyo	2005 (Novx2); 2006 multiple informal	International fisheries specialist and PIC/Japan industry representative

<b>Solomon Islands</b>	Forum Fisheries Agency	Amanda Hamilton	2005 (Nov); multiple person. comms. until 2011	International fisheries specialist
<b>Solomon Islands</b>	Forum Fisheries Agency	Masao Nakada, OFCF advisor, General Manager, Port Relief Engineering Co. Ltd. Tokyo, and former Operations Manager at Solomon Taiyo	2005 (Novx2); 2006 multiple informal	International fisheries specialist and PIC industry representative
<b>Solomon Islands</b>	H.M. Customs & Excise	Daniel Rofeta, Comptroller of Customs	2005 (Nov)	Solomon Islands government official
<b>Solomon Islands</b>	Japan International Cooperation Agency	Hiromi Fujita, Resident Representative	2005 (Nov)	PIC industry representative
<b>Solomon Islands</b>	Mako Fisheries Limited	Durkee Kim, Managing Director	2005 (Nov)	Asia industry representative
<b>Solomon Islands</b>	Ministry of Commerce, Trade and Foreign Affairs	Henry Pika, Under Secretary	2005 (Nov)	Solomon Islands government official
<b>Solomon Islands</b>	National Fisheries Development	Adrian Wickham	2005 (Nov)	EU industry representative
<b>Solomon Islands</b>	New Zealand High Commission	Brian Sanders, High Commissioner	2005 (Nov)	ANZ government official
<b>Solomon Islands</b>	New Zealand High Commission	Tamsin Royson, Second Secretary	2005 (Nov)	ANZ government official
<b>Solomon Islands</b>	Soltai Fishing & Processing Ltd	Milton Sibiospere	2005 (informal, Nov); Interview transcript (A. Hamilton)	PIC industry representative
<b>Spain (Bilbao)</b>	Albacora, SA	Inaki Lachanga Bengoetxea, President	2010 (Sept)	EU industry representative
<b>Spain (Bilbao)</b>	Albacora, SA (Bilbao)	Luisa Lachanga, Asst President	2010 (Sept)	EU industry representative
<b>Spain (Bilbao)</b>	Albacora, SA (Bilbao)	Imanol Loinaz Eguiguren, Fleet Director	2010 (Sept)	EU industry representative
<b>Spain</b>	ANABAC/OPTUC (Bermeo)	Anertz Muniategi	2010 (Sept)	EU industry representative
<b>Spain (Vigo)</b>	ANFACO	Juan Manuel Vieites Baptista de Sousa, Secretary General, Anfaco-CECOPESCA	2010 (Sept)	EU industry representative
<b>Spain (Vigo)</b>	ANFACO	José Carlos Castro Neila, Head of Department of Institutional Relations, Expansion and Management of Associations	2010 (Sept)	EU industry representative
<b>Spain (Vigo)</b>	ANFACO	Felicidad Fernández Felicite, Head of Department of International Information	2010 (Sept)	EU industry representative
<b>Spain (Vigo)</b>	ANFACO	Marta Aymerich Cano, Head of Department of Trade, Promotion and EU Affairs	2010 (Sept)	EU industry representative
<b>Spain (Madrid)</b>	Calvo	Carlos Sánchez Plaza, Director of Fleet	2010 (Sept)	EU industry representative
<b>Spain (Galicia)</b>	Conservas Garavilla	Juan Coralles, Chief Executive	2010 (Sept)	EU industry representative
<b>Spain (Galicia)</b>	Conservas Garavilla	José Manuel Blanco Cid, Director	2010 (Sept)	EU industry representative
<b>Spain (Galicia)</b>	Jealsa Rianxeira	Benjamin Recarey Rendo, Plant Production Manager	2010 (Sept)	EU industry representative

<b>Spain (Galicia)</b>	Jealsa Rianxeira	Paula Fabeiro Castro, Plant Quality Control Manager	2010 (Sept)	EU industry representative
<b>Spain</b>	OPAGAC	Julio Moron	Interview transcript (A. Hamilton) and person. comms., 2011	EU industry representative
<b>Spain (Bilbao and Galicia)</b>	Tri Marine International (Spain)	Alfonso Beitia, General Manager	2010 (Sept, and informal)	EU industry representative or Asia industry representative
<b>Spain (Galicia)</b>	Tri Marine International (Spain)	Alberto Quinteiro, Inspector	2010 (Sept, and informal)	EU industry representative or Asia industry representative
<b>Thailand (Bangkok and surrounds)</b>	Besso Limited, Lloyd's Brokers	Eyre Turbett, Director – Marine Division	2006 (May)	International fisheries specialist
<b>Thailand</b>	Echebstar fleet, s.l.u.	José Luis Jauregui Iriarte, Director of Fleet Operations	2006 (May)	EU industry representative
<b>Thailand</b>	FAO	David James,	2006 (May)	International fisheries specialist
<b>Thailand</b>	FAO	Helga Josupeit,	2006 (May)	International fisheries specialist
<b>Thailand</b>	FAO	Derek Staples, Senior Fishery Officer	2006 (May)	International fisheries specialist
<b>Thailand</b>	FCF Fishery Co., Ltd.	David Fang, Bangkok Representative Office	2006 (May)	Asia industry representative
<b>Thailand</b>	Gillett Preston and Associates	Mike McCoy, Consultant	2006 (May)	International fisheries specialist
<b>Thailand</b>	Independent.	Dr Sakda Thanicul, Faculty of Law, Chulalongkorn University	2006 (May)	International fisheries specialist
<b>Thailand</b>	Interpral s.a.	Prachote Bedi, Bangkok Representative Office	2006 (May)	EU industry representative
<b>Thailand</b>	J.M.B. International Ltd.	Anchern Thangsombat	2006 (May)	Thailand industry representative
<b>Thailand</b>	Kingfisher Group, Southeast Asian Packaging and Canning Ltd.	Yanee Arunthong, General Manager – Admin & Procurement (Canned Operation)	2006 (May)	Thailand industry representative
<b>Thailand</b>	Kingfisher Holdings Limited	Toshikatsu Tanaka, Managing Director	2006 (May)	Thailand industry representative
<b>Thailand</b>	Kingfisher Holdings Limited, Southeast Asian Packaging and Canning Ltd.	Nat Onsri, General Manager –Manufacturing	2006 (May)	Thailand industry representative
<b>Thailand</b>	Maldives Industrial Fisheries Company (MIFCO)	Mohamed Adil Saleem, Managing Director	2006 (May)	Asia industry representative
<b>Thailand</b>	Marine Stewardship Council	Duncan Leadbitter, Regional Director – Asia Pacific	2006 (May)	International fisheries specialist
<b>Thailand</b>	Southeast Asian Fisheries Development Center (SEAFDEC)	Suppachai Ananpongsuk, Administrative Division Head, Training Dept.	2006 (May)	International fisheries specialist
<b>Thailand</b>	Southeast Asian Fisheries Development Center (SEAFDEC)	Bundit Chokesanguan, Information and Extension Division Head, Training Dept.	2006 (May)	International fisheries specialist
<b>Thailand</b>	Southeast Asian Fisheries Development Center (SEAFDEC)	Dr Somboon Siriraksophon, Research Division Head, Training Dept.	2006 (May)	International fisheries specialist
<b>Thailand</b>	Southeast Asian Fisheries Development Center	Dr. Yuttana Theparoonrat, Training Division	2006 (May)	International fisheries specialist



	(SEAFDEC)	Head, Training Dept.		
<b>Thailand</b>	Starkist South East Asia, Inc	Tim Real, Director	2006 (May)	US industry representative
<b>Thailand</b>	TESS Group of Companies, Sri Lanka	Roshan Fernando, Director	2006 (May)	Asia industry representative
<b>Thailand</b>	Thai Union Manufacturing Co. Ltd.	Sunan Chantavichaikij, Manager, Procurement Dept.	2006 (May)	Thailand industry representative
<b>Thailand</b>	Thai Union Manufacturing Co. Ltd.	Wanna Sukwiboondacha, Marketing Executive, Marketing Dept.	2006 (May)	Thailand industry representative
<b>Thailand</b>	Thai Union Manufacturing Co. Ltd.	Varawit Tre-tip-rat, Regional Manager, Marketing Dept.	2006 (May)	Thailand industry representative
<b>Thailand</b>	Tri Marine International (Bangkok)	Michele Mango, Thailand Representative Office	2006 (May)	EU industry representative or Asia industry representative
<b>Thailand</b>	Tri Marine International (Panama)	Rick Heroux, Managing Director	2006 (May)	EU industry representative or Asia industry representative
<b>Thailand</b>	Tri Marine International (Panama)	Manuel Zito, Commercial Manager	2006 (May)	EU industry representative or Asia industry representative
<b>Thailand</b>	Tri Marine International (Singapore)	Marco D'Agostini, Assistant Manager, Value Added Products Asia/ Africa	2006 (May)	EU industry representative or Asia industry representative
<b>Tonga</b>	'Alatini Group of Companies	Bill Holden, Director	2006 (Feb)	PIC industry representative
<b>Tonga</b>	AusAID	Tracey Austwick, AusAID Representative	2006 (Feb)	ANZ government official
<b>Tonga</b>	Customs	Kelemete Valie	2006 (Feb)	Tonga government official
<b>Tonga</b>	Customs	Heiloni Latu	2006 (Feb)	Tonga government official
<b>Tonga</b>	Don Jacobson & Associates	Don Jacobson	2006 (Feb)	International agency
<b>Tonga</b>	Global Fishing	Sailosi Taunaholo	2006 (Feb)	PIC industry representative
<b>Tonga</b>	Japan International Cooperation Agency (JICA)	Mr. Soane Patolo	2006 (Feb)	PIC industry representative
<b>Tonga</b>	Maritime Projects Tonga Ltd	Lennie Niit, Managing Director	2006 (Feb)	PIC industry representative
<b>Tonga</b>	Ministry of Finance	Aholotu S. Palu, Economist	2006 (Feb)	Tonga government official
<b>Tonga</b>	Ministry of Fisheries	Sione Vailala Matoto, Secretary for Fisheries	2006 (Feb)	Tonga government official
<b>Tonga</b>	Ministry of Labour, Commerce and Industry	Jaya Choraria, ODI Fellow	2006 (Feb)	Tonga government official
<b>Tonga</b>	Ministry of Labour, Commerce and Industry,	Paulo Kautoke, Secretary for Labour, Commerce and Industry	2006 (Feb)	Tonga government official
<b>Tonga</b>	Ministry of Labour, Commerce and Industry,	Vika Filsimaloliu, Deputy Secretary, Industries	2006 (Feb)	Tonga government official
<b>Tonga</b>	Ministry of Labour, Commerce and Industry,	Siaosi T. Fifito, Senior Trade Officer	2006 (Feb)	Tonga government official
<b>Tonga</b>	New Zealand High Commission	Michael McBryde, High Commissioner	2006 (Feb)	ANZ government official
<b>Tonga</b>	RIOT UNIFI Ltd	Tisina Filo	2006 (Feb)	PIC industry representative

<b>Tonga</b>	South Pacific Resources Co. Ltd	Chin H. Choe, Managing Director	2006 (Feb)	PIC industry representative
<b>Tonga</b>	South Pacific Resources Co. Ltd	Lopeti Prescott, Operations Manager	2006 (Feb)	PIC industry representative
<b>Tonga</b>	Statistics Division	Mrs. Masivailo Masila, Consumer Price Index	2006 (Feb)	Tonga government official
<b>Tonga</b>	Statistics Division	Mr. Feleti Wolfgramm (Trade)	2006 (Feb)	Tonga government official
<b>Tonga</b>	Statistics Division	Mr. Sione Lolohea, Vital Statistics	2006 (Feb)	Tonga government official
<b>Tonga</b>	Statistics Division	‘Ata’ata M. Finau, Government Statistician & GDP/GNP	2006 (Feb)	Tonga government official
<b>Tonga</b>	Tonga Development Bank	‘Otenifi Auf’alo Matoto, Managing Director	2006 (Feb)	Tonga government official
<b>Tonga</b>	Tonga Development Bank	Simione Sefanaia, Deputy Managing Director–Operations	2006 (Feb)	Tonga government official
<b>Tonga</b>	Tonga Development Bank	John Bath, Manager, Risk Management/Board Advisor	2006 (Feb)	Tonga government official
<b>Tonga</b>	Tonga Fisheries Project	Marc Wilson, Team Leader & Institutional Specialist	2006 (Feb)	Tonga government official
<b>Tonga</b>	Tonga Ports Authority	Mr. Viliami Tuipulotu, Deputy Port Master	2006 (Feb)	Tonga government official
<b>UK</b>	Foodvest (Findus, Young’s Bluecrest Seafood and The Seafood Company)	Stephen William Wardley, Seafood Sourcing Manager	2008 (Aug, telephone interview)	EU industry representative
<b>UK</b>	Greenpeace UK	David Ritter	2007-2011 (multiple informal communications)	NGO
<b>UK</b>	Iglo Birds Eye	Bob Hannon, Procurement Director	2008 (Sept, telephone interview)	EU industry representative
<b>UK</b>	Iglo Birds Eye	Peter Hajipieris, Director of Sustainability and External Affairs	2008 (Sept, telephone interview)	EU industry representative
<b>UK</b>	M&J Seafoods	Mike Berthet, Group Director Fish and Seafood	2008 (Aug, telephone interview)	EU industry representative
<b>UK</b>	Marks and Spencer (M&S)	Andrew Mallison, Technical Manager - Seafood Procurement	2008 (Aug, telephone interview)	EU industry representative
<b>UK</b>	New England Seafood International	Lucy Pelham Burn, Head of Corporate Social Responsibility	2008 (Aug, telephone interview)	EU industry representative
<b>UK</b>	Princes Group	Mike Easterbrook, Chief Executive Group Buying	2007 (May, Liverpool)	EU industry representative
<b>UK</b>	Seafish	Andy Gray, Marketing Manager	2008 (Aug, telephone interview)	EU industry representative
<b>UK</b>	Waitrose	John Vine	2005 (Oct, telephone interview)	EU industry representative
<b>UK</b>	Waitrose	Quentin Clark, Central Buyer Poultry, Fish And Eggs	2005 (Oct, person. comm.); 2008 (Aug, telephone interview); 2011 (March, informal meeting)	EU industry representative

<b>United States (San Diego)</b>	American Tunaboat Association	Paul Krampe, Executive Director	2006 (May)	US industry representative
<b>United States (LA)</b>	Bumble Bee Seafoods, LLC	Sheri R. Glazebrook, General Manager	2006 (May)	US industry representative
<b>United States (LA)</b>	Bumble Bee Seafoods, LLC	Liliana Rodriguez, Quality Assurance Manager	2006 (May)	US industry representative
<b>United States (San Diego)</b>	Bumble Bee Seafoods, LLC	Michael McGowan, Vice President, Resourcing & Government Affairs	2006 (May in San Diego and Bangkok and person. comms.)	US industry representative
<b>United States (Washington DC)</b>	Bureau of East Asian and Pacific Affairs, Department of State	Gavin A. Sundwall, Country Desk Officer, Office of Australia, New Zealand and Pacific Island Affairs	2006 (May)	US government official
<b>United States (San Diego)</b>	Catalina Offshore Products, Inc.	Dan Natrass, Sales/Purchasing	2006 (May)	US industry representative
<b>United States (San Diego)</b>	Catalina Offshore Products, Inc.	Dave Rudie, President	2006 (May)	US industry representative
<b>United States (San Diego)</b>	Chicken of the Sea International	Kevin Bixler, Director, Procurement	2006 (May)	US industry representative
<b>United States (San Diego)</b>	Chicken of the Sea International	Kevin McClain, Vice President, Procurement	2006 (May)	US industry representative
<b>United States (San Diego)</b>	Connors Bros. Ltd.	J. Douglas Hines, Executive Vice President, COO	2006 (May in San Diego and Bangkok)	US industry representative
<b>United States (San Diego)</b>	Connors Bros. Ltd.	Christopher Lischewski, President, CEO,	2006 (May in San Diego and Bangkok)	US industry representative
<b>United States (New York)</b>	High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States, United Nations	Anwarul K. Chowdhury, Under-Secretary-General	2006 (May)	International agency
<b>United States (San Diego)</b>	Independent.	James Joseph, Consultant	2006 (May)	International fisheries specialist
<b>United States (San Diego)</b>	Inter-American Tropical Tuna Commission (IATTC)	Robin Allen, Director	2006 (May)	International fisheries specialist
<b>United States (San Diego)</b>	Inter-American Tropical Tuna Commission (IATTC)	Brian S. Hallman, Senior Policy Advisor	2006 (May)	International fisheries specialist
<b>United States (Washington DC)</b>	IUCN (The World Conservation Union), USA Multilateral Office	Dr Harlan K. Cohen, Advisor, Ocean Governance Global Marine Program	2006 (May)	NGO
<b>United States (Washington DC)</b>	IUCN (The World Conservation Union), USA Multilateral Office	Dr Charlotte de Fontaubert, Senior Marine Advisor	2006 (May)	NGO
<b>United States (Washington DC)</b>	National Marine Fisheries Service, National Oceanic and Atmospheric Administration, US Department of Commerce	Dean Swanson, Chief, International Fisheries Division	2006 (May)	US government official
<b>United States (Washington DC)</b>	National Marine Fisheries Service, National Oceanic and Atmospheric Administration, US	John Ward, Office of Constituent Services	2006 (May)	US government official

	Department of Commerce			
<b>United States (LA)</b>	New Zealand Seafoods	John Barrett, South Pacific Specialist	2006 (May)	US industry representative
<b>United States (LA)</b>	New Zealand Seafoods	Ruben Galicia, HACCP Director	2006 (May)	US industry representative
<b>United States (Washington DC)</b>	Office of Marine Conservation, Department of State	Dave Balton	2006 (May)	US government official
<b>United States (Washington DC)</b>	Office of Marine Conservation, Department of State	William Gibbons-Fly, Director	2006 (May)	US government official
<b>United States (Washington DC)</b>	Office of Marine Conservation, Department of State	Holly Koehler	2006 (May)	US government official
<b>United States (Washington DC)</b>	Office of the United States Trade Representative, Executive Office of the President	Roy Malmose	2006 (May)	US government official
<b>United States (Washington DC)</b>	Office of the United States Trade Representative, Executive Office of the President	Carlos S. Pachon, Director for Environment and Natural Resource Policy Affairs	2006 (May)	US government official
<b>United States (Washington DC)</b>	Office of the United States Trade Representative, Executive Office of the President	Tiffany Smith, Director for Market Access	2006 (May)	US government official
<b>United States (San Diego)</b>	Pacific Princess Partnership Ltd.	Ricardo da Rosa, Manager	2006 (May)	US industry representative
<b>United States (Washington DC)</b>	Sher & Blackwell	Jeffrey R. Pike, Government Relations	2006 (May)	US industry representative
<b>United States</b>	Starkist	Susan Jackson, Procurement	2006 (May) [Telephone Interview]	US industry representative
<b>United States (LA)</b>	Taiwan Seafood & Fish Corporation	Frank Namikawa	2006 (May)	US industry representative
<b>United States (LA)</b>	Tri-Marine Fish Company, LLC	Anthony Vuoso, Executive Vice President	2006 (May)	US industry representative
<b>United States (LA)</b>	Unified Seafood Co., Inc	Robert C. Wang	2006 (May)	US industry representative
<b>United States (San Diego)</b>	United States Tuna Foundation	David G. Burney, Executive Director	2006 (May)	US industry representative
<b>United States (Washington DC)</b>	United States Tuna Foundation	Randi Parks Thomas	2006 (May)	US industry representative
<b>United States (Washington DC)</b>	US House of Representatives	Eni F. H. Faleomavaega, Member of Congress	2006 (May)	US government official
<b>United States (Washington DC)</b>	US House of Representatives	Tim W. Johnson, Legislative Counsel to Congressman Eni F. H. Faleomavaega	2006 (May)	US government official
<b>United States (Washington DC)</b>	World Bank (Agriculture and Rural Development Department)	Kieran Kelleher, Senior Fisheries Specialist	2006 (May)	International agency
<b>United States (Washington DC)</b>	World Bank (Environmental, Rural and Social Development)	John Virdin, Operations Officer	2006 (May)	International agency

<b>United States</b>	WWF	David Schorr, consultant	2008-2010 (multiple informal comms. in Geneva)	NGO
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## CHAPTER 2 APPENDICES

### APPENDIX 2A

#### **Characteristics of Principal Market Canning-Grade Tuna Species; and Extent and Intensity of Global Tuna Fisheries, 1960-2004**

It should be noted that there is some variation (and confusion) in nomenclature used for different species of tuna by: a) the Food and Agricultural Organisation (FAO) (with significant variations and overlaps in the English, French and Spanish names); b) the 1982 UN Convention on the Law of the Sea (UNCLOS, entered into force in 1994) and the subsequent 1995 UN Agreement Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (UN 'Fish Stocks' Agreement); the World Customs Organisation (WCO); and, c) the 1983 International Convention on the Harmonised Commodity Description and Coding System. A legal review by Serdy clarifies that FAO nomenclature is preferred as it is based upon the principle of 'one species, one name'; although, for legal purposes, Serdy recommends the use of the scientific (Latin) names (2004: 245-246).

As noted in Chapters 1 and 2, the other main canning-grade subtropical tuna species – albacore – is not addressed in this thesis because of the limited interactions with purse seine fisheries (including in and around the Seychelles EEZ) and its relatively minor direct importance to EU markets. It is, however, of central importance to the US canned tuna market, which in turn might affect EU markets for canned skipjack, such as in the case where increased US consumption of canned albacore relative to skipjack expands the international availability of supply of canned skipjack, expressed through a downward effect on price, and vice versa.

**Table 2A.1: Characteristics of principal market canning-grade tuna species**

<b>FAO English name</b>	<b>Key biological characteristics<sup>1</sup></b>	<b>Key production-consumption characteristics (industrial fishing method → principal market)<sup>2</sup></b>
Albacore	Sub-tropical. Worldwide distribution along this latitude. Intermediate between tropical and temperate tunas, i.e. adults widely distributed in tropical waters, but also widely distributed in subtropical and temperate waters. Moderately developed thermoregulation and seasonal spawning. Spawning duration: 3 months (in year); sexual maturity: 4.5 years and 15kg in weight; maximum: age (10 years), length (120cm) and weight (80kg)	Primarily freezer longliner, but some fresh-chilled longliners → Canned tuna, primarily for US consumption (marketed as ‘white meat’), but also in France and other EU15 countries. Minority consumption as tuna steaks in the US and elsewhere.
Bigeye tuna	Sub-tropical. Worldwide distribution. Intermediate between tropical and temperate tunas. Advanced rate of thermoregulation which allows their range to extend vertically in water column well below the epipelagic zone (diving to over 500 m). Spawning duration: 3 months; sexual maturity: 3.5 years and 31kg in weight; maximum: age (15 years), length (180cm) and weight (225kg)	Depth of habitat for adults means that they are primarily targeted by industrial longliners (freezer and fresh-chilled vessels) → Consumption as sashimi, primarily in Japan. Industrial purse seiners targeting skipjack and yellowfin incur significant levels of incidental catch of juveniles, especially when fishing on Fish Aggregating Devices (FADs) → Incidental catch used in canned tuna, often packed with skipjack
Skipjack tuna	Tropical. Worldwide distribution along this latitude. Poorly developed thermoregulation, spends entire life in tropical waters (except when currents displace), spawns all year round over wide areas, and patterns of movement tend to be limited. All commercial tuna species listed here are all part of the genus <i>Thunnus</i> except for skipjack tuna, which is the only species in its genus ( <i>Katsuwonus pelamis</i> ). Spawning duration: 12 months; sexual maturity: 1.5 years and 1.7kg in weight; maximum: age (4-5 years), length (75cm) and weight (23kg).	In order of importance, purse seine, pole and line and, very limited, longline → Canned skipjack tuna consumption is global. Principal markets are EU and USA (mixed with yellowfin in US for ‘lightmeat’ canned tuna) Also supplies katsuobushi (dried tuna) and other specialised markets in Japan.
Yellowfin tuna	Tropical. Worldwide distribution. Population based in the Indian and Pacific oceans. Less advanced rate of thermoregulation which confines their range to the upper 200 m of the water column. Poorly developed thermoregulation, spends entire life in tropical waters (except when currents displace) and spawns for much of the year over wide areas. Spawning duration: 6 months; sexual maturity: 2.8 years and 25kg weight; maximum: age (10 years), length (170cm) and weight (176kg).	In order of importance: Purse seine and pole-and-line → Canned tuna, primarily for southern EU consumption and mixed with skipjack for US ‘lightmeat’ product; Longliners (freezer and fresh-chilled vessels) → Sashimi, primarily in Japan, but also US, East Asia and the EU; Longline, pole-and-line and purse seine → tuna fillets (e.g. ‘steaks’, etc), primarily to EU and US.

<sup>1</sup> Based on FAO (2001: sections 1.4 and 1.5).

<sup>2</sup> Based on multiple interviews and direct observation over 2006-9, see also Campling et al. 2007; Miyake et al. 2010. This discussion excludes artisanal and small-scale tuna fisheries. An explanation of different fishing methods follows in the next section.

As we have seen in Chapter 2, freezer technology and enhanced vessel capacity allowed longer periods at sea, and permitted the spatial and temporal range and intensiveness of resource exploitation to expand rapidly.<sup>3</sup> Figure 2A.1 illustrates total global production of skipjack by purse seine vessels in terms of volume and location between 1960 and 2004.<sup>4</sup> Average yearly catch is illustrated over five year periods running from the start of each decade. This avoids El Nino events in 1996/7 (dramatic) and 2007 (moderate) when changes to oceanic temperature affected tuna population flows, thus the data on location of fishing effort for these periods shifted. A clear trend is the rapid expansion of the fishery from the 1980s onwards in terms of both geographical location and intensity of catch volume. The spatial expansion and enhanced productivity of purse seine fisheries in the 1980s was driven by constant growth in sales of canned tuna in the US until 2002 and in the EU (see Chapter 3). Of particular importance to this thesis is the clear emergence of the purse seine fishery in the Western Indian Ocean (WIO) from the 1980s onwards (FAO statistical area 51 in the first plate of figure 2.3). The WIO tuna fishery must however, be understood in relation to other relevant fisheries for skipjack and yellowfin.

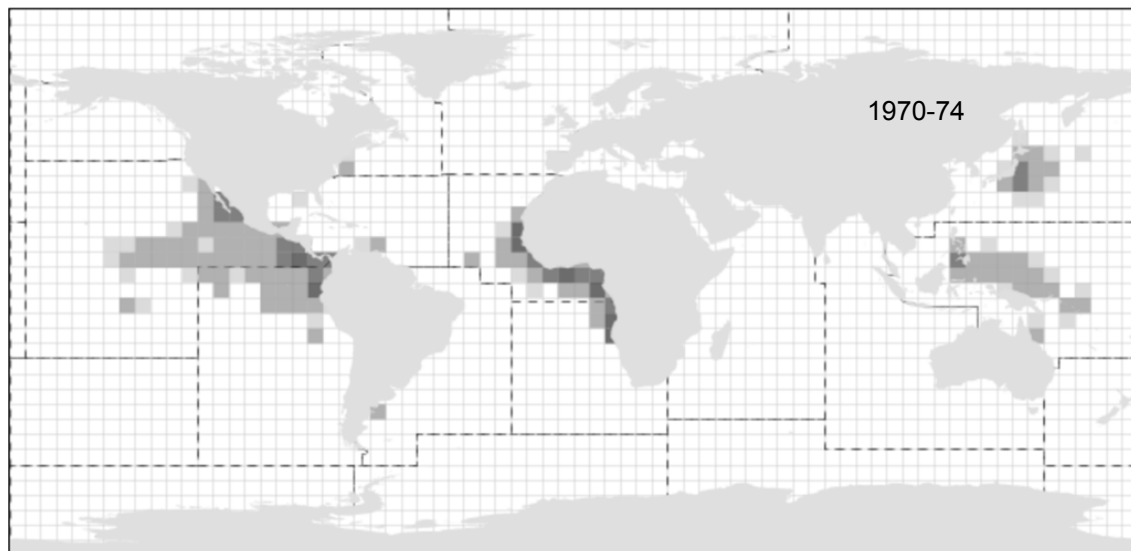
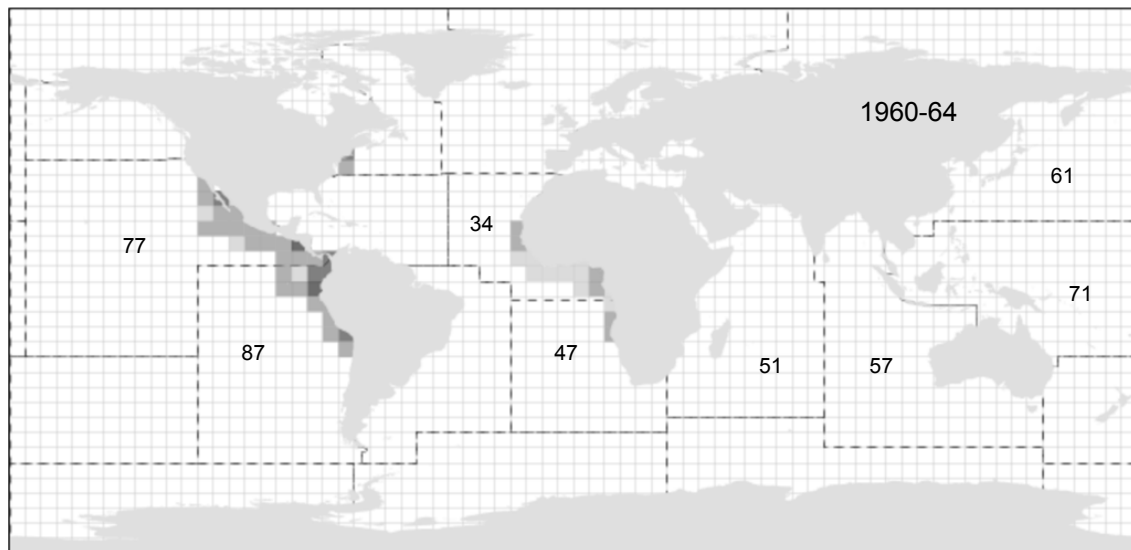
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<sup>3</sup> As did the ability of firms to tranship frozen fish in reefer vessels to processing locations long distances from fishing grounds, such as Thailand (see Chapters 2 and 3)

<sup>4</sup> The same exercise was undertaken for purse seine capture of yellowfin tuna. The results are broadly similar in terms of both spatial and volume growth trends, albeit at a lower absolute volume (compare figure 2.3 and 2.4), and are not provided here.



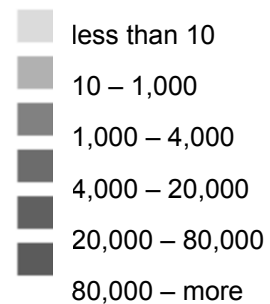
**Figure 2A.1: Average yearly catch of skipjack by purse seine, 1960-2004**



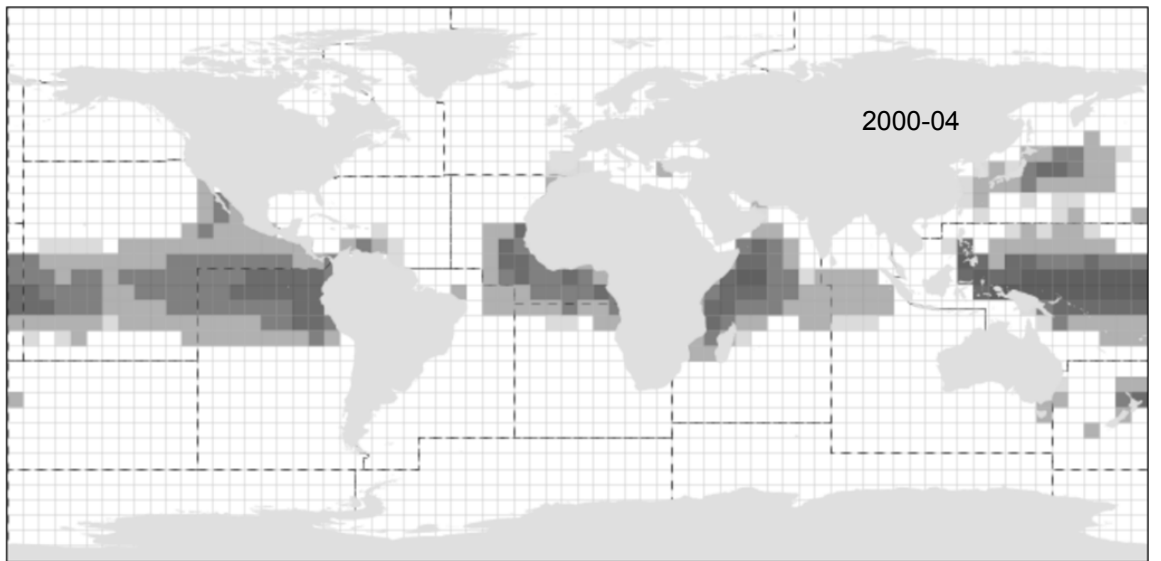
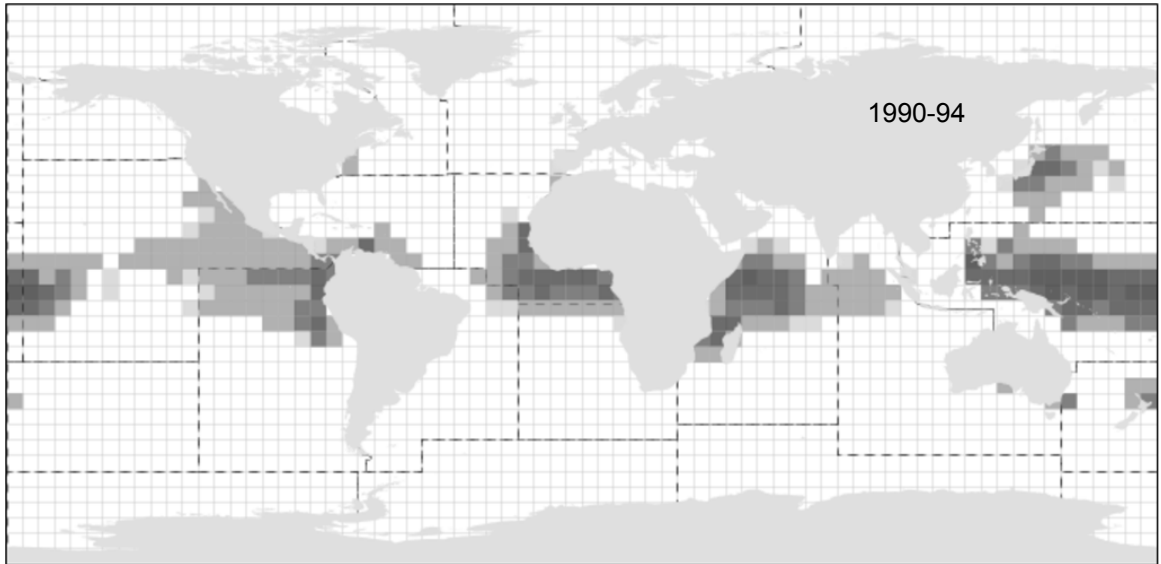
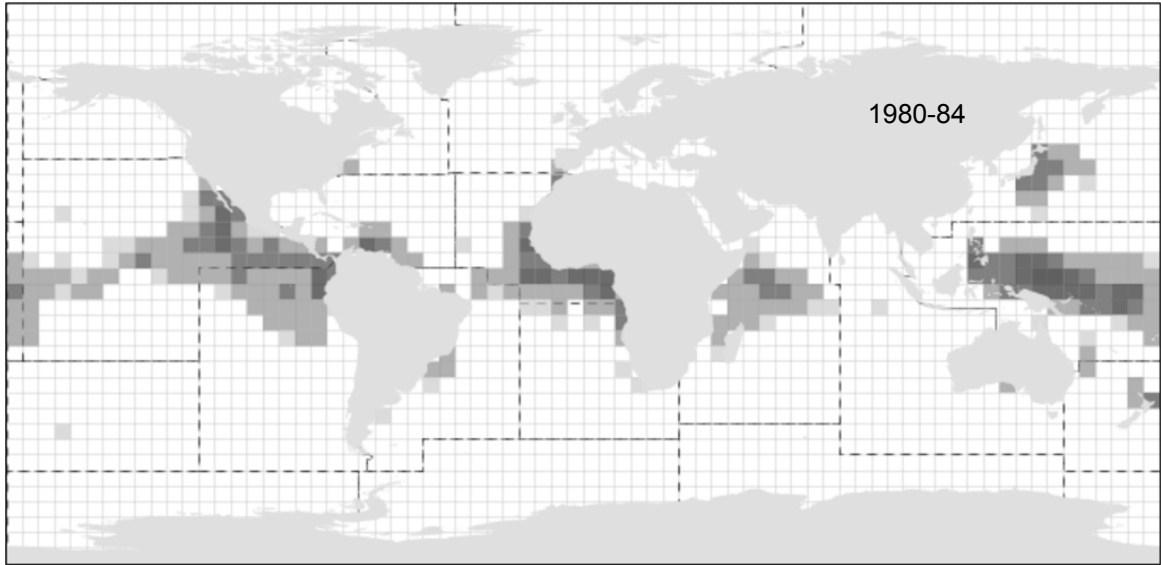
**Numbering in first image = selected FAO statistical areas**

- 34: Eastern Central Atlantic
- 47: Southeast Atlantic
- 51: Western Indian Ocean
- 57: Eastern Indian Ocean
- 61: Northwest Pacific
- 71: Western Central Pacific
- 77: Eastern Central Pacific
- 87: Southeast Pacific

**Catches (metric tonnes)**



Source: Customised illustration using FAO Atlas of Tuna and Billfish Catches: Interactive display. <http://www.fao.org/fishery/statistics/tuna-atlas/query/en> (last accessed 01 December 2009).



## **APPENDIX 2B:**

### **Comparing production costs of tuna purse seiners by national fleet**

French and Spanish boat owners regularly point out that their costs are higher than those of their Asian competition. This however, excludes Japanese boats which are consistently recognised as having similar crew and regulatory costs to the EU DWF (EUInd#14; #15; #21; #22; JInd#9; #16–#18; #21–#26; #32; #33; JGvt#4–#14). Table 2.3 presents comparative data on costs of exploitation – or ‘operational’ costs<sup>5</sup> – by four major distant water purse seine fishing ‘nations’ in 2003: Spain, Taiwan, Japan and the Philippines (for detail on the last three fleets, see Campling et al. 2007; Hamilton et al. 2011). Given that the data compares boats of different gross tonnage (GT), a euro/vessel tonnage weighting is applied. The data is only indicative and contains several weaknesses: first, given that fuel is normally purchased in US dollars and that different ‘national’ boats operate in different currencies, comparing costs in any arbitrarily selected currency is skewed by exchange rates; second, and similarly, no attempt is made to factor-in different costs of living, for example, the comparison of Spanish and Philippine crew costs would be substantially transformed if weighted by purchasing power parity; third, boats operate in different oceanic regions which involve different distances between port and fishing ground (see below on ‘fishing days’) and are subject to different regulatory mechanisms (e.g. Japanese boats have historically been obliged to offload in Japan, see above), which all have important effects on fuel and maintenance inspection costs; and finally, the data does not account for fish sales, including the role of catch quality and quantity, and species composition (see below) in shaping ex-vessel fish prices accrued to the boat owner, or the role of government subsidies (see Chapter 4 on EU subsidies).

In light of these weaknesses the data in Table 2B.1 are of greatest use as a rough indicator of *relative* (rather than absolute) comparative costs. It serves to confirm numerous interview data stating that the principal operational costs of any purse seiner are crew and fuel (although Philippine crew costs are comparatively minor). While the examination of the commodity chain in canned tuna in this thesis excludes the political economy of labour, its exchange value and regulation are central considerations from the perspective of capital; for, while the ‘crew payment system varies from one fleet to the other’, it ‘is a determining factor for the profitability of the vessel’ (Estudios Biologicos 2006: 55). Industrial purse seining is already a highly capital intensive fishing method and there are few major additional labour saving devices that can be inserted into production except for making bigger boats.

#### ***Employment and wage costs***

French, Spanish and Japanese boat owners and managers regularly complain that regulatory mechanisms make their crew costs very high compared to competing purse seine fleets from East and Southeast Asia. For example, one Spanish boat-owner

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<sup>5</sup> It is recognised that this combines variable capital (wages) and constant capital, and also that it excludes various other components of constant capital, especially the vessel itself (including interest on loans and depreciation), as well as costs of compliance with regulation. However, ‘operational cost’ is used here and in Chapter 3 on the canning industry as the analysis is from the perspective of capital, which itself uses mainstream (bourgeois) methods of accounting.

argued that: ‘The East Asian crews eat rice and tuna – they’re on very poor salaries: they’re slaves! So their spending onshore is far less’ (EUInd#13); and a Japanese manager claimed that their Asian competitors ‘have a slave fishery compared to ours’ (JInd#7; also IntFS#5; PICInd#5; AInd#2). While it is believed that most crew on Taiwanese boats are ‘cheap’ Chinese nationals as well as from Vietnam, Philippines Indonesia, Burma and Bangladesh (AGvt#4; PICVS#1; JInd#7; #8; AFP/Taipei Times 2002), it is also known that Indonesian and Pacific Islander crew work on Japanese purse seiners, although most ‘upper level crew’ are Japanese nationals ‘because of pressure from the Seaman’s association in Japan’ (JInd#9–#14; JGvt#7–#14; see below on EU DWF crew). The sensationalist claims are only partly apparent from estimated total crew costs detailed in Table 2B.1.

Of total operational costs, crew wages totals almost 42 percent on Spanish boats, 33 percent on Japanese and Taiwanese boats, and only six percent on Philippine boats. European and Japanese fishing firms are obliged to pay year-round salaries to crew (which is the highest on Spanish boats), while Philippine and Taiwanese equivalents establish employment contracts on the basis of individual fishing trips (Estudios Biologicos 2006). But given that crew on Taiwanese and Philippine boats can stay onboard without holiday for over 12 months, this is, in effect, an annual contract. In contrast, according to EU employment law, crew on the EU DWF receive two months of paid holiday – including transfers – for each four months of work onboard.<sup>6</sup> As a result EU boat managers/owners rotate crews in thirds: given that a typical French purse seiner employs 20-24 crew and a Spanish boat 24 crew, a complete crew totals between 33 and 36 employees (Oceanic Développement et al. 2005: 236). EU DWF crew also receive several days holiday when the fish is offloaded (direct observation, Seychelles, 2001-4; interviews, multiple industry representatives 2006 and 2009), while crew on Philippine and Taiwanese boats often do the stevedoring themselves (EUInd#13; multiple interviews PIC industry representatives). Fishing bonuses are the majority source of income for crew on all types of boats in Table 2.3 and are largest in the Spanish case, followed by Japan; for the latter, fishing bonuses constitute over 90 percent of total remuneration to crew, generating a high degree of precarity and, in turn, financial incentive to maximise catch. In the majority of cases, Spanish boat owners base crew bonuses on the *quantity* of fish caught,<sup>7</sup> except for skippers and engineers, where it is calculated on the basis of the selling price of the fish (Estudios Biologicos 2006). Under Spanish law employers of Spanish citizens must make national social security contributions, which total 8 percent of operating costs, but for all three of the other ‘national’ employers in Table 2B.1 it is less than 1 percent.

It was estimated that the EU-*flagged* DWF provided between 780 and 910 *direct* jobs for EU citizens in 2003 (Oceanic Développement et al. 2005: 236). Although very small, this contribution to the generation of employment of EU citizens is a major lobbying point by industry associations (see Chapter 2 and 5). However, EU boat owners/managers often stress that it is difficult to employ European crew. One Spanish owner of a vertically-integrated firm noted that: ‘It’s more difficult to get Spanish crew, even if there are many ‘hot potatoes’ at home. ... Adult Spanish males in their 30s still living with parents for economic reasons.’ He also pointed out that

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<sup>6</sup> Skippers and engineers (almost always Spanish or French citizens) receive four months holiday for every four months (Estudios Biologicos 2006).

<sup>7</sup> In an effort to discourage the catch of juveniles, French crew are not paid for tuna under 1.5 kg (Goujon and Riva 2009: 8).

even in the pole-and-line fleet in the Bay of Biscay around half of the crew employed are from Peru and Senegal because ‘the boats are very uncomfortable’ (EUInd#21; #22).

A long-standing strategic response by the EU DWF to crew costs and shortages has been to employ crew from West Africa (primarily from Senegal) and the Western Indian Ocean (mainly from Madagascar).<sup>8</sup> In 2003 the EU-flagged DWF directly employed between 1,365 and 1,430 crew from *non*-EU countries. The provision of local crew was locked into EU preferential rules of origin for tuna, where 50 or 75 percent of crew must be nationals of the signatory states (see Chapter 5). It is also recognised (and encouraged) in fishing agreements signed by coastal states with the EU, which require a negotiated number of crew to be employed from the coastal state; if this condition is not met, compensation is paid to the coastal state (see Chapter’s 4 and 6). However, despite employing an average of 1.7 times more non-EU citizens, total wages (fixed and variable components) paid by the total EU DWF in 2003 to these crew came to only €6.9 million, while total wages paid to the (minority) EU employees came to €52.3 million, or 7.6 times more (Oceanic Développement et al. 2005: 235). This disparity is certainly in part due to Spanish and French employees normally performing highly specialised roles (e.g. captains, fishing masters and engineers), but it also reflects racialised conceptions of the international division of labour which are normally justified based upon the fact that income earned by non-EU citizens working for the EU DWF is substantially higher than opportunities available domestically. For example, in reference to Ecuadorian crew on Spanish-owned boats active in the Eastern Tropical Pacific, one industry representative exclaimed that ‘They are kings!’ but immediately followed with: ‘They are on half the salary of Spanish crew’ (EUInd#21).

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<sup>8</sup> On similar strategies by Japanese tuna boat owners/managers to mitigate crew costs, see Campling et al. 2007: 238.

**Table 2B.1: Comparative costs of exploitation for tuna purse seiners**

Cost items	Spanish (Average capacity 1,700GT)		Taiwanese (Average capacity 1,700GT)		Japanese (Average capacity 800GT)		Philippine (Average capacity 650GT)	
	Euro/Vessel Tonnage	% Total	Euro/Vessel Tonnage	% Total	Euro/Vessel Tonnage	% Total	Euro/Vessel Tonnage	% Total
<b>Crew</b>	1,295.5	41.5	562.8	33.9	1,287.9	33.2	117.5	6.0
<i>Salaries</i>	230.5	7.4	139.4	8.4	52.8	1.4	53.1	2.7
<i>Fishing bonus</i>	713.6	22.9	373.5	22.5	1,195.2	30.8	58.5	3.0
<i>Social security</i>	257.2	8.2	14.9	0.9	19.9	0.5	5.9	0.3
<i>Crew trips</i>	94.2	3.0	34.9	2.1	19.9	0.5	--	--
<i>Other costs related to work</i>	91.6	--	*	*	5.9	--	22.0	??
<b>Supplies</b>	686.1	22.9	673.1	40.6	1,020.9	26.3	963.9	49.4
<i>Food, water, other supplies</i>	67.3	2.2	6.3**	0.4**	209.2	5.4	15.4	0.8
<i>Fuel</i>	576.5	18.5	647.4	39.0	776.9	20.0	918.0	47.0
<i>Lubricating oil</i>	42.4	1.4	19.4	1.2	34.9	0.9	30.5	1.6
<b>Maintenance/repair, mooring fees, maintenance inspections</b>	644.1	20.7	124.5	7.5	896.4	23.1	656.7	33.6
<b>Equipment</b>	361.8	11.6	249.0	15.0	598.6	15.4	175.1	8.9
<b>Insurance</b>	132.4	4.2	49.8	3.0	79.7	2.1	39.6	2.0
<b>TOTAL</b>	<b>3,119.8</b>	<b>100</b>	<b>1,659.1</b>	<b>100</b>	<b>3,883.5</b>	<b>100</b>	<b>1,952.9</b>	<b>100</b>

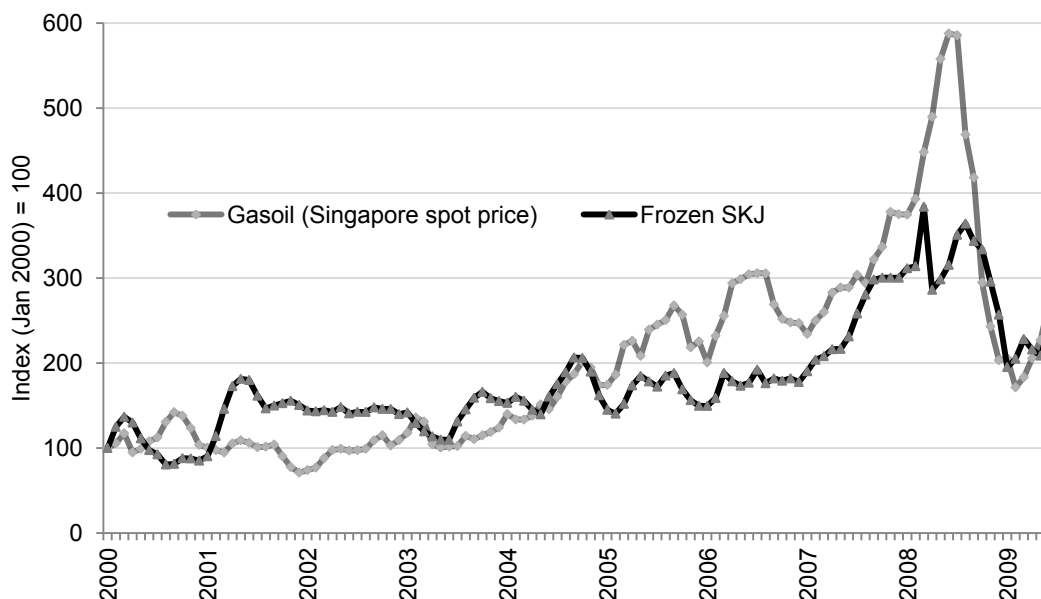
Notes: Numbers rounded so may not equal 100%; \* data excluded by original authors because submission by Taiwan Tuna Association under this heading was deemed 'disproportionate'; \*\* no data provided as crew provide their own food, estimated minimum inserted by original authors.

Source: Estudios Biologicos (2006: 46, 49-51) translated by Béatrice Gorez, using data supplied by OPAGAC, Taiwan Tuna Association, Kaimaki (Japan Far Seas Purse Seine Fishing Association), and Confederation of Philippine Tuna Industry.

### *Fuel costs*

The ratio of edible-protein energy return on fuel energy investment for global marine capture fisheries is more ‘efficient’ than in intensive livestock production such as beef and lamb. Nonetheless, ‘fisheries globally dissipated 12.5 times the amount of fuel energy as they provided in the form of edible-protein energy’ (Tyedmers et al. 2005: 636). For tuna purse-seiners, it is estimated that some boats ‘use as much as four metric tons of fuel for each ton of tuna that they catch’ (Krampe 2006: 1). Thus, as Friedman rhetorically points out, ‘We are eating oil’ (Friedmann 2008: 620; see also Weis 2007) as much for fish products as for agriculture ones.<sup>9</sup> Fuel is the second largest operational cost for Spanish and Japanese purse seiners, and the largest for Taiwanese and Philippine boats, based on data for 2004.<sup>10</sup> The rise in global gasoil prices in 2005 and their sharp acceleration from mid-2007 (Figure 2B.1) would have shifted upwards the proportion of fuel costs detailed in Table 2.3,<sup>11</sup> and certainly imposed a price-cost squeeze on vessel owners (Krampe 2006: 22; Tiu-Laurel 2006: 80). Importantly, the EU DWF based in the Eastern Tropical Atlantic and the WIO has a fuel advantage over the Taiwanese fleet (€576.5/GT and €647.4/GT respectively, Table 2B.1). This is because the latter is entirely based in the WCPO where the number of ‘steaming days’ (see below) required to access fishing grounds is considerably larger.

**Figure 2B.1: Gasoil and canning-grade skipjack price index, January 2000 to June 2009**



<sup>9</sup> It is estimated that fisheries accounted for about 1.2 percent of global oil consumption to the point of *landing catch alone* (Tyedmers et al. 2005: 635). An assessment of which areas of the UK-centred seafood chain are responsible for the greatest carbon emissions found that fishing itself generates the most (Seafish 2008; see also, Campling 2008c).

<sup>10</sup> Floyd (1987b: 24) estimated that fuel accounted for between 50 and 60 percent of total operating costs of distant-water fishing vessels in the mid-1980s.

<sup>11</sup> For example, Krampe (2006: 3) estimated that fuel costs were 52 percent of total production costs of the US purse seine fleet but only two percent of final canned lightmeat production cost. Miyake et al. (2010: 42) estimate that in the 1980s and 1990s fuel as a proportion of total operating expenditure in purse seine fleets in general, regardless of vessel size, was 20 percent, but ‘In recent years, this increased to 50 percent or more for some vessels’.

Source: FFA database (price data uses Bangkok skipjack price in cif for fish weighing 1.8-3.4kg; Singapore gasoil spot price data is sourced from the US Energy Information Administration).

The relationship between canning-grade tuna and gasoil prices is central to an understanding of the economics of purse seining because of the high proportion of fuel to total operational costs. Gasoil price shifts are thus important to relative levels of vessel profitability, even if ‘fishing days’ are successfully maximised (Chapter 2). Since 2005, skipjack tuna prices have very rarely risen to the same heights as gasoil prices (Figure 2B.1). The widening of the fuel-fish price differential during the oil price hike from 2007 to mid-2008 resulted in the tying-up of East Asian longline fleets, protests by fishers across Europe and the roll-out of new subsidies in several countries (Campling 2008d; 2008e; 2008f; see also, Arnason 2007). For the EU DWF in the WIO it resulted in lower profit margins (Miyake et al. 2010: 44). Conversely, assuming stable catch rates, when gasoil price drops and the tuna prices rise a vessel is more likely to turn a profit, as occurred for the EU DWF in late 2008 and into 2009.

### ***Other running costs***

The third major cost identified in Table 2B.1 for *all* boats is the combination of maintenance/repair, mooring fees and maintenance inspections. This is an important area of potential economic activity for coastal states in their interactions with the fishing node of the commodity chain (i.e. ‘upgrading’, as analysed at length in Chapter 6). These costs are broadly equivalent for Spanish, Japanese and Philippine boats, but especially low for the Taiwanese. This confirms the perspective of various Japanese industry representatives who claim that Taiwanese boats are able to stay at sea for longer periods because of more limited boat inspections and lower levels of other regulation (JInd#9; #16–#18; #21–#26; #32; #33; JGvt#4–#14; IntFS#3).<sup>12</sup> While the relative costs of regulation are difficult to quantify and are not captured in Table 2B.1, EU regulations are a major concern of the EU DWF and are probably the most restrictive in the world (EUInd#1–#4; #12; #13; #15; #21; #22). One Spanish fleet manager spoke at length on this:

The control of our boats is very heavy, but for [Asian] long-liners?! They have no controls. Our purse seiners must comply with EU SPS [sanitary and phyto-sanitary] regulations. Food and Veterinary Office inspectors are very tough on vessels and factories, but East Asian boats are not subject to this (aside from Japan, which have similar standards to us). Therefore the costs of raw material are lower. The 24 percent margin doesn’t cover our higher SPS and wider regulatory compliance costs. It’s much easier for FVO inspectors to check us, all our boats and operations are well known (EUInd#16).

Another fleet manager put it more succinctly: ‘Fishing for the EU distant water fleet is highly regulated – to fulfil everything is a nightmare’ (EUInd#14). Arguably,

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<sup>12</sup> In the mid-2000s one major Japanese company was maintaining purse seiners less frequently in order to maximise fishing days and to reduce fuel costs associated with returning to port for scheduled maintenance. The company previously undertook in-dock boat and net maintenance annually, but has switched to doing it every 15 to 20 months (20 months is reported to be the regulatory maximum period without maintenance in Japan) (JInd#10–#14).



however, the costs of regulation for the EU DWF are countered by an extensive regime of subsidies (see Chapter 4).

In terms of equipment cost the largest recurring for most purse seiners in Table 2B.1 is the net, which costs around €0.5million (EUGvt#14). Given their enormous size and technical intricacy they require constant maintenance and repair (see Chapter 6 on net repair in Seychelles). However, extensive use of modern technology on fish aggregating devices (FADs) by Spanish boats means that they are a major component of equipment costs for this fleet – at over 60% (Estudios Biologicos 2006: 46). This was a non-existent or extremely minor (or unreported) equipment cost for the other three representative purse seiners detailed in Table 2B.1. As discussed in Chapter 2, the additional ‘cost’ of high-tech FADs to the Spanish fleet certainly contributed to enhance the productivity of fishing trips.

The final major item of operational cost is insurance. The insuring of fishing vessels is a highly specialised and complex industry and often extends to machinery, fishing gears, industrial freezers and electronic systems (e.g. navigation and fish finding equipment). The capture fisheries insurance market in Europe, North America, and Latin America is largely dominated by private-sector insurance firms, while in Asia the public-sector plays a major role either through public insurance firms or, in the case of Japan, through government financial assistance to fishing cooperatives (Van Anrooy et al. 2009: 8).<sup>13</sup> The slightly lower Taiwanese insurance costs (three percent of total operating costs) compared to the Spanish (4.2 percent) might be explained in part by the practice of the former of ‘only buy[ing] total loss cover to satisfy the bank, but no cover for fires onboard, crew cover, etc.’ (IntFS#7).<sup>14</sup> This serves to support the claims of the EU and Japanese DWF that their cost structures are higher than the Taiwanese competition because they are regulated more extensively (see above). In the case of large vessels such as those in the EU DWF, it may also be that insurance is obligatory and, because of their high value, includes reinsurance on the international market (Van Anrooy et al. 2009: 14-15).

In summary, given its comparatively high operating costs it is perhaps surprising that the EU DWF has survived commercially and is the largest purse seine fleet in the world. The answer to this lies in part in the regime of government subsidies made available to the fleet (Chapter 4) and a set of commercially-beneficial regulatory mechanisms (Chapter 5), but also in the range of business strategies employed to increase production and profitability.

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<sup>13</sup> On insurance costs in the US purse seine fleet, see Campling et al. 2007: 156, 282.

<sup>14</sup> In addition, two sets of vessel data included the disaggregation of insurance costs to specify ‘goods’ insurance (assumed to be fish). This was around three percent of total insurance costs for Spanish purse seiners and ten percent for Philippine boats (Estudios Biologicos 2006: 46, 50). The difference between them is almost certainly due to the Spanish boats being larger: the value of the catch as a proportion of the value of the boat would be significantly lower (even taking into account the basic Euro/vessel tonnage weighting).

## **APPENDIX 2C: Business Strategies of the European Tuna Fleet in the Western Indian Ocean in the 2000s**

This appendix identifies and explains two business strategies employed by the French and Spanish purse seine fleets ('EU DWF'). It generally narrows these down into one geographical area, the Western Indian Ocean (WIO). While most of the following business strategies apply to other fleets in other places and at other times, no claims for generalisation are made here. The analysis of this set of additional strategies allows a deeper understanding of firm activities in the fishing node (Chapter 2) and establishes linkages between these and the manufacturing and retail nodes, which are addressed in Chapter 3. This appendix consists of three sub-sections:

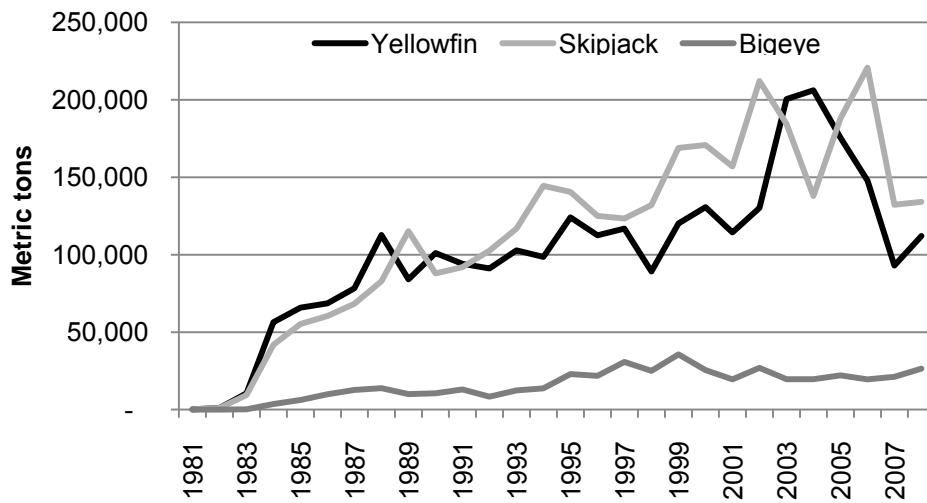
### **2C.1: Canning-grade tuna prices and the catch composition of the EU DWF in the Western Indian Ocean**

Yellowfin tuna fetches a price premium in the EU-centred canned tuna chain (see Figures 2C.1, 2C.2, 2C.3 and Chapter 3). This is an important distinction because statistical analyses of the world market for canning-grade *skipjack* tuna in the period 1989-2001 have shown that regional ex-vessel markets are globally integrated by price (Jeon et al. 2008). The implication is that regional ex-vessel markets for canning-grade skipjack do not behave independently, with short-term regional price differences converging (in a matter of months) and with long-term price leadership exerted by markets with Bangkok and, apparently, the 'Americas' (Puerto Rico and Ecuador) (Jeon et al. 2008; Squires et al. 2006).<sup>15</sup> Subsequent econometric work concurred with these findings in specific reference to the relationship between European and world markets for frozen skipjack for the period 1995-2006 (Jiménez-Toribio et al. 2010). As one industry representative put it: 'There is a world market – each region follows each other'; another noted that 'skipjack is a universal market' (EUInd#11; #13). The difference in raw material prices paid by factories is often due to reefer transshipment costs, which are around US\$ 200 per ton between oceanic regions (EUInd#11; USInd#5; #11; #12). In the statistical analysis of *yellowfin* price movements however, no such convergence was found, leading to the conclusion that regional markets for this species are not fully co-integrated (Jeon et al. 2008: 43 and 46); an *explanation* of these trends is discussed below.

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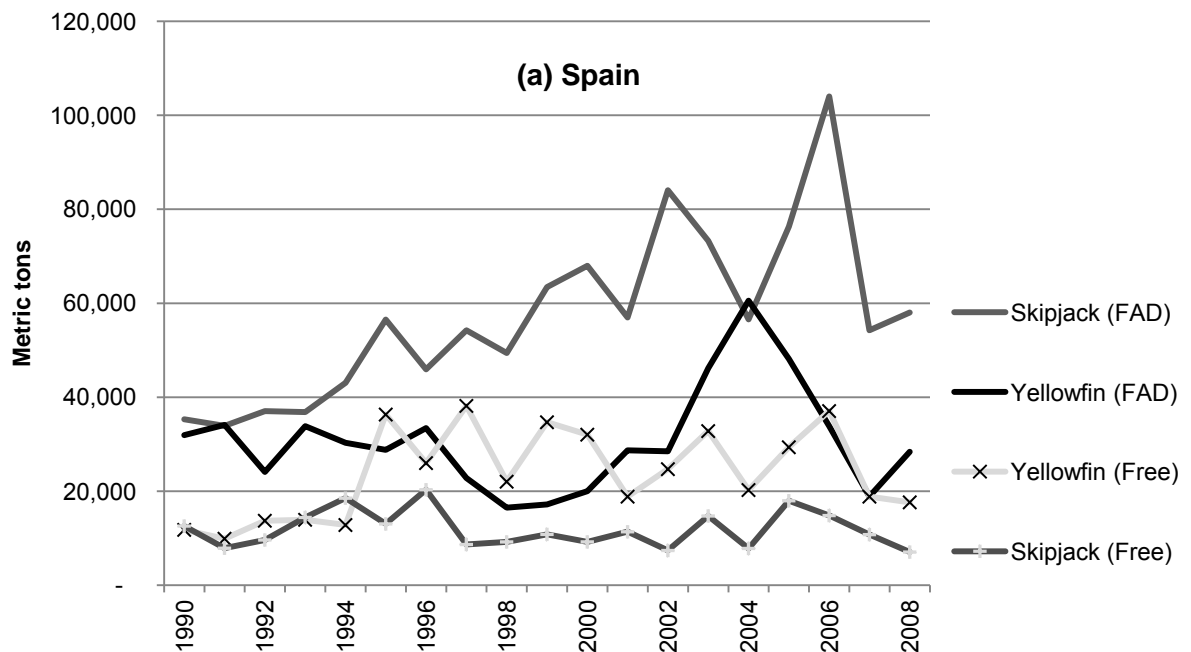
<sup>15</sup> It is beyond the scope of this thesis to assess the relative merits of these (and other) econometric analyses of tuna price time-series. However, it is important to note that interviews with a very large number of industry representatives with operations in the ETA, EPO, WCPO and WIO in 2005, 2006, 2007, 2009 and 2010 – as well as interview transcripts from Ecuador in 2010 by Elizabeth Havice – all cite the Bangkok market as the price leader for skipjack (see also Squires et al. 2006).

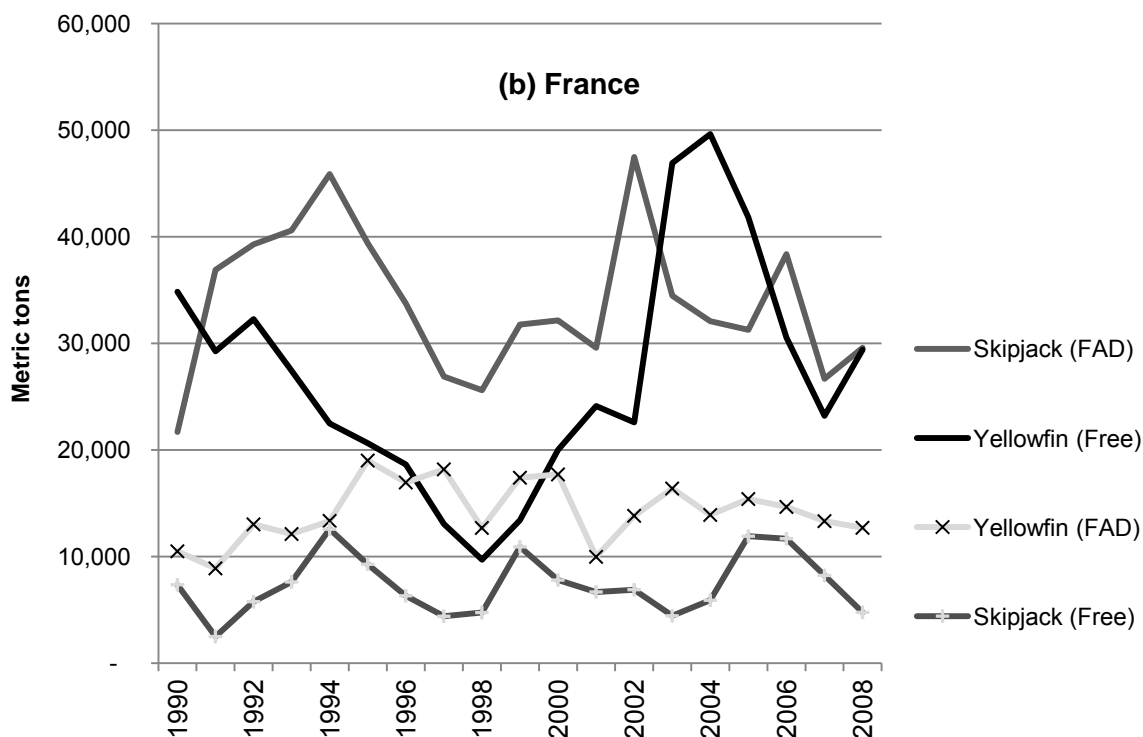
**Figure 2C.1: Total tuna catch by purse seine in the WIO, 1981-2008 (in mt)**



Note: data excludes minor volumes of albacore and bycatch  
 Source: Pianet et al. 2009: 11

**Figure 2C.4: Spanish (a) and French (b) purse seiners catch on FADs and free schools by species in the Indian Ocean, 1990-2008.**





Note: The catch data excludes capture of bigeye, which is proportionately very high in some years, and all bycatch.

Sources: de Molina et al. 2009: 3-4; Pianet et al. 2009: 9

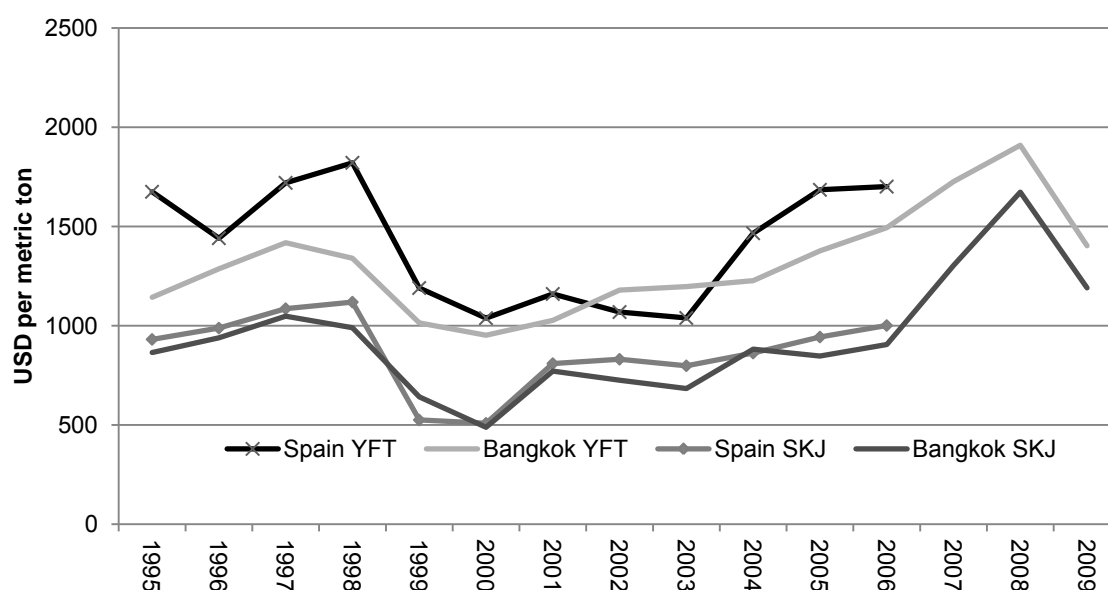
In commercial terms, the high ratio of yellowfin to skipjack catch in the WIO is very important to the profitability of the EU DWF active there (multiple interviews, industry representatives and international fisheries specialists, 2006, 2007 and 2009. See also Jiménez-Toribio et al. 2010). Figure 2C.2 shows that there is a significant difference between prices for frozen yellowfin landed in Spain and in Bangkok. Over the period 1995-2006, the Spain landed price for *yellowfin* was an annual average of US\$ 196 (14 percent) higher than Bangkok. Whereas the annual average price over the same period for *skipjack* was only US\$ 51 per ton (6 percent) higher than that landed in Bangkok.

Two aspects of the price trends for frozen skipjack and yellowfin in Figure 2C.2 should be noted. First, the destination markets for canned yellowfin produced in the EU and Thailand can be very different. On the one hand, there is a high premium on canned yellowfin in the EU based on sharp market segmentation; as a result 'it's a very specific price for yellowfin [in the EU], which cannot be compared with Bangkok' (EUInd#7). Cultures of consumption in Southern Europe show a preference for canned yellowfin because of its richer flavour (especially in Italian and Spanish markets where it is the dominant product); the consumer 'preference' in Northern Europe is for canned skipjack. On the other hand, production in Thailand for the US (its largest market) *mixes* skipjack and yellowfin species under the heading 'lightmeat' canned tuna (EUInd#7; see also, Jiménez-Toribio et al. 2010).<sup>16</sup>

<sup>16</sup> Canned lightmeat tuna for the US-centred commodity chain is normally characterised as low cost and low quality. US industry executives see canned lightmeat tuna as a 'mom and pop' food – i.e. a staple for low income households – which competes on the market purely on price; the lowest quality product

Second, the managers of EU-based processing facilities – which are in decline because of relatively high labour and other costs (Chapter 3) – prefer larger sized fish (e.g. yellowfin >10kg) because they allow higher ‘recovery rates’. While larger fish are more expensive, the amount of canning-grade meat extracted per fish by workers in the process of butchering – i.e. the balance of labour time/cost and fish yield – is a major competitive driver in the rate of exploitation by cannery managers in Spain, whereas in relative low costs sites of production like Thailand, more effort is placed on gaining additional yield by ‘throwing labour’ at the process (Appendix 3B; see also Jeon et al. 2008: 34; Jiménez-Toribio et al. 2010: 170; Brus 2002: 98). Similarly, EU-based processors have a preference for tuna caught in the WIO because – as a biomass – they reportedly have a better recovery rate than that from the Pacific Ocean, which is Thailand’s primary source of supply.<sup>17</sup> These two points about recovery rates mean that the yellowfin price data in Figure 2C.2 probably reflects *actual* quality differentials (e.g. fish size and location of capture) (EUInd#35; SGvt#14).

**Figure 2C.2: Comparing Spain and Thailand annual average price for frozen skipjack and yellowfin, 1995-2009 (in US\$/mt)**



Note: Annual average prices calculated using monthly average price data.

Sources: Spanish data (whole frozen, raw material for canning), prices cif, origin EU fleet (FAO database 1995 to mid-2006); Bangkok data, skipjack (1.8 – 3.4 kg) and yellowfin (>9kg), prices cif, various origin (FFA databases, 1995-2009).

is informally characterised by industry as ‘tuna soup’ due to the combination of flaked flesh with packing media, oil or brine (multiple interviews, US industry representatives 2006; see also Appendix 3A.2; Campling and Havice 2010b; Guillotreau et al. 2008: 5).

<sup>17</sup> Industry sources estimate a recovery rate of canning-grade tuna of 41 percent for skipjack and 43 percent for yellowfin from the WIO, and 39 and 42 percent respectively from the Pacific.

## Appendix 2C.2: European industry associations and the World Tuna Purse Seine Organisation (WTPO)

The second business strategy of the EU DWF addressed here is the role of industry associations. The French and Spanish purse seine fleets are organised at inter-firm level at multiple scales.<sup>18</sup> These take several forms which is reflected by differing nomenclature, but at the level of general discussion they shall be referred to as industry associations. Three sets of industry associations have been identified as playing an important role in the activities of the EU DWF and the wider functioning of the commodity chain, with membership coalescing, respectively, at the national, regional and transnational scales. The first is at the national scale and consists of three ‘producer organisations’ – one for the French fleet and two for the Spanish (see Section 2.5). They play a role in EU policy as well in relationships with Seychelles’ and its ‘upgrading’ in the fishing node of the commodity chain (Chapter 6). The second (at the regional scale) is Eurothon, which groups the EU DWF and canned tuna manufactures and branded-firms. Its activities are addressed in Chapter’s 5 and 7 on the regulatory mechanism of the EU trade regime and Seychelles’ interactions with the canned tuna processing node respectively. Finally, and addressed below, is industry collaboration at the transnational scale, which connects with the discussion of global crises of oversupply of raw material in Chapter 2 and has implications for the processing node of the EU-centred chain in Chapter 3.

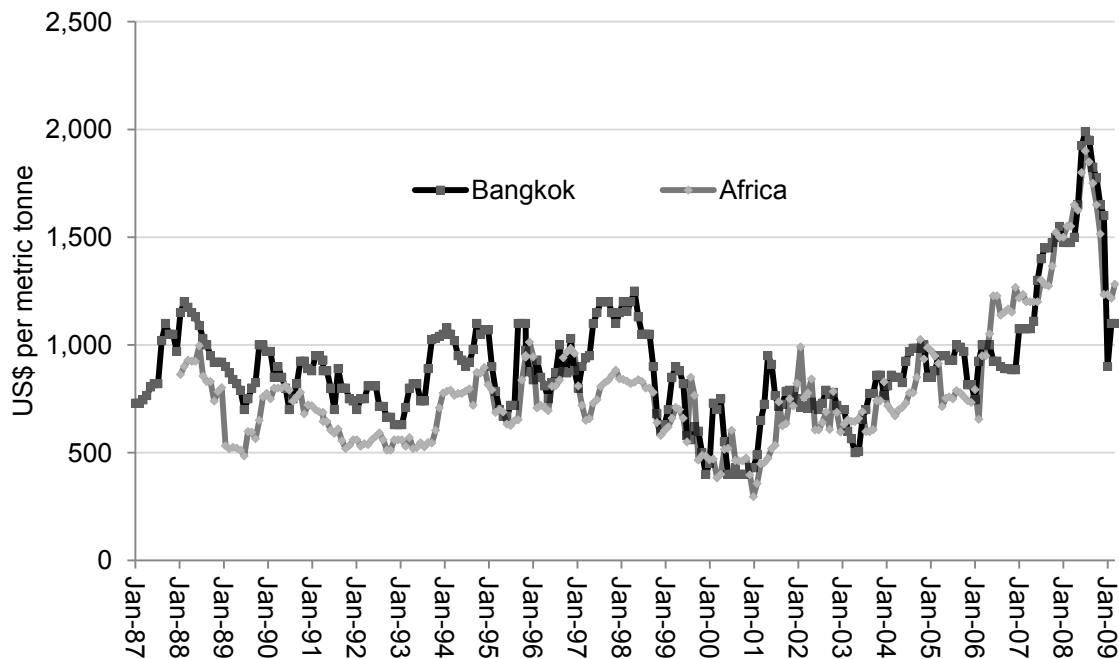
On the *transnational* scale, the EU DWF plays a major role in the World Tuna Purse Seine Organisation (WTPO), a grouping of boat owners and industry associations from most of the major distant water fishing nations. Accelerated growth in demand for canned tuna from the mid-1980s (see Chapter 3) resulted in a boom in boat building and the capacity of the global tuna purse seine fleet, especially in the WCPO, but also the WIO (see above and also Jiménez-Toribio et al. 2010: 172).<sup>19</sup> The outcome was a crisis of overcapacity and temporary periods of oversupply canning-grade tuna – at time of writing (mid-2011), overcapacity has only deepened. This was translated into a sharp decline in frozen skipjack prices at the end of 1999 and throughout 2000 (Figure 2C.5 below); the year which holds the lowest annual average price on record. This situation was compounded in the second half of 2000 when the differential between gasoil and canning-grade skipjack prices widened (see Figure 2B.1 above), further eating into vessel profitability. In short, temporary oversupply and higher relative fuel prices created a ‘price-cost squeeze’ (Squires et al. 2006: 748; Morón 2002a: 4). The reduced cost of raw material was quickly transmitted into a sharp decrease in canned tuna prices (Josupeit 2000: 24; see also Appendices 3A and 3B).

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<sup>18</sup> As Lequesne documents, fishermen and boat owners in Spain began to organise to represent their collective interests ‘as early as the Middle Ages’ (2004: 43).

<sup>19</sup> Albeit in the context of a reported *decline* in real ex-vessel prices of ‘tuna and swordfish’ between 1950 and 2000 (Sumaila et al. 2007a: 45). This price time series is not available and, importantly, it is not disaggregated by type of tuna raw material (e.g. sashimi or canning-grade); however, the broad trend is probably accurate.

**Figure 2C.3: Monthly average frozen skipjack price, Bangkok and ‘Africa’, 1987- March 2009 (USD/ mt)**



Notes: Fish are sized from 1.8 kg. It is assumed that ‘Africa’ represents landed price in West Africa because this is the only known African region for which FAO holds tuna price data.

Source: FAO Globefish database

The French industry association ORTHONGEL called for a collective and global response to the crisis by boat owners. The first actions – by what would in 2001 become the WTPO – were undertaken in late 2000 to stabilise the collapse in international tuna prices, including collective agreement to temporarily reduce fishing effort (Morón 2002a: 1, 4; Tsai 2002: 43-5; WTPO 2002; Morón 2003). WTPO membership included fleet representatives from Ecuador, France, Japan, Philippines and Spain and South Korea who together totalled 65 percent of the global tuna catch by purse seiners (Tarte 2002: fnt 11; Morón 2002b: 22; Tan 2006:28), all of which are in the top 12 tuna fishing countries detailed in Table 2.2 above.<sup>20</sup> The central aim of the WTPO was for members to voluntarily restrict fishing activity by keeping vessels in port for longer periods of time thereby reducing supply, with the objective of increasing price beyond ‘squeeze’-point levels. The result was an upward trend in skipjack prices in 2001 (Honda 2001: 1; Hampton and Williams 2003: 4; Allen 2002: 11; Josupeit 2003: 13; Moron 2002b).<sup>21</sup> As pointed out by Japanese industry representatives, the WTPO ‘had a positive impact in improving the prices, most of the

<sup>20</sup> See Morón (2003a: 1) for a full list of original WTPO members, revised in Morón (2003:1). The US fleet voluntarily stopped fishing in January and for part of February 2001, but is not a member of the WTPO because of domestic anti-trust legislation. (Interviews, Japanese and US industry representatives, 2006; Joseph 2003)

<sup>21</sup> Note that the American Tuna Sales Association also used to coordinate pricing among the US tuna fleet. See Gallick (1984) and Munoz (1993). See also Campling and Havice 2010b; Campling, Havice and Ram-Bidesi 2007: 360-362 for a discussion of price stabilisation arrangements in the Pacific for canning-grade albacore the US-centred commodity chain.

shipowners followed the arrangement because they thought it was best for them in the long run' (JInd#21–#26).

However, several purse seiner fleet owners did not interrupt their fishing effort. In particular, interests based in Taiwan and, especially, the Philippines continued to expand vessel capacity and fleet size (Tarte 2002: fnt 13; Tsai 2002: 44; Tiu-Laurel 2002: 35; IntFS#18; JInd#8; #10–#14; #16–#18).<sup>22</sup> In addition, the aggressive entry of Spanish-flagged and owned purse seine fleets into the WCPO in 1999 in effect cancelled out efforts by the US fleet at the reduction of supply from this oceanic sub-region.<sup>23</sup> In the Western Indian Ocean however, the Spanish and French fleets engaged in effective cooperation both to stabilise supply (and eventually price) and to block new entrants to the fishery (see Chapter 4; Marguerite 2005).<sup>24</sup> However, the vessel owners or associations present at future WTPO meetings represented only 50 percent of global purse seine capacity, which made efforts at coordination less effective. Non-attendance at meetings can in part be explained by concerns that the organisation was focussed on price setting (e.g. the US fleet was deterred by domestic anti-trust legislation) (IntFS#18; USInd#18; Joseph 2003), but it is also likely that several vessel owners/associations did not attend for other reasons such as ongoing or planned expansion in fishing capacity and/or contravention of prior WTPO recommendations (Morón 2003; *Foodmarket Exchange*, January and June 2002).<sup>25</sup> Nonetheless, a combination of WTPO measures and an apparently 'natural decline in catches' resulted in a secular increase in skipjack prices from mid-2003 to the end of 2004 (Catarchi 2004: 53; Figure 2.11). The internal tensions and contradictions within the WTPO and the relative stability of canning-grade skipjack prices after the 1999-2000 price-cost squeeze<sup>26</sup> meant that the WTPO became a less significant player in the global commodity chain (JInd#10–#14). Even when fuel prices increased sharply away from skipjack prices in 2006 (Figure 2.4) one group of industry representatives noted that they 'don't see any [WTPO] activities. As fuel costs rose it became more fractured' (JInd#4–#6). It does continue to play a lobbying role as a 'non-governmental organisation' accredited to the United Nations and regional fisheries management organisations.

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<sup>22</sup> Taiwan was the biggest single national producer in the global purse seine fishery between 1998-2001 with a catch of over 200,000mt per annum.

<sup>23</sup> Initially organised as a private agreement between OPAGAC and Kiribati, this was followed by the European Commission in a break-through government-to-government access agreement, which enabled the licensing of 14 Spanish purse seiners in the Kiribati EEZ (interviews, international fisheries specialists and industry representatives, 2006; Hunt 2003: 81).

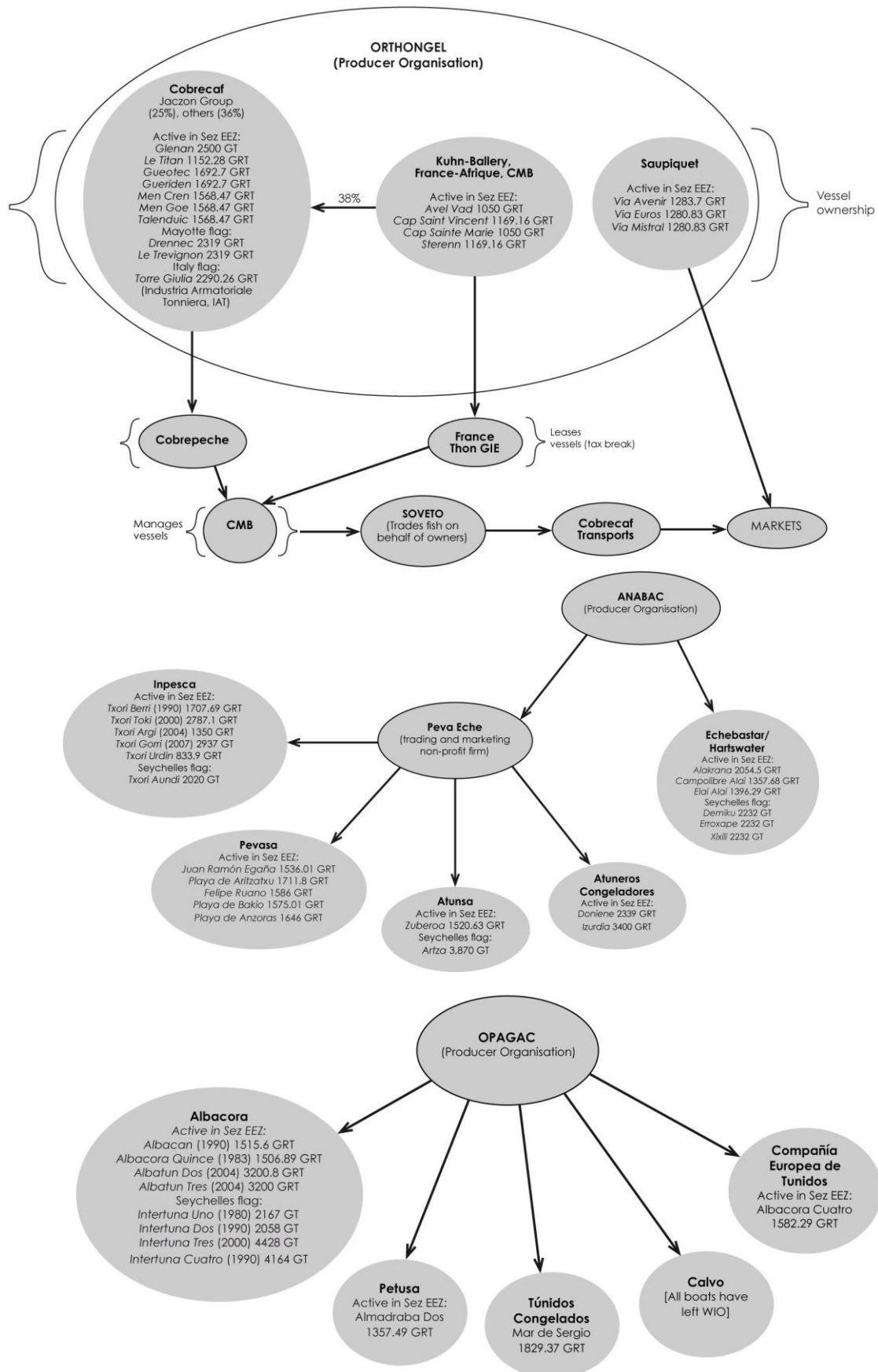
<sup>24</sup> The period of price

<sup>25</sup> Note that the tuna longline industry is far more effective and better organised than the WTPO. The creation of the Organisation for Promotion of Responsible Tuna Fisheries (OPRT) in 2000 grouped Asia-Pacific longline associations and 'established a fund from industry and government sources with which to buy and retire excess longline capacity' (Joseph 2003; IntFS#18; NGO#10; JGvt#7–#14; Campling, Havice and Ram-Bidesi 2007). The OPRT is comparatively successful because of Japan's market power in the sashimi-grade tuna chain.

<sup>26</sup> Bar the oil price hike of 2007-08, discussed above, reflected in Figure 2C.5 through the sharp acceleration in tuna prices in 2006 through to late 2008, but this was not at the same rate as the rise in gasoil price (Figure 2B.1).



## APPENDIX 2D: EU DWF licenced to fish in the Seychelles EEZ in 2008



Flag	Vessel Name	Ownership	Producer Organisation	Known vessel construction and modernisation subsidies (in €)	Port Name	Ton Gt	Power main (kW)	Construction Year	Place of construction
France	Glenan	Cobrecaf	ORTHONGEL	7,365	Concarneau	2,500	4,000	2004	France (Piriou)
France	Gueotec	Cobrecaf	ORTHONGEL	53,711	Concarneau	2,255	3,640	1989	France
France	Gueriden	Cobrecaf	ORTHONGEL	53,711	Concarneau	2,255	3,690	1990	France
France	Le Titan	Cobrecaf	ORTHONGEL	-	Concarneau	1,609	2,870	1981	France
France	Men Cren	Cobrecaf	ORTHONGEL	-	Concarneau	2,119	3,645	1992	Spain
France	Men Goe	Cobrecaf	ORTHONGEL	53,711	Concarneau	2,119	3,533	1991	Spain
France	Talenduic	Cobrecaf	ORTHONGEL	53,711	Concarneau	2,109	3,533	1992	Spain
France	Avel Vad	Kuhn-Ballery, et al	ORTHONGEL	1,877,245	Concarneau	1,598	2,950	1996	France
France	Cap Saint Vincent	Kuhn-Ballery, et al	ORTHONGEL	-	Concarneau	1,606	2,950	2000	France
France	Cap Sainte Marie	Kuhn-Ballery, et al	ORTHONGEL	75,993	Concarneau	1,596	2,950	1997	France
France	Sterenn	Kuhn-Ballery, et al	ORTHONGEL	-	Concarneau	1,606	2,950	2000	France
France	Via Avenir	Saupiquet	ORTHONGEL	-	Concarneau	1,737	3,091	1989	USA
France	Via Mistral	Saupiquet	ORTHONGEL	55,079	Concarneau	1,737	3,091	1990	USA
France	Via-Euros	Saupiquet	ORTHONGEL	67,955	Concarneau	1,737	3,091	1991	USA
Italy	Torre Giulia	Cobrecaf	ORTHONGEL	155,246	Bari	2,137	3,690	1997	France (Piriou)
Mayotte	Drennec	Cobrecaf	ORTHONGEL	-	-	2,319	-	-	-
Mayotte	Le Trevignon	Cobrecaf	ORTHONGEL	-	-	-	-	-	-
Seychelles	Intertuna Uno	Albacora	OPAGAC	-	Victoria	2,167	-	1980	-
Seychelles	Intertuna Dos	Albacora	OPAGAC	-	Victoria	2,058	-	1990	-
Seychelles	Intertuna Tres	Albacora	OPAGAC	-	Victoria	4,428	-	2000	-
Seychelles	Intertuna Cuatro	Albacora	OPAGAC	-	Victoria	4,164	-	1990	-
Seychelles	Artza	Atunsa	ANABAC	-	Victoria	3,870	-	-	-
Seychelles	Demiku	Echebatar	ANABAC	-	Victoria	2,232	-	-	-
Seychelles	Erroxape	Echebatar	ANABAC	-	Victoria	2,232	-	-	-
Seychelles	Xixili	Echebatar	ANABAC	-	Victoria	2,232	-	-	-
Seychelles	Txori Aundi	Inpesca	ANABAC	-	Victoria	2,020	-	-	-

Flag	Vessel Name	Ownership	Producer Organisation	Known vessel construction and modernisation subsidies (in €)	Port Name	Ton Gt	Power main (kW)	Construction Year	Place of construction
Spain	Albacan	Albacora	OPAGAC	1,383,360	Cadiz	2,347	2,960	1991	Vigo
Spain	Albacora Quince	Albacora	OPAGAC	1,383,360	Sta. Eugenia Riveira	2,336	3,370	1983	Vigo
Spain	Albatun Dos	Albacora	OPAGAC	4,935,360	Ceuta	4,406	5,735	2004	Vigo
Spain	Albatun Tres	Albacora	OPAGAC	4,935,360	Sta. Eugenia Riveira	4,406	4,927	2004	Vigo
Spain	Doniene	Atuneros Congeladores	ANABAC	3,641,160	Villagarcia	3,507	4,415	1996	Vigo
Spain	Izurdia	Atuneros Congeladores	ANABAC	-	Bermeo	4,089	5,660	2004	Murueta
Spain	Zuberoa	Atunsa	ANABAC	950,487	Bermeo	2,172	3,451	1990	Vigo
Spain	Albacora Cuatro	Compania Europea de Tunidos	OPAGAC	610,545	Vigo	2,082	2,943	1974	Vigo
Spain	Alakrana	Echebatar	ANABAC	4,272,960	Bermeo	3,716	4,532	2005	Vizcayo
Spain	Campolibre Alai	Echebatar	ANABAC	2,758,300	Bermeo	2,214	2,825	1988	Bilbao
Spain	Elai Alai	Echebatar	ANABAC	1,783,092	Bermeo	2,217	2,906	1993	Bermeo
Spain	Txori Argi	Inpesca	ANABAC	4,674,240	Bermeo	4,134	5,854	2004	Murueta
Spain	Txori Berri	Inpesca	ANABAC	381,429	Bermeo	2,400	3,311	1991	Zumaya
Spain	Txori Urdin	Inpesca	ANABAC	635,160	Bermeo	1,286	2,133	1976	Bilbao
Spain	Txori Toki	Inpesca	ANABAC	3,959,283	Bermeo	4,134	5,854	1999	Murueta
Spain	Txori Gorri	Inpesca	ANABAC	-	Bermeo	2,937	-	-	-
Spain	Almadraba Dos	Petusa	OPAGAC	2,309,439	Cadiz	1,929	3,532	1979	Bilbao
Spain	Felipe Ruano	Pevasa	ANABAC	1,495,306	Bermeo	2,110	3,449	1989	Zumaya
Spain	Juan Ramon Egãna	Pevasa	ANABAC	1,109,953	Bermeo	2,107	3,200	1984	Bilbao
Spain	Playa De Anzoras	Pevasa	ANABAC	234,861	Bermeo	2,446	4,304	1998	Bilbao
Spain	Playa De Aritzatxu	Pevasa	ANABAC	43,070	Bermeo	2,458	4,304	2001	Murueta
Spain	Playa De Bakio	Pevasa	ANABAC	-	Bermeo	2,101	2,902	1990	Zumaya
Spain	Mar De Sergio	Tunidos Congelados	OPAGAC	1,096,172	Malaga	2,767	3,086	1984	Vigo

Notes: table includes 38 of the total 57 EU-flagged vessels, and 11 of an estimated total of EU-owned foreign flag boats of 27. Both sets of data for 2007.

Sources: SFA licensing database, 2008; IOTC online database, accessed 2009; EU Transparency, accessed 2009; Oceanic Développement (2008); multiple interviews, various EU industry representatives, and Seychelles fisheries managers and domestic industry representatives, 2006 and 2009.

## CHAPTER 3 APPENDICES

### APPENDIX 3A

#### Canning Tuna: Historical Development and Modern Production Process

##### 3A.1 Historical development of canned tuna production

The objectives of this section are two-fold; first, to provide a brief historical narrative of the development of the canning process in Western Europe, and; second, to sketch how a can of tuna is manufactured, focusing on the degree of capital and/or labour intensive elements of production. Both supplement and extend the periodisation of dynamics of ‘territoriality’ and technological change in French and Spanish canning-grade tuna fisheries (1860s-1980s) in Section 2.3.

The canning of food is a relatively simple technological process. It was initially developed by Nicolas Appert in the first decade of the nineteenth century through the heating of food in air-tight (hermetic) glass containers, which was found to preserve fruit and vegetables at “a glorious sweetness that recalls the month of May in the heart of winter” (Grimod de La Reynière, an important food critique of the day and Appert’s patron, as cited by Shephard 2000: 230). Appert’s discovery was undertaken in the context of the Napoleonic wars when, because of the cutting-off of the supply of cane sugar (then widely used for the preservation of food) and the objective of reducing reliance on imported food, the French state promoted investigation of methods for food preservation. It provided a 12,000 franc ‘encouragement’ for effective processes that were subsequently published with patenting foregone; a prize that Appert went on to win (Warne 1988: Section 1.1; Shephard 2000: 231). Interestingly, the report that recommended Appert’s receipt of this award specifically noted the implications of his invention for international trade, both in terms of the export of French product and for the import of preserved food from other countries. The early spark for commercial processing was military naval contracts supplied by a small factory attached to Appert’s house, but because it used glass containers there were obvious limitations regarding durability because the product was more easily broken during rough periods at sea. It was only in 1869 when Pasteur found that heat can kill bacteria that the reason behind the success of Appert’s innovation was discovered (Diaz 2002: 143).

The world’s first food cannery was set-up in London in 1813 by Donkin, Hall and Gamble, the owners having bought the patent in 1810 (Appert probably secretly initiated the patent process in Britain having waived it in France). This firm benefited from the competitive advantage of Britain’s (then) leading industrial base, including in domestic tinplate production (Shephard 2000: 233, 236), which remains an important commercial advantage in canned tuna production (see Section 3.2.2). Donkin, Hall and Gamble’s ‘preservatory’ (or cannery) was boosted by British military contracts (Shephard 2000: 243). Initially cans were made, sealed and sterilised by hand (two skilled workers could

make 120 cans a day). In the 1830s the steam retort was developed and used to thermally sterilise the cans rather than them being boiled in water. In 1849 new plant was developed that allowed two unskilled workers to produce 1,500 cans per day (Shephard 2000: 243-4, 246). Canned sardines were exported from France to supply miners in the mid-nineteenth century gold-rushes in California and Australia, and canned salmon was supplied from Canada to feed the growing working class in Britain (Dias and Guillotreau 2005: 65-6; Muszynski 1996: 13). The American Civil War further spurred demand for canned food in the US to supply Union and Confederate soldiers. By the 1880s the emergence of growing markets for canned tuna and its acceptance in cultures of consumption contributed to the expansion of tuna fishing. By the end of the century the canning process was highly mechanised in the US and canneries based there were the world leaders in the industry (Shephard 2000: 246).

Fish and other forms of meat are particularly prone to spoilage compared to fruit and vegetables. Microbial contaminants are present in the gut and skin of all fish, and even if these parts are removed fish will rapidly putrefy unless effectively preserved. The objective of canning fish is to use heat 'to kill or inactivate all microbial contaminants, irrespective of their source, and to package the product in hermetically sealed containers so that it will be protected from recontamination' (Warne 1988: Section 1.1). Factories to can sardines (in oil or butter) emerged in Nantes on the west coast of France and in Brittany in the 1820s, and by 1880 the latter region produced nearly 50 million cans, including for export (Shephard 2000: 241-2). In the 1860s canned tuna was twice the price of canned sardines and was thus an item of luxury consumption (Dias and Guillotreau 2005: 72). In the US, factories producing canned lobster and salmon were established in Boston and Baltimore in the late 1810s. Salmon canning plants were established at the mouths of rivers throughout the entire length of the Pacific coast of North America. This included British Columbia, where 'a proletariat was created in order to feed the British working classes' (Muszynski 1996: 13).<sup>1</sup>

Canning allowed large catches of salmon and other fish species to be preserved during high fishing seasons without the significant adulteration of flavour and texture that came with earlier methods of preservation such as salting, smoking or drying. Apart from its clear use value, canning also enhanced exchange value because of the higher quality and increased durability of canned fish relative to prior preservation methods. The extent to which canning resulted in higher profits for fish processors is not known, although there was certainly less spoilage, a reduced need for more careful transportation and handling of cargo (thus reduced risk), and an expansion in the geographical range of markets for exporting companies.

### **3A.2 Labour process and productivity in canned tuna production**

The first tuna cannery in the US produced 35,000 cans in its first year in 1903 (Chapter 2); in a modern factory and using only a single preparation line this volume can be produced in only two hours (Diaz 2002: 143). Figure 3.1 illustrates the production

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<sup>1</sup> See pages 106-128 on the historical development of the salmon canning industry in British Columbia.

process in a modern tuna canning factory. Most of the process sketched in the figure is self-explanatory and is provided as technical background to the thesis. Several points however, require highlighting as they are directly relevant to the later analysis. The first, and most important aspect for this thesis, is that the most labour-intensive steps of tuna processing are cooking, cleaning, butchering and sorting the meat ('loining') (steps 4, 7.a and 8 in Figure 3A.1) to produce tuna loins (an intermediate good). Around 80 percent of the direct ('living') labour costs in manufacturing a can of tuna are incurred in loining the fish (multiple interviews, Japanese, PIC, Thai, US and WIO tuna industry representatives, 2006 and 2007; COS 2001: 6).<sup>2</sup> To date there is no commercially viable mechanical process that can reduce labour time in loining, despite attempts to invent one (Iverson 1987a: 277; Buddruss 1998; Diaz 2002: 145). This is simply because tuna come in such varied sizes, even within the same species and even within a pre-sorted batch of whole fish of the same species. The lack of uniformity in fish size prevents mechanised butchering (unlike in salmon processing for example), which is a major technical limitation to enhancing labour productivity in the production process in tuna canneries.

A second (interconnected) point is that to save on direct labour costs in high cost sites of production, frozen tuna loins are imported from relatively lower cost world-regions. Loins are defrosted and the meat is inserted directly into cans (step 7.b). This represents an important set of distinctions within the manufacturing node of the canned tuna chain: a) factories processing tuna from whole frozen fish to the finished can, b) those involved primarily or solely in canning pre-butchered fish (or loins) imported from other sites of production, and c) plants specialised in loining only. Canneries based in the EU15, Japan and the US, defrost loins and (as a rule) mechanically pack them directly into cans (see Chapter 3 for more data and analysis on this).<sup>3</sup> The 'logic of loining' is based upon the international social division of labour between labour-intensive production in developing countries and more capital-intensive production in developed countries. There are however, quality concerns associated with loins because the fish is handled more often than when canned directly and is frozen twice before canning (Munoz 1993: 75). This quality concern remains a challenge today (multiple interviews, PIC and US industry representatives, 2006). As a reflection of this concern, MW Brands marketed its product canned in Ghana and the Seychelles as being 'from sea to can'. As also noted in the figure at 8), canned tuna is produced at different qualities (e.g. steak, chunk, flake) which allow firms to compete at different price levels at point-of-retail (Fernandez and Hudgins 1987: 136).

Finally, depending upon the relative cost and availability of labour-power as well as the relative need to ensure fast throughput (i.e. because of limited warehousing space on site), several aspects of the production process are either labour- or capital-intensive. For example, the cooling of the product after the first (step 6) or second (step 13) cooking

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<sup>2</sup> The first recorded international trade in tuna loins was imports into the US in the early 1950s (Gallick 1984: 121-2).

<sup>3</sup> By the early twenty-first century, there was only one tuna cannery on the US mainland – the Bumble Bee plant in Santa Fe Springs, Los Angeles – which, despite being able to produce 1,000 cans per minute, only employed 220 workers. The very high productivity of this plant (and the Bumble Bee plant in Puerto Rico) is because it solely uses tuna loins in the production process and does not process any whole round fish (i.e. it is a 'canning only' plant). Direct observation and interviews, US industry representatives, May 2006.

operation is done either using natural cooling or via mechanised processes.<sup>4</sup> Loading into retort trays (step 11) is done either using a machine (with one worker monitoring the procedure) or by hand by several workers.<sup>5</sup>

It is also worth noting an aspect of the canning process that is not explicitly identified in Figure 3A.1, the issue of ‘recovery rates’ (see also Chapter 2). This refers to the percentage of whole fish that yields useable meat for canning. Not only do ‘[b]ig fish clean faster than small fish’,<sup>6</sup> but tuna of the same species from different oceanic regions have (on average) different recovery rates. For example, industry managers estimate a rate of recovery of useable tuna meat relative to the original whole fish of 41% for skipjack and 43% for yellowfin from the Indian Ocean, but only 39% for skipjack and 42% for yellowfin from the Pacific.<sup>7</sup> As the tuna itself constitutes around 40% of the total cost of a can of tuna, this small difference is commercially significant.

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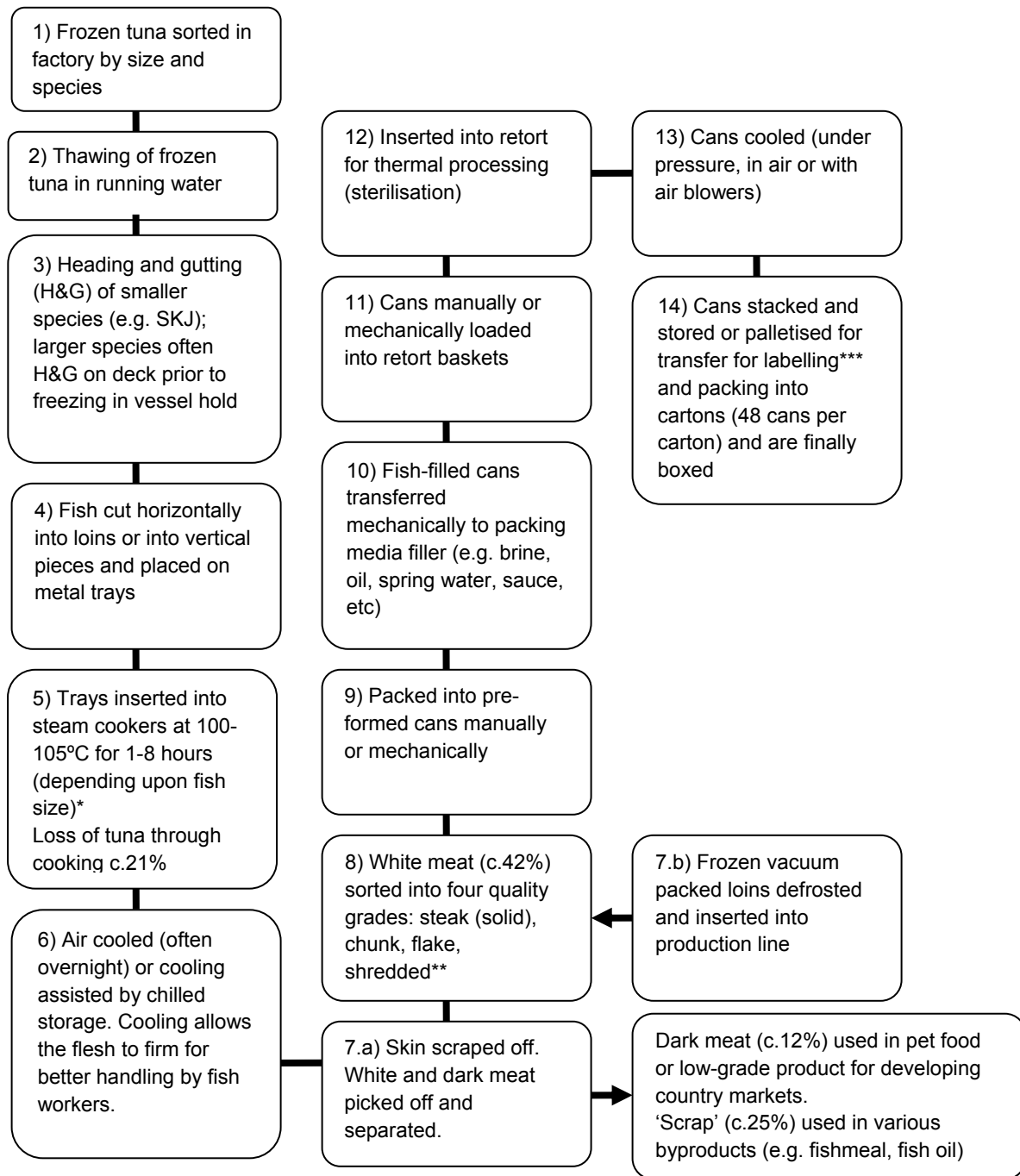
<sup>4</sup> The determining factor here is not necessarily labour costs. The Hagoromo plant in Japan allows the fish to cool overnight in a controlled environment indicating that management strategies can be employed to sequence production so as to minimise labour *and* capital costs. Direct observation, Shida, Japan June 2006.

<sup>5</sup> Mechanised loading into retort trays was the process at the Bumble Bee plant (Los Angeles) and manual loading was undertaken in the Thai Union factory (Bangkok). Direct observation, June and May 2006 respectively.

<sup>6</sup> Person. Comm.. WIO industry representative, July 2007.

<sup>7</sup> Telephone interview, WIO industry representative, June 2007.

**Figure 3A.1: The process of canning tuna**



\* Fish for *thon au naturel* (or 'raw pack') is not cooked at this stage; \*\* This four part categorisation follows Codex Standard No. 70 (CODEX STAN 70-1981, REV.1-1995, p.1-2); \*\*\* Modern cans are pre-printed with labels, if they are they are packed in cartons directly rather than being palletised.

Sources: Warne (1988: Sections 1.1 and 4.1); De Santis (1996); Subhapholsiri (2000: 109); direct observation in the following factories: Bumble Bee cannery, Sante Fe Springs, CA, USA (May 2006); Hagoromo, Shida, Japan (June 2006); Impress (can making plant), Port Victoria, Seychelles (September 2006); RD Tuna Cannery, Madang, Papua New Guinea (March 2006); Thai Union Manufacturing Co., Bangkok, Thailand (May 2006); see also Myrseth 1985.



### **APPENDIX 3B**

#### **Comparative cost structure and business strategies in locations of EU-centred canned tuna production in the 2000s**

The appendix outlines some elements of the basic cost structure of manufacturing canned tuna. The rationale is to identify key areas of competition in the ‘input-output structure’ (in GCC parlance) of tuna processing between major geographical regions of export-orientated production. This informs elements of the narrative and analysis in the thesis; include the discussion around change in the international division of labour and the EU-centred commodity chain in Chapter 3.

Three key aspects of the cost structure have been selected here for brief contextual analysis, with particular reference to differences between the Indian Ocean ACP (including Seychelles) and Southeast Asia (especially Thailand, as the leading export-orientated location of canned tuna production since the mid-1980s). These are fish costs, wages, and can costs.<sup>8</sup> Even marginal cost advantages are highly significant in an industry with reportedly low margins of profitability – apparently ranging between 5-10 percent (PICInd#45–#47; USInd#22), but data on profitability of US canneries between 1979-1985 indicate that the norm may be at the lower end of the estimate where the highest reported pre-tax ‘net income’ was in 1985 with 5.6 percent (Iverson 1987b: 35). Before moving to examine cost structure in canned tuna production it is essential to emphasise the strategic commercial importance of EU trade preferences to the ACP and Andean countries. (This regulatory mechanism is the subject of Chapter 5 and will not be discussed further here.) This is made clear when comparing the estimated full manufacturing cost per case (48 cans) by region of production with the landed cost in the EU (Table 3B.2). On a three-year average, full manufacturing cost per case is around US\$25 in Southeast Asia and \$32 in the Indian Ocean ACP. The average EU customs duty of US\$6 applied to Southeast Asian product (plus freight) is a fundamental competitive advantage for the ACP. As will be argued in detail in Chapter 5, the regulatory mechanism of EU trade preferences is perhaps the most important factor in explaining the location of canned tuna production in coastal areas of the ACP (their ‘upgrading’).

#### ***Fish costs***

As discussed in Appendix 2C.1, regional ex-vessel *skipjack* markets are globally integrated by price with long-term price leadership exerted by firms based in Bangkok.<sup>9</sup>

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<sup>8</sup> Other important costs are ocean freight and by-product revenue. Aspects such as utilities, fixed overheads, filling and packing materials, etc. have been excluded from the analysis either because of the difficulties involved in isolating costs and obtaining reliable data or because of their relative marginality (i.e. the proportions of utility inputs such as electricity and water are unlikely to have changed significantly).

<sup>9</sup> For a detailed analysis of Thailand’s historical emergence and competitive advantages in the global canned tuna industry, see Campling et al. (2007: 336-350), Campling and Doherty (2007) and Crough (1987a, 1987b).

Nonetheless, all processing industry interviewees place considerable emphasis on short-term tuna raw material price fluctuations, not least as it is by far the most expensive input in canned tuna production. Average fish cost as a proportion of full manufacturing cost for four major regions of world production was 64 percent (averaged over three years 2006-8, see Table 3B.2).<sup>10</sup> Price negotiations between individual processors and boat owners or tuna trading firms depend upon a variety of factors. As one insider put it: ‘If you can make the right choice on fish price you make a lot, if not you lose’ (USInd#1). The most important dynamics in raw material price negotiations are:

- Current known catches/available supply and prices: This is where the information advantages of the larger branded-firms are of considerable strategic commercial importance. (See Section 3.4.1 for more on this.)
- Fish prices reflect differences between directly landed cost and transhipped cost (the fob-cif differential). Processors based in Abidjan, Port Victoria, Pago Pago (American Samoa) and General Santos (the Philippines) benefit here because the raw material is normally landed directly (see Chapters 2 and 6, as well as Figure 3B.1 below comparing ‘African’ ACP and Thai skipjack price). Thailand benefits from being at the apex of the Indian and Pacific oceans for raw material supply and as a hub on the ‘East-West’ seafreight ‘superhighway’ (JInd#4–#6; TInd#8; EUInd#53).
- Cold storage capacity allows processors to warehouse raw material. As one Thai processor noted ‘every time of buying is a game: whoever can hold their breath longer is better off, but packers have very small lungs’ (TInd#5–#7). That is, most processors have a limited ability to wait out in price negotiations because they need to keep production running to meet overhead costs, maintain production volume, etc. Of course, those processors firms with larger strategic cold storage have bigger lungs.
- Vertical integration, financial control or supply contracts with fishing fleets mean that processors will not be subject to arbitrage by tuna trading companies (see Chapter 2 and below).
- On top of their information advantages, the larger branded-manufacturers with multiple processing facilities (directly or indirectly controlled) have considerable market power due to their huge volumes of repeat raw material purchases. This provides them with a significant advantage vis-à-vis relatively more fragmented players in the fishing node (Chapter 2 on the fragmented ownership of the EU and US purse seine fleets, and on the Japanese, see Matsuda (1987: 87). Medium-sized processors are aware of their disadvantages here, as one put it: ‘Price is controlled by the hand of god, unfortunately we are not a god, we are not even a hand!’ (TInd#2–#4).
- The quality and size of the fish, which combined with relative wage costs and labour productivity in the location of production (the balance of labour time/cost

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<sup>10</sup> The data in Table 3B.2 is unreliable because it was supplied in the public domain by the CEO of MW Brands who had a commercial interest in misrepresenting cost data (see Chapter 6 for an explanation).

and fish yield), means that lower-wage locations are able to purchase smaller fish and still profitably butcher (loin) them.

- If a processing firm is locked-in to a commercial relationship with specific fleets through rules of origin, boat owners may be able to charge more thereby capturing a part of the trade preference. This is believed to be the case for the ACP countries (see Chapter 5).

Given the large number of contingencies affecting raw material costs, processors undertake strategies to mitigate short-term price fluctuations. Many processing firms spread shifting costs for tuna raw material across their annual accounts based upon known seasonal catch/price fluctuations and the factoring-in of retail discounts, promotions, etc. (see Section 3.4).<sup>11</sup>

### ***Labour costs***

As tuna loining is so labour-intensive, '[w]age rates are especially important' (COS 2001: 8). Table 3B.1 provides estimates of basic wages for tuna cannery workers in several locations of production in 2001. This data is problematic for several reasons, not least because wage rates are not adjusted to reflect relative spending power in the countries concerned. It does however, adequately illustrate the motivations of canned tuna processing firms in choosing between relatively high and low cost wage locations in the global North and South respectively, including decisions around the (re)location of plant and/or the outsourcing of the loining process. Other important labour cost differentials such as social security payments and the meeting of legal health and safety requirements are not factored-in.

Several industry interviewees qualified the importance of the wage differential in the cost structure of tuna processing in the global South. While relatively low wage-labour is of course a major attraction for processing companies to invest in a given location, when choosing *between* relatively low cost locations the wage costs relative to total net production will only range between five and ten percent. This is because of the very high proportion of tuna raw material in the cost structure. In fact, wage costs were not a major concern for the more serious corporate managers interviewed as potential savings from one country to the next were relatively small, but what did concern *all* corporate interviewees was the *productivity* of local workers. Workers in canneries in Thailand are renowned throughout the tuna industry for their degree of specialisation and productivity (TInd#1; #5-#7; EUInd#7; #13 USInd#3-#5; #8-#11; #20) and, anecdotally, productivity in one Thai factory was observably very high (direct observation in a Thai cannery compared with a cannery in PNG, 2006). Quantitative data on comparative labour productivity is not available, but, for example, one WIO industry representative noted that it 'is a *big* difference' and another noted that, in Mauritius, workers are 'very low-skilled' (EUInd#35). Another stated that: 'A skilled tuna cleaner can clean 600kg per day. In PNG workers only do 300-350kg per day. A one percent better yield *directly* translates to a one percent increase in profit margin' (EUInd#11; broadly confirmed by

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<sup>11</sup> Note that this practice means that the use of annual average whole frozen tuna price data in this thesis (as opposed to monthly seasonal data by oceanic sub-region) is a sufficient indication of broad trends.

IntFS#3; #5; PICInd#45–#47). From the perspective of cannery managers, absenteeism is a known problem among the local workforce in Mauritius and the Seychelles (Wood 1997: 204; IDDRA 2004), and was a major concern of existing and prior tuna processing managers in Fiji, PNG and the Solomon Islands. In short, while all ACP locations of production except for Seychelles had lower wages rates than Thailand in 2001, labour productivity was reported to be considerably less.

Migrant workers play a central role in several sites of production. For example, in 2006, around 40 percent of fish workers in the Seychelles plant were expatriates, for the Princes plant in Mauritius this totalled around 30 percent, and in Thai tuna canneries an estimated 50 percent of the labour force were workers from Burma, who were reported to be ‘very efficient’ (TInd#1; EUInd#13).<sup>12</sup> The reported labour productivity of Burmese workers is probably due, quite simply, to their desire to stay out of Burma and/or send remittances to family. Individual Thai firms sponsored migrant workers in their application to the Thai government for a work permit, which is non-transferable between firms (TInd#5–#7).<sup>13</sup> Due to the fact that the work permit stays with the sponsoring firm, if workers do not do an ‘efficient’ job they are legally compelled to return home. The employment of migrant workers is certainly in practice – albeit not necessarily in intent – an effective disciplinary tool for plant managers. Burmese migrant workers are also alleged to be paid a third of the wages for Thais (EUInd#13).

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<sup>12</sup> It was claimed by one industry interviewee that Thai workers are moving out of factory work towards employment with better pay and that is ‘less smelly’ (TInd#1).

<sup>13</sup> Transcripts from interviews with Thai industry representatives by Amanda Hamilton in 2010 report that Burmese migrant workers are no longer tied to a specific firm.

**Table 3B.1: Hourly Wage Comparisons in Tuna Processing, 2001**

Country	Hourly wage (USD/hour)*
<i>Developing Countries</i>	
Ecuador (StarKist plant)	0.69
Fiji	0.47 **
Ghana (StarKist plant)	0.62
Indonesia	0.14
Philippines	0.43
Papua New Guinea	0.27 #
Seychelles	1.90 ##
Solomon Islands	0.31
Thailand <sup>14</sup>	0.48
<i>OECD</i>	
France	Euro 6.67§
USA (California)	11.00 §§

Sources: Prehearing statement of StarKist Samoa, Inc. (StarKist 2001: 19). Several items were confirmed via data presented in Prehearing statement of COS (Chicken of the Sea) Samoa Packing Company (COS 2001: Exhibit 2).

\* All data excludes benefits and specific arrangements for expatriate fish workers such as housing and airfares.

\*\* This increased to USD1.53 per hour in 2003 as a result of successful industrial action (interviews, Fiji, 2006)

# FFA database (figure does not include additional benefits).

## Data for 2004. Based upon the assumption of an eight-hour day, five days a week at a minimum monthly starting salary of SR2,100 (c.SR52.5 p/h), and conversion using the official exchange rate of SR6.3:USD1 (Central Bank of Seychelles, June 2007). Note that, until late 2008, the exchange rate was fixed and non-convertible outside of the country. Estimates for the exchange rate in the parallel economy are in the region of SR12: USD1. *The Nation* (Seychelles) 17 February 2004.

§ Data based upon French minimum wage in 2001 (gross, excluding benefits). National Institute for Statistics and Economic Studies, [http://www.insee.fr/en/home/home\\_page.asp](http://www.insee.fr/en/home/home_page.asp)

§§ USITC July 2002.

### **Can costs**

A major area of price competition is on cans, the second most expensive ‘input’ in production in the global South and a key point of competition between factories. For the

<sup>14</sup> An estimated 48% of workers were paid less than the minimum monthly wage during the initial stages of Thailand’s rise to dominance in canned tuna production (Crough 1987b: 12).

ACP (West Africa and Indian Ocean) and Latin American regions of production in 2006, the average cost of the empty can as an input in a single can of finished product was USD0.09, while the average Southeast Asian cost was USD0.06, or a relative price advantage of 30 percent (Table 3B.2). Translating this into full manufacturing cost, Southeast Asian producers have a five percent price advantage over ACP producers as a result of can cost alone.

Thailand's competitiveness on can price stems, certainly in part, from economies of scale. It was a manufacturer of canned fruit and vegetables prior to the initial emergence of the domestic canned tuna industry in the 1970s. This 'backward integration into can production' (Jaffee 1992: 90; TInd#2-#4; #8; #9; EUInd#57 -#60; USInd#18) helps to explain why Thai tuna processors tendering for contracts can offer much cheaper cans as part of total manufacturing costs (EUInd#7; USInd#22). In 2005 there were over 30 can making companies based in Thailand (Hayes 2005). Canneries that source sheet tins from a domestically-based steel industry have a competitive advantage because: freight costs are much lower over short distances for a fairly heavy product like tins, and; currency exchange rates are taken out of the equation.<sup>15</sup> In contrast, ACP based firms import all of the tins used in their cans. For example, an outsourcing manager at one of the main US brands noted that, when tendering for production of canned tuna in 2005, his firm received prices from processors in China, the Philippines, Thailand and Vietnam, of which Thailand was the most 'competitive' mainly because of the price of cans, which 'really stood out in this tender process' (USInd#1). This has led to some suspicion that a hidden subsidy is provided to firms in Thailand, either on the cost of cans or on electricity (USInd#22; EUInd#6; #61).

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<sup>15</sup> Personal communication, Suzanne Christiansen, Managing Editor, CanTech.

**Table 3B.2: Comparative canned tuna production costs by major region (all in USD unless otherwise stated), 2006-2008**

	Southeast Asia			Indian Ocean ACP*			West African ACP			Latin America GSP+		
	2006	2007	2008	2006	2007	2008	2006	2007	2008	2006	2007	2008
<b>Fish cost (SKJ &gt;1.8kg)</b>	935	1,280	1,510	1,100	1,462	1,750	1,050	1,275	1,550	1,070	1,495	1,483
<b>By-product credit**</b>	-23	-60	-65	-23	-45	-49	-23	-40	-43	-23	-27	-29
<b>Net fish cost</b>	912	1,220	1,445	1,077	1,417	1,701	1,027	1,235	1,507	1,047	1,468	1,454
<b>Recovery rate***</b>	40%	40%	40%	39%	40%	40%	39%	40%	40%	39%	40%	40%
<b>Cost per cleaned mt</b>	2,280	3,050	3,613	2,762	3,542	4,252	2,633	3,088	3,768	2,685	3,670	3,634
<b>Cost per cleaned gram</b>	0.00228	0.0031	0.0036	0.00276	0.0035	0.0043	0.00263	0.0031	0.0038	0.00268	0.0037	0.0036
<b>Grams per can****</b>	135	116	116	135	116	116	135	116	116	135	116	116
<b>Fish cost per case (48 cans)</b>	14.77	16.98	20.11	17.89	19.72	23.68	17.06	17.19	20.98	17.4	20.43	20.23
<b>Can cost</b>	2.9	3.1	3.36	4.19	4.67	5.3	4.3	5.2	5.8	4.15	5.3	5.3
<b>Other packaging</b>	0.4	0.41	0.59	0.5	0.73	0.76	0.69	0.6	0.6	0.65	1.15	0.84
<b>Conversation costs (labour, fixed overheads, etc)</b>	3.2	3.5	4.75	4.8	6.64	7.01	4.8	7.2	7.2	4.8	5.9	5.9
<b>Full manufacturing per case</b>	21.27	23.99	28.81	27.38	31.75	36.75	26.85	30.19	34.58	27	32.78	32.27
<b>Ocean freight</b>	0.8	0.96	0.96	0.95	1.21	1.21	0.7	0.9	0.9	1	1.44	1.44
<b>Customs duty on full manufacturing cost and freight</b>	5.3	5.76	6.92	0	0	0	0	0	0	0	0	0
<b>Landed cost in EU</b>	27.37	30.71	36.69	28.33	32.96	37.96	27.56	31.09	35.48	28	34.22	33.71

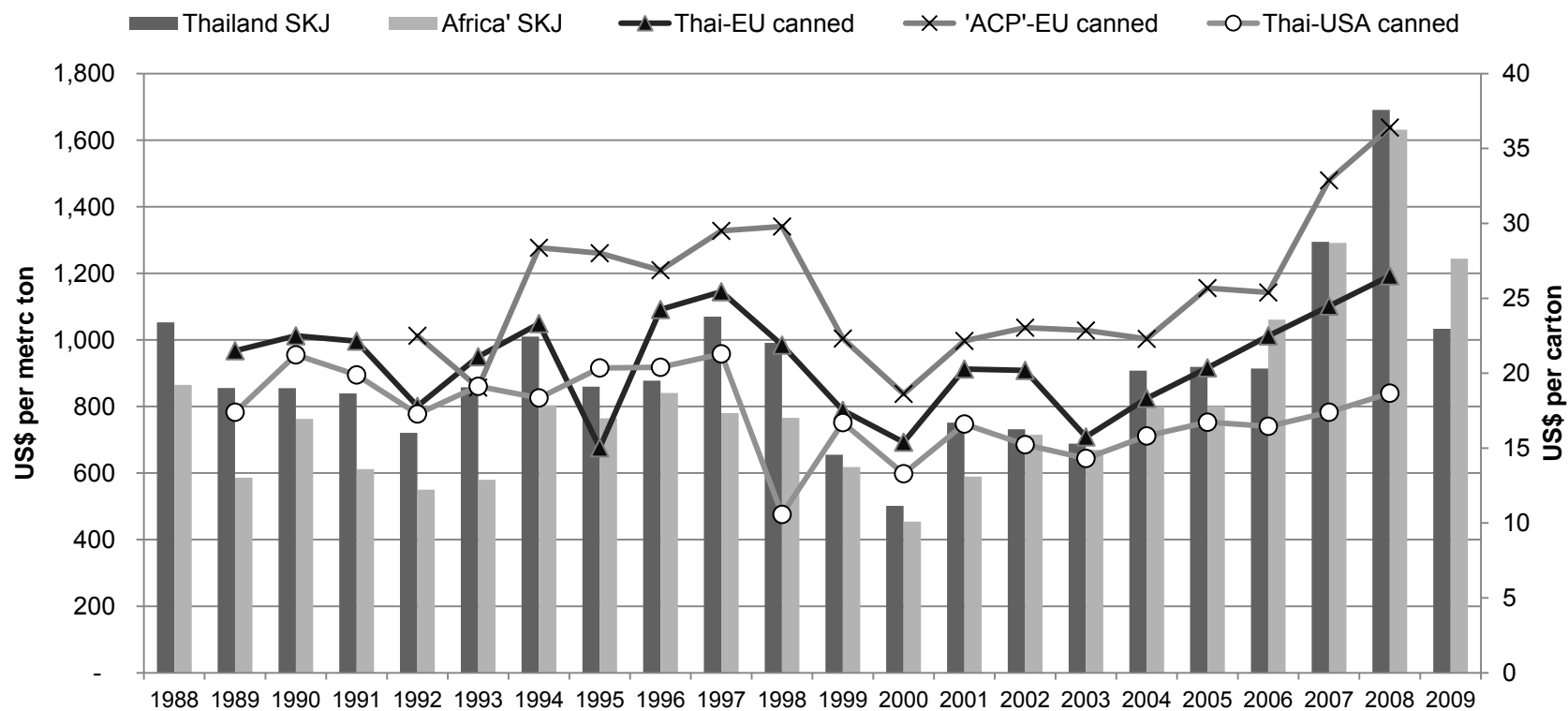
Notes: 2006 data average for May-July; 2007 data average for entire year; 2008 data average for January-June; \* Madagascar, Mauritius and Seychelles; \*\* Assumed to be standard in 2006 data, but this is problematic as is clear for data for 2007 and 2008; \*\*\* 2006 data assumes that higher skilled workers in SE Asia led to better recovery rates in cleaning process. Data for 2007 and 2008 assume an identical recovery rate; \*\*\*\* Note different assumption for 2006 data compared to 2007 and 2008.

Sources: Valsecchi 2006; Valsecchi 2008.

Canned skipjack is probably best conceived of as a truly 'global' market with the Bangkok price acting as the international benchmark since the late 1980s (as it is for skipjack raw material, see Appendix 2C.1), although important product and quality differentials factors must be taken into account. As one UK buyer put it 'We use the Bangkok price to gauge the market price' (EUInd#25; StarKist 2001: 17), although important product and quality differentials factors must also be taken into account. As one industry analyst put it: 'All roads lead to Bangkok, or so it seems in the tuna world' (Subhapholsiri 2000a: 110). Canned yellowfin is a very different market segment and is dominated by EU-centred considerations. Canned albacore must, again, be differentiated, and is dominated by US-centred factors. ACP production of core canned product has been consistently more expensive than that of competitors based in Southeast Asia, even though it has also reduced in price along with the general downward trend (probably driven down by Thai price competition as the Thai price is often used as a competitive benchmark). The reasons for Thai dominance in the canned tuna industry were touched upon above, but one EU-specific trend of note is that Southeast Asian processors' share of the EU canned tuna market grew from 24% to 29% between 2004 and 2005 (Valsecchi 2006b: 2). In short, actual (and potential) ACP exporters are being hit with a price squeeze horizontally – the competitive pressures of other developing country exporters which have a disciplinary impact on price – and vertically: the demand for ever lower prices by supermarkets to facilitate competitiveness in their respective domestic retail markets .



**Figure 3B.1: Comparing 'Africa' and Thai frozen skipjack price (USD/mt) to ACP-EU, Thai-EU and Thai-US canned skipjack import price (USD/carton 48x6.5 oz cans) (annual average prices)**



Notes: SKJ = skipjack.; ACP-EU and Thai-EU data: monthly canned skipjack tuna in brine import prices into Europe per carton (48 x 6.1/2 oz cans), origin Thailand and 'ACP', in US\$/carton; Thai-US data: monthly canned skipjack tuna in brine prices into USA per carton (48x6 oz), origin Thailand, in US\$/carton

Source: Databases provided by FAO

### APPENDIX 3C

#### UK import of canned tuna by major supplying country, 1980-2009 (in 1,000 metric tons)

Country	1980	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009
<b>Mauritius</b>	0.8	3.0	2.4	3.7	4.1	4.9	5.7	7.0	11.6	22.5	23.1	24.9	27.8	22.9
<b>Seychelles</b>	0.0	0.0	0.0	0.1	3.4	3.7	4.8	0.4*	17.5	23.3	23.9	28.8	23.9	19.7
<b>Ghana</b>	ns	ns	ns	0.0	0.0	0.0	4.9	11.0	13.7	19.6	23.0	20.2	18.4	19.3
<b>Thailand</b>	0.0	4.4	19.8	32.8	32.5	10.6	27.5	22.3	19.1	16.9	18.2	15.9	14.9	16.8
<b>Philippines</b>	0.0	2.9	2.1	3.0	7.0	6.8	8.6	8.5	11.5	6.0	7.7	9.7	13.0	16.4
<b>Ecuador</b>	ns	ns	ns	0.1	0.7	1.2	0.2	5.3	5.0	8.6	6.4	6.7	7.8	7.4
<b>Spain</b>	ns	ns	ns	0.2	0.2	0.1	1.3	6.4	4.6	9.3	3.3	2.6	1.4	2.2
<b>France</b>	ns	ns	ns	0.0	0.0	1.1	5.0	1.3	2.2	1.3	0.9	1.3	3.0	2.1
<b>Indonesia</b>	0.0	0.0	0.4	2.6	2.1	4.2	4.8	5.1	5.4	4.7	4.3	2.8	1.7	0.7
<b>Côte d'Ivoire</b>	1.4	3.5	2.4	2.8	1.4	0.3	0.0	1.4	2.2	0.3	0.7	0.0	0.0	0.0
<b>Solomon Is.</b>	0.8	1.0	1.4	1.0	4.1	4.6	7.2	6.7	4.6	0.0	0.0	0.0	0.0	0.0
<b>Fiji</b>	1.0	2.5	4.1	6.5	5.8	3.4	4.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0
<b>Japan</b>	3.8	3.5	0.6	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
<b>Others</b>	3.2	3.0	2.0	4.9	8.0	30.7	11.9	16.0	11.2	11.5	18.7	19.7	18.6	8.6
<b>Total</b>	11.0	23.8	34.7	57.7	69.3	71.6	85.9	94.5	108.6	124.0	130.2	132.6	130.5	116.1

Notes: ns = not specified, this is because supplying countries listed in the ADB/INFOFISH dataset are not the same as the Globefish data. Japan exports assumed to be zero from late-1980s onwards; Seychelles exports known to be zero between 1980 and 1987. Where data is replicated by year and country, the Globefish (2010) data are used because it is assumed that they are deliberately revised. \* error in FAO data.

Sources: ADB/INFOFISH (1991: 101) for 1980, 1985 and 1987; Globefish (2010: 47)

### APPENDIX 3D

#### A Note on Mitsubishi in the Global Commodity Chain in Canned Tuna

Princes is one of the main three players in the EU-centred commodity chain in the 2000s. Princes Group has been a subsidiary of Mitsubishi Corporation – the giant *sogo shosha* – since 1989, which bought it from the firm Buitoni (ADB/INFOFISH 1991: 102). Mitsubishi was the first Japanese firm to establish export-orientated activities in the global canned tuna chain after World War Two. Like Heinz, Mitsubishi was initially a player in the US-centred commodity chain. In 1952 it emerged as Japan's first tuna trading company, initially supplying StarKist with canning-grade fish sourced mainly from Japanese longline fleets (Matsuda 1987: 81; Gallick 1984: 40, 119). By the mid-1980s it also procured from South Korean and Taiwanese boats (fleets which it had part-financed so as to ensure supply), and had a 30 percent share of the total tuna trade in Japan, 40 percent of the total market emanating from the Pacific ocean (both including sashimi grade), and a 20-25 percent share of canning-grade supply to the canneries in Thailand (Comitini 1987: 263-5).<sup>16</sup> By the 1970s Mitsubishi was also a minor branded-firm in the US market with its *Three-Diamonds* brand, which had between two and three percent share between 1972-1985 (King 1986: 70).<sup>17</sup> This product was supplied by a subsidiary cannery in Ponce, Puerto Rico which packed albacore ('whitemeat') and non-branded manufacturers in Thailand (Iverson 1987a: 272, 1987b: 23; Hudgins and Fernandez 1987: 298; Ashenden and Kitson 1986: 15; ADB/INFOFISH 1991: 84).<sup>18</sup> Interestingly, when Mitsubishi closed its Puerto Rico plant, it procured canned tuna from StarKist (Munoz 1996: 109), demonstrating the regular shifts between competition and collaboration among firms in this industry.

Mitsubishi was also a shareholder with Nikkatsu (Japan Tuna Fisheries Cooperative Association) in Kaigai Gyogyo Kabushiki Kasisha (KGKK Overseas Fishing Co. Ltd.), established in 1958 to expand the commodity frontier of the Japanese fleet through establishing a series of overseas bases throughout the world. One of KGKK's joint ventures was in Mauritius with the creation of a cold-storage facility for the transshipment of tuna and an EU-centred cannery, primarily for the UK market, in 1972. The tuna cannery was partly supplied by one purse seiner – the pioneer of the Western Indian Ocean purse seine fishery (see Section 2.3.4; Ashenden and Kitson 1986: 15; EUInd#34). Nikkatsu withdrew from KGKK in 1983, but Mitsubishi maintained the Mauritius cannery, which was apparently supplying Princes with canned tuna before 1989 (Comitini 1987: 261-2; Hudgins and Fernandez 1987: 298; Michaud 2000: 82). It eventually sold its purse seiners 'because it's a different business. You're chasing, it's too risky' (EUInd#11). Until the mid-1980s UK retailers bought canned tuna only through *sogo shosha* (especially Mitsubishi and Mitsui) which had investments in canneries in the Pacific Islands and Thailand, but then new suppliers emerged and UK buyers procured through other importing firms/ retail brokers, on the spot market and direct from canneries (Elsy 1987: 96; ADB/INFOFISH 1991: 102).

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<sup>16</sup> By the 2000s Mitsubishi was only a minor player in the canning-grade tuna trade. As one interviewee put it: 'Trading Companies are getting richer and richer, the barriers to entry are very high; even Mitsubishi cannot compete' (TInd#1; see also AInd#12). It was, however, the world's largest trader in the sashimi-grade chain, both fresh and frozen (JInd#4-#6; PICInd#5).

<sup>17</sup> The 'three diamonds' symbol is that used by the Mitsubishi Group as a whole. The US subsidiary was called Mitsubishi Foods Inc. and canned tuna totalled 50 of its total US sales under the *Three-Diamonds* brand and for US private label (the rest being mainly canned fruit and vegetables) (Iverson 1987b: 9; ADB/INFOFISH 1991: 84).

<sup>18</sup> Another *sogo shosha* Mitsui was also a minor player in the US market and had a cannery in Puerto Rico (ADB/INFOFISH 1991: 82).

Mitsubishi went from being primarily a tuna trading firm (including in the canning-grade segment),<sup>19</sup> to being a minor player in the US market (where it declined in the mid-1980s) and a major player in the EU-centred commodity chain, especially with the purchase of Princes Group in 1989. Princes falls within Mitsubishi's 'Living Essentials Group', and within that the 'Food (Products) Division'. This division processes and procures a wide range of branded canned animal protein, vegetables and tomatoes, soft drinks, edible oils, pasta and cooking sauces. In 2007 Princes had a total share of 16.3 percent in the UK food and drink market segments in which it operates, with a retail turnover of £1.2 billion (Princes n.d.). It is also MW Brand's main direct competitor in the canned fish markets in the UK and the Netherlands.<sup>20</sup> Princes' main source of supply of standard canned tuna comes from its new factory in Mauritius – Princes Tuna Mauritius (PTM) – which was opened in 1999 at a cost of around £12 million (EUInd#34).<sup>21</sup> However, unlike MW Brands, it does not have a cannery elsewhere and so is reliant on the EU DWF in the WIO and transhipped supply from elsewhere for raw material and on various non-branded manufacturers for finished product.

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<sup>19</sup> A position that it solidified through part financing of new fishing capacity, thereby contributing to the crisis of overcapacity and subsequent restructuring of the US-centred chain in the early 1980s.

<sup>20</sup> Princes also owns the *Vier Diamanten* brand which has a 50 percent share of the market in Austria. This is touted as a very high quality canned skipjack product (EUInd#11).

<sup>21</sup> Official Princes material states that PTM was bought in 1999 (Princes n.d.: 8), but this was more a distribution of assets *within* Mitsubishi. The cannery 'wasn't a core business for Mitsubishi so they asked Princes to get in' (EUInd#34).

## CHAPTER 5 APPENDICES

### APPENDIX 5A

#### ACP-EU Preferential Trade Relations: The Rise and Decline of the Lomé/Cotonou Agreements

This appendix provides a historical sketch of the emergence and historical development of ACP-EU preferential trade relations. It traces the first Lomé Convention to the specific historical juncture of the early 1970s and the associated turbulence in the world economy and culmination of ‘third worldism’. It then traces the evolution of the subsequent Lomé Conventions (including their reflection and refraction of shifts in inter-state power relations further in favour of EU interests) to their replacement by the Cotonou Agreement in 2000 and the subsequent phasing-out of non-reciprocal trade relations with the initialling of Economic Partnership Agreements in December 2007 (where the historical coverage of this aspect of the thesis ends). The core argument here is that the relative gains afforded to the ACP under the first Lomé Convention were products of the political struggles of the 1970s and are unlikely to be repeated without a similar configuration of forces in the global political economy.

This appendix is not framed as an intervention in debates within the discipline of International Political Economy (IPE) or the Development Studies literature on trade and development. The influence of these bodies of work is generally implicit, such as the discussion of trade preference optimists/pessimists, and it certainly takes seriously relations of power in the international political economy (see Cammack 2011 on the distinction between this and ‘IPE’). Instead, the purpose is a historical understanding of the political economy of EU trade policy to explain why particular policies were followed at particular times on behalf of which interests (including their unintended effects).

#### 5A.1 Historical context to the Lomé Conventions

A central aspect of the institutional context of export-orientated canned tuna industries based in the ACP (and elsewhere) was the international economic law that was shaped by and, in turn, influenced and regulated these flows, especially regarding the trade in goods. The overarching legal framework here was the General Agreement on Tariffs and Trade (GATT) established in 1947 and superseded in 1995 with the formation of the World Trade Organisation, which among multiple other new Agreements included a reformulation of GATT.<sup>1</sup> A fundamental element of WTO law, and GATT (1947) before it, is the Most-Favoured Nation (MFN) or ‘non-discrimination’ principle. Contrary to its literal meaning, the MFN principle stipulates that WTO Members have to offer the same tariff treatment to all other WTO members except in the case of a regional integration organisation or free trade agreement. Preferential (i.e. non-MFN) tariffs can only be offered to certain categories of countries under certain conditions.

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<sup>1</sup> The two legal agreements on tariffs and trade are referred to here as GATT (1947) and GATT (1994), the institution of the World Trade Organisation as a whole is referred to as the WTO.

A major exception to the MFN principle is the Generalised System of Preferences (GSP), which is an arrangement that formally allows developed countries to offer *non-reciprocal* and preferential access to their markets for goods from qualifying developing countries.<sup>2</sup> The GSP in 1971 and the first Lomé Convention in were established in a period of global political and economic turbulence,<sup>3</sup> which served to provide the global South with increased *relative* bargaining power in relations with the advanced capitalist countries. This was a period of so-called ‘Third Worldism’ exemplified by the call for a New International Economic Order (NIEO), which was passed by the UN General Assembly in 1974.<sup>4</sup> As we saw in Chapter 4, this moment was also important to the assertion of developing country interests in the negotiation on UNCLOS.

The idea of a GSP was initiated at the first United Nations Conference on Trade and Development (UNCTAD) in 1964<sup>5</sup> and was eventually institutionalised through a series of offers by eleven developed countries between 1971 and 1976.<sup>6</sup> The architects of the GSP were heavily influenced by the dominance of structuralist thinking within development economics of the time (Leys 1996). The objective was to promote developing country exports of manufactured goods so as to ‘help free their heavy dependence on trade in primary products, whose slow long-term growth and marked price instability contributed to chronic trade deficits’ (OECD 1983: 9).<sup>7</sup> The intention was to use trade preferences as a mechanism to encourage the export-orientated development of infant industries, generate employment and foreign exchange, and promote economic diversification in developing countries.<sup>8</sup> The GSP, the structuralist thought influencing its creation and the wider global context played an important role in the formation of the terms of the Lomé Convention.

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<sup>2</sup> States are self-categorised as developing countries. This contains within it the only other formally accepted sub-category at the WTO, the Least Developed Countries (LDCs) as officially defined by the UN Development Committee. It is important to stress that “‘Least Developed’ is an official classification, not a neutral measure of poverty’ (Page and Hewitt 2002: 91).

<sup>3</sup> For seminal interpretations of this historical moment, see Arrighi (1994), Brenner (2004), Glyn (2006). The GSP was initially a temporary agreement, but it was extended for an indefinite period through the GATT ‘Enabling Clause’ of 1979 (GATT 1979), which embedded the GSP in international trade law and set a key legal precedent for the special and differential treatment (S&DT) of developing countries.

<sup>4</sup> See Campling (2006: 257-58) for an overview of factors explaining the rise and decline of the NIEO, including a range of references.

<sup>5</sup> UNCTAD was seen as a pro-‘Third World’ agency of the UN in the 1970s and 1980s, not least because at its first meeting in 1964 the Group of 77 developing countries (G77) was formed. To paraphrase Robert McNamara (then President of the World Bank), the G77 was an alliance that attempted to respond to disparities of wealth, that appeared to be widening, between developed and developing countries (cited in Cox 1987: 282).

<sup>6</sup> The eleven countries in 1976 were: Australia, Austria, Canada, the EU, Finland, Japan, New Zealand, Norway, Sweden, Switzerland and the US. By 2005, the only countries granting a GSP were Australia, Bulgaria, Canada, Estonia, the EU, Japan, New Zealand, Norway, Russian Federation, Switzerland, Turkey and the US (UNCTAD 2005).

<sup>7</sup> Otherwise known as the ‘Prebisch thesis’ after the theory’s major proponent, Raul Prebisch (the first Secretary-General of UNCTAD).

<sup>8</sup> For a brief and general overview of the scope of the success of the GSP see Gibbon and Ponte (2005: 50-51, 212 footnote 15); Cernat *et al.* (2004: 257). See also Grilli (1993: 22).

## 5A.2 Historical development of ACP-EU preferential trade relations

The origins of ACP-EU relations are commonly traced to the Treaty of Rome (1957) of which Part IV established an association between the (then) European Economic Community (EEC) and (primarily) French colonies and overseas territories.<sup>9</sup> This association *unilaterally* imposed *reciprocal* preferential trade, but also extended access for colonies to all EEC markets and provided for a set of aid commitments.<sup>10</sup> In light of the rapid process of decolonisation and the fact that the association was deemed non-compatible with GATT(1947) this was replaced by the *negotiated* Yaoundé Conventions (Yaoundé I 1963-1969 and Yaoundé II 1969-1975),<sup>11</sup> essentially reciprocal arrangements between the EEC and Francophone Africa – the Associated African States and Madagascar (AAMS).<sup>12</sup> The Yaoundé Conventions were frameworks for the protection of EEC economic and geopolitical interests, in particular for the cost-sharing of French (post-)colonial mercantilism across the EEC as a whole, mainly in return for guaranteed supply of primary commodities and access to Francophone Africa's (very limited) markets by other EEC members (Grilli 1993: 7 and 156; Nunn and Price 2004: 211). It is no surprise that the Yaoundé Conventions were subject to substantial criticism at the time because of the EEC's perceived 'divisive' and (in the parlance of the time) 'neo-colonial' exploitation of Africa (Lister 1988: 55). Rhetoric aside, the fact that the AAMS countries' relative share of EEC trade *declined* between 1958 and 1973, meant that the Yaoundé Conventions were viewed with a degree of scepticism by its developing country signatories (Grilli 1993: 155-161).

### *The Lomé Conventions I-IV(bis): ACP-EU trade relations and their context*

The first Lomé Convention (Lomé I, 1975-1980) may well represent a high-point in modern world history of developing country gains in trade concessions from the advanced capitalist countries in inter-state negotiations (Ravenhill 1980: 33). These developments must be set in the political context of the Third Worldism of the late 1960s and early 1970s, including the call for a NIEO. Lomé was the most 'generous' developed country response to Third World demands for reformist 'justice' in international trade relations. While this victory by the ACP group was far from absolute (the more radical demands were, unsurprisingly, rejected by the EEC)<sup>13</sup> and it was tempered by onerous rules of origin and related procedures (RoO, see below on fisheries RoO), never before (or since) had such extensive non-reciprocal preferential

<sup>9</sup> On the history of European 'Associationism', including a detailed analysis of French colonial theory, see Grilli (1993: Chapter 1). See also Cosgrove Twitchett (1981) and Lister (1988).

<sup>10</sup> The association applied to French West Africa (Dahomey, Guinea, Côte d'Ivoire, Mauritania, Niger, Senegal, Sudan and Upper Volta), French Equatorial Africa (Cameroon, Chad, Middle Congo, Gabon and Ubangi-Chari), and other French territories, namely Autonomous Republic of Togo, Madagascar, Comoros, French Polynesia, French Southern and Antarctic Territories, Algeria, Réunion, Guyanne, Martinique, Guadeloupe, St. Pierre and Miquelon, French Somaliland, New Caledonia and Dependencies, Belgian Congo and Ruanda-Urundi, Italian Somaliland, and New Guinea.

<sup>11</sup> Latin America was particularly concerned that the association would lead to trade diversion in favour of exports from francophone Africa. Grilli 1993: 12 and 15.

<sup>12</sup> The eighteen Associated African States and Madagascar (AAMS) were: Burundi, Cameroon, Central African Republic, Chad, People's Republic of Congo (formerly Brazzaville), Dahomey, Gabon, Côte d'Ivoire, Madagascar, Mali, Mauritania, Niger, Rwanda, Senegal, Somalia, Togo, Upper Volta and Zaïre (formerly Congo-Kinshasa, Congo Leopoldville).

<sup>13</sup> For example, the EEC refused ACP demands for the inclusion of certain elements of NIEO demands, such as ACP national sovereignty over natural resources, adjustment of EU economies and a code of conduct for multinational corporations (Nunn and Price 2004: 212; see also Hurt 2003).

treatment been negotiated by a block of developing countries.<sup>14</sup> In fact, it is commonly argued that the EEC ‘made many more concessions than it was prepared to do during the negotiations of Lomé I, and that from Lomé II onwards, the EU has been rolling back these concessions’ (Babarinde and Faber 2005: 2).<sup>15</sup> The terms of Lomé I and II reflected the assumptions of the structuralist economic thinking of the 1970s, for example, placing “special emphasis” on “the domestic processing of ACP raw materials with a view to achieving a larger and equitable share of processed raw materials in both production and exports of the ACP states” (Article 70 of Lomé II as cited by Stevens and Weston 1984: 28). Alongside the injection of capital in the form of EEC aid, the major policy mechanism for achieving this objective was the provision of non-reciprocal trade preferences as a mechanism of competitive advantage to support the development of infant industry in the ACP.

The determining factor behind the formation of the Lomé Convention was the accession of the UK to the EEC in 1973. In short, the terms of the UK accession made it necessary to replace Yaoundé with a new EEC regime that accommodated the trade and other relations of Britain with the independent Commonwealth countries.<sup>16</sup> This brought together the eighteen AAMS (the EEC’s ‘partners’ in the Yaoundé Conventions) with former British colonies in sub-Saharan Africa, the Caribbean and the Pacific (i.e. the developing country Commonwealth bar Asian members). In short, Lomé was the genesis of the ACP group of countries (initially totalling 46 states) and its institutional representation through the ACP Secretariat.

Four interrelated factors converged to enable the ACP states to negotiate a relatively beneficial non-reciprocal agreement, in positive contrast to the prior (reciprocal) terms of the Yaoundé Conventions. First and foremost, because of stagflation in the world economy and the perception among developed countries of a ‘threat’ from the Third World through ‘commodity power’ (i.e. via cartel-like organisations based on the successful model of OPEC), the EEC was willing to *negotiate* the terms of the agreement in order to establish a steady supply of primary commodities from the ACP countries in the face of real shortages of raw materials (Arts and Byron 1997: 74-75; Grilli 1993: 25-26). Second, the EEC was pushed onto its back-foot by the unity of the ‘common front’ of ACP states and its pro-active leadership by the Nigerian government. This is interesting because the agreement was non-reciprocal and thus the ACP group had little to ‘offer’ the EEC in terms of bargaining power, it was also in direct contrast to the terms of the Yaoundé Conventions dictated by the EEC despite being reciprocal agreements. One important political lesson from these negotiations was that the ACP states united to support particular positions and

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<sup>14</sup> The principle of reciprocity in GATT(1947) had been a target of Third World critique since the 1955 Bandung Conference as they were ‘unsuitable to the special needs of the underdeveloped countries’ (Grilli 1993: 30; Parkinson 1956). For example, for Ravenhill, Lomé I was ‘one of the few successfully negotiated multilateral agreements in the contentious area of North-South relations’ (1980: 33). For Clapham, it was negotiated from ‘something approaching a position of equality’ (1996: 99). For Stevens and Weston it was ‘the most important trade agreement between a group of developed market economies and a group of developing countries, and is at the summit of the EEC’s hierarchy of trade relations with the Third World’ (1984: 29). For Grilli, Lomé I looked ‘at least for a while, like the most advanced system of North-South development cooperation and a model for things to come’ (1993: 35).

<sup>15</sup> It is for this historical reason (among others) that this thesis asserts the centrality of historical context in understanding international trade relations and the rules that govern it.

<sup>16</sup> Protocol 22 of the UK accession agreement provided for an agreement along the lines of the Yaoundé Conventions (Babarinde and Faber 2005: 3; see also Grilli 1993: 21-35).



demands of direct interest only to a very small amount of its members (Ravenhill 1980: 35; Grilli 193: 7).<sup>17</sup> This is not to suggest that Lomé I was negotiated as a relationship between equals: for example, the export dependence of the ACP on the EEC compared to EEC penetration of ACP markets was (and remains) profoundly uneven. Instead, it is to claim that successful negotiation tactics in the context of the world system of the mid-1970s lessened this asymmetry. Third, the US objected to the reciprocity embodied in the Yaoundé Conventions because it offered EEC firms preferential access to developing country markets against the interests of US capital (Ravenhill 1980: 35). Finally, the GSP had recently been established (in 1971), thereby setting a precedent for non-reciprocal preferential trade agreements in international economic law.

In contrast to the first Convention, Lomé II (1980-1985) was negotiated in a period of deepened relative asymmetry to the detriment of the ACP group. This was due to the convergence of a set of interrelated factors:<sup>18</sup> non-oil producing ACP economies were very hard hit by the two successive OPEC price rises in the 1970s; the initial signals of the fast approaching Third World debt crisis were being felt; there was a shift to the political right in the capitalist core (not least through the rising dominance of free market neoliberal thinking); and the Third World radicalism associated with the NIEO began to fade, partly because of divisions between these heterogeneous states (including within the ACP group itself, such as between anglophone and francophone states),<sup>19</sup> which allowed the EEC to pick off certain states in an imperial policy of divide and rule (Ravenhill 1980: 45). The outcome of this configuration of structural and contingent forces was ‘the re-establishment of the balance of international economic and political power in favor of the North’ (Grilli 1993: 36), which contributed to the inability on the part of the ACP to pressure the EEC to offer further trade concessions under Lomé II. In short, by the late 1970s ACP bargaining power had diminished further. One EEC negotiation tactic (or veiled threat) was to stress that its existing aid provisions and investment guarantees under Lomé were far higher than from other OECD countries; hints were also made that bilateral ODA from individual EEC states were also at stake (Ravenhill 1980: 43). The consequence of all of this was a general embittering of ACP-EU relations, and, although the non-reciprocal trade provisions under Lomé I remained in place, the EEC continued to interpret the Convention in a very narrow and legalistic fashion, for example, procedural aspects such as rules of origin would be followed to the letter, rather than being interpreted with ‘developmental’ outcomes in mind.

By the time of the negotiations of Lomé III (1986-1990) the EU was committed to pursuing an agenda of private sector-led development, informed and justified by neoliberal ideas; what the EU portrayed as a ‘minimally interventionist, catalytic form of assistance’ (EC 1995: 23). This is despite the fact that the *only* comprehensive success story of industrialisation among developing countries since 1945 – the newly

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<sup>17</sup> At the same time however, it should be noted that the ACP group countered the NIEO call for South-South unity because of its status as a sub-grouping of developing countries with preferential relations with the EEC (Cosgrove Twitchett 1981: 130-31).

<sup>18</sup> For a detailed analysis of the asymmetry in negotiations for Lomé II and the disappointment of the ACP states with its outcome, see Ravenhill (1980).

<sup>19</sup> This was not primarily a consequence of the dominance of different European languages and cultural influences, but because of the dependence of many francophone ACP on relations with France and the EEC in contrast to some of the more radical regimes of the anglophone Caribbean which appeared to take the demands of the NIEO more seriously (Ravenhill 1980; Grilli 1993).

industrialized countries of East Asia (NICs) – was contingent upon fairly extensive (and very well documented) strategic *intervention* by the state.<sup>20</sup> Lomé IV (1990-2000) extended the EU's neoliberal policy agenda even further: importantly, the 'balancing' influence of the USSR was no longer significant at the time of negotiations, so ACP countries could not use relations with the USSR to temper EU demands (Wright 2005: 78). Notable additions to the expanding remit of ACP-EU relations were an enhanced 'participatory' role for civil society actors within ACP countries; and a redefinition of the state as 'enabling'. The private-sector was the driver of development and state reform focused on the effective provision of market-based regulations that would facilitate investment through implementing, extending and enforcing of private property rights. In addition, some Lomé IV aid packages were tied to neoliberal adjustment conditionalities (Grilli 1993: 345).<sup>21</sup> The significance of the terms of Lomé IV was neatly summarised by Grilli as representing:

a substantial movement in EC-ACP relations away from any pretense of partnership and towards a more traditional (and thus inherently unequal) North-South relationship in both trade and aid – a relationship strictly conditioned by the priorities, ideology and economics of the North (Grilli 193: 43).

By the time of the mid-term review of Lomé IV in 1995 – Lomé IV(bis) – it had become clear that the EU was not going to extend non-reciprocal market access to any post-Lomé arrangement from 2000 onwards. The primary stated rationale for this was that Lomé had never been compatible with GATT(1947), and was not compatible with the newly established WTO (McQueen et al. 1998: 12). In addition, in terms of changes to the actual agreement, the mid-term review represented a shift by the EC even further towards the developmental assumptions associated with neoliberalism (albeit in its revised form).<sup>22</sup> These included an emphasis on 'good governance' as 'a particular aim of cooperation' (ACP-EC 1996: 33, Amendment to Article 5),<sup>23</sup> the assignment of an even more prominent role to the private sector in the development needs for ACP economies (EC 1996: 8-9; see also ACP-EC 1996), and more important in relation to the topic of this appendix, a move from trade policy focused on trade preferences to 'improving the competitiveness of the ACP states' (Directorate General for Development 1996: 7, referring to Article 15a of Lomé IV (bis)), by 'integrating them into the world economy in a *harmonious* and gradual manner' (Amendment to Article 6 of Lomé IV, ACP-EC 1996: 36. Emphasis added).<sup>24</sup>

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<sup>20</sup> A dynamic that even the World Bank has since (partially) acknowledged (World Bank 1997). On the integral role of state intervention in the economic development of the NICs see the following, now classic, texts: Amsden 1989, Chang 2004, Wade 1990.

<sup>21</sup> Grilli does not use the term neoliberal, but he spells out the package of stabilisation and structural adjustment measures associated with imposed 'Washington consensus' policies.

<sup>22</sup> Neoliberalism cannot be understood as a static ideology. For example, significant shifts in its composition of policies away from its 'orthodox form' (World Bank 1981) occurred in the late 1980s (with the good governance and 'human face' agendas) and the in mid-1990s with the 'enabling state' (WDR 1997). These shifts reflected a combination of the clear failure of the objectives of its initial policies, and the influence of NGO agendas, which, paradoxically, had emerged as key players because of initial neoliberal reforms of the state in the global South. Nonetheless, several of its core assumptions remained, even in its so-called 'post-Washington consensus' variant (Rodrik 2001).

<sup>23</sup> And a range of aid conditionalities to facilitate this aim, reflecting the 'emerging consensus' in mainstream development circles by the mid-1990s 'on the link between human rights, democracy and development' (Arts and Byron 1997: 83).

<sup>24</sup> The assumption that economies can harmoniously integrate with the neoliberal era of global capitalism is one of the many contradictions of the EU agenda here.

### *Why did the Cotonou Agreement Replace the Lomé Conventions?*

In June 2000, the ACP and the (then) 15 member states of the EU signed the Cotonou Partnership Agreement (CPA), which would be the major (albeit not only) regime governing ACP-EU relations for the period 2000-2020.<sup>25</sup> The CPA did not represent a significant departure from Lomé, although several elements were modified, including WTO conformity as an *objective* of ‘cooperation’ rather than as a principle (Article 34 of the CPA as interpreted by Faber 2005: 85; WTO conformity was re-iterated in CPA Articles 36 and 37). The most important element for the purposes of this analysis is the framework that the CPA laid-out for the reform of preferential trade relations: the ‘preparatory phase’ (2000-2008) of the CPA allowed eight years to negotiate an end to the non-reciprocal trading embodied in Lomé, to be replaced by a legal framework establishing separate sub-regional and *reciprocal* ‘Economic Partnership Agreements (EPAs)’. According to the terms of the Cotonou Agreement, EPAs were to ‘enter into force by 1 January 2008, unless earlier dates are agreed between the Parties’ (Article 37. 1).

The primary stated rationale for establishing reciprocal EPAs was to achieve WTO-compatibility for the ACP-EU preferential trade regime. In short, non-reciprocal preferences discriminated between developing countries and as such conflicted with the MFN (or non-discrimination) principle. More specifically, preferences under the Lomé Conventions and the preparatory period of the Cotonou Agreement were not framed under the GSP because there was no ‘objective’ criterion to differentiate the ACP from other developing countries, which would have been necessary to meet the terms of the Enabling Clause. The ACP is simply a historical legacy of European colonialism and the formation of the EEC; it has little other unifying dynamics beyond a shared status as ‘developing countries’. To be WTO compatible, non-GSP preferential trade arrangements were required to comply with Article XXIV of GATT(1994), which is the regulatory framework for all customs unions and free trade areas.<sup>26</sup> As such, the terms of the Cotonou Agreement stated that EPA negotiations were to establish ‘the timetable for the *progressive removal of barriers to trade between the Parties*, in accordance with the relevant WTO rules’ (Article 37.7).<sup>27</sup>

The EU’s shift to promote a regime of EPAs was also supported by arguments that the trade preferences under Lomé had been a decisive failure (the ‘preference pessimist’ view in Chapter 5), and the assumption that regional integration among ACP countries would kick-start their development and act as a ‘stepping stone’ to full integration with the world economy (EC 2002), thereby mirroring (or imposing?) the trajectory of regional economic integration among EU members. Although the primary stated

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<sup>25</sup> By end-2007, the Cotonou Agreement governed relations between 25 EU states and 79 ACP states.

<sup>26</sup> GATT 1994, ‘Understanding on the Interpretation of Article XXIV of the General Agreement on Tariffs and Trade 1994’. The number of reciprocal trade agreements falling under Article XXIV *trebled* during the 1990s (UNCTAD 2003: ix).

<sup>27</sup> This article also contained flexibilities that recognized the level of development of the ACP: ‘Negotiations shall *take account of the level of development and the socio-economic impact* of trade measures on ACP countries, and their *capacity to adapt and adjust* their economies to the liberalization process. Negotiations will therefore be *as flexible as possible* in establishing the duration of a sufficient transitional period, the final product coverage, taking into account sensitive sectors, and the degree of *asymmetry* in terms of timetable for tariff dismantlement, while remaining in conformity with WTO rules then prevailing’. (Emphases added.)

objective of the Cotonou Agreement was poverty reduction, this was conditioned by the qualifier that any activities towards this objective must be consistent with the integration of ACP countries into the world economy (with reference to Article 1 of the Cotonou Agreement; see Dearden 2003: 110).

## APPENDIX 5B

### Overview of ACP tuna canneries and tuna loining plants in mid-2000s

Country	Company Overview	Production and Employment
Fiji	Pafco (est. cannery in 1970). Ownership 98% Fiji Government/ 2% local investors and 'villages'. Processing agreement to supply Bumble Bee (US canned tuna company) with tuna loins since 1999. Stopped exporting product to the EU due to price squeeze by main buyer (Sainsbury's). Previously a joint venture with the Japanese firm C. Itoh until 1987.	155mt/day frozen albacore loins (US) 238,000 cases canned tuna per year (80% local and sub-region/ 20% Canada) Direct employment: 800, including temporary workers
Ghana	The Pioneer Food Cannery (PFC, established in 1976). Majority owned by Lehman Brothers with some limited local ownership, managed by MW Brands. Previously owned by Heinz European Seafood.	175mt/day predominantly skipjack Direct employment: 1,200
Kenya	Kenya-Wanaichi Marine Products Ltd. Processing agreement to supply Tri Marine (a tuna trading company).	Annual raw material production capacity 20,000mt for loins. Direct employment: c.400.
Côte d'Ivoire	Pêche et Froid Côte d'Ivoire (PFCI). Bought by Thunnus Overseas Group (TOG) in 2005.	200mt/day predominantly skipjack. Annual raw material production capacity 50,000mt
	Société des Conserves de Côte d'Ivoire (SCODI). (Owned by Bolton/Saupiquet until 2005)	250mt/day predominantly skipjack.  Direct employment in <i>both</i> canneries: c.3,000
Madagascar	Thunnus Overseas Group (TOG) owns one factory: CTOI (owned by Pêche et Froid Océan Indien, PFOI, until 2007).	Annual raw material production capacity 36,000mt for canned and pouch <sup>28</sup> skipjack/ yellowfin. Direct employment: 1,500
Mauritius	Princes Tuna (Mauritius) Ltd (PTM). 58/59% share bought by Princes Ltd (UK) in 1999, which is a subsidiary of Mitsubishi Corporation/ 35% Ireland Blyth Ltd (IBL, Mauritius)/ 6-7% State Investment Corporation (Mauritius).	Annual raw material production capacity 50,000mt for canned skipjack. Direct employment: 1,950
	Thon des Mascareignes (est. 2005). Owned 75% IBL/ 25% Pesqueras Echebstar (Spain).	Annual raw material production capacity 55,000mt for albacore, skipjack and yellowfin loins (90%) cans and pouch. Direct employment: 750

<sup>28</sup> Tuna packed in aluminium foil pouches.

### Overview of ACP tuna canneries and tuna loining plants in mid-2000s [cont.]

Country	Company Overview	Production and Employment
Papua New Guinea	Frabelle (est. 2006) owned by Philippine firm Frabelle Market Corporation.	Maximum capacity of 80mt/day that can be split between loining and canning. 80% loins and cans to EU/ 20% of canned product to domestic market Direct employment: 2,000
	RD Tuna Cannery (est. 1997) owned by Philippine firm RD Corporation.	150mt/day canned (80% EU/20% local) 20mt/day frozen loins (EU) Direct employment: 3,000 (15% over-employment to offset high absenteeism)
	South Seas Tuna Corporation (SSTC) (est. 2003) owned by FCF (Taiwanese tuna trading company) and Taiwanese purse seine vessel owners.	100mt/day frozen loins (for US market, but made attempts to target EU markets) Direct employment: 1,300
Senegal	Société nouvelle des conserveries du Sénégal (SNDCS) Ownership unknown	Actual annual raw material production capacity 20,000mt; 4,200mt finished product in 2001. Direct employment: 1,340
	Pêcheries frigorifiques du Sénégal (PFS) Ownership unknown	Actual annual raw material production 15,000mt; 4,500mt finished product in 2001. Direct employment: 1,100
Seychelles	Indian Ocean Tuna Ltd (IOT) (est. 1995) owned 60% Lehman Brothers/40% government of Seychelles, managed by MW Brands. Previously owned by Heinz European Seafood until 2006.	Actual annual raw material production 102,000mt (2006) for canned skipjack/ yellowfin and some loins. Direct employment: 2,300
Solomon Islands	Soltai Fishing & Processing Ltd. (Soltai) (est. 1973) owned 51% National Government/ 49% Western Province government. Processing agreement to supply Tri Marine with tuna loins. Previously a joint venture with Japanese firm Maruha until 2001.	37mt loins per day Developing line for catering cans for France and Germany. Local/sub-region: c.65,000 cases per year Japan: Katsuobushi, 8-10 containers per month <sup>29</sup> Direct employment: 800

Sources: In-country interviews, Fiji, Mauritius, Papua New Guinea, Seychelles and Solomon Islands (2005-7); Barnes (2006); Golub and Mbaye (2002); IDDRA (2004); Oceanic Développement et al. (2005).

<sup>29</sup> Katsuobushi is a boiled, dried, smoked, and fermented skipjack (or bonito) that is a main ingredient of *dashi* (a broth that forms the basis of soups (miso) and sauces) in Japanese cuisine.

## APPENDIX 5C

### Demonstrating the Importance of the EU Trade Preference to Canned Tuna Production in the ACP

Chapter 5 shows that the Lomé/Cotonou preference was an important incentive to capital in the development of a tuna processing industry in the ACP. Can we quantify this? And what was its impact on market share of competing sites of production, especially in Southeast Asia?<sup>30</sup> To answer these questions, the following discusses data provided in Table 5C.1 to demonstrate shifts over time in share of the EU market for canned tuna between the ACP and competing sites of production in Southeast Asia and Latin American GSP+ receiving countries.

Using data for the four most important EU import markets for canned tuna (France, Germany, Italy and the UK), Table 5C.1 provides evidence of a growing ACP market share, but also by GSP+ countries in Latin American. While the ACP share of the French market for imported product declined in relative terms from 99.5 percent in 1985 to 58 percent in 2005 (with product from processors based in Spain and Latin America capturing market share),<sup>31</sup> the total *volume* of ACP canned tuna exports rose from 36,800mt in 1985 to 107,900mt in 2005. For the German market, ACP exporters expanded their share from 0 percent in 1985 to 24 percent by 2005, which, combined with a boom in imports from GSP+ countries by 2005, reduced Southeast Asian exporters' market share from 74 percent in 1985 to only 46 percent in 2005.<sup>32</sup> Finally, in the largest EU market, the UK, ACP exporters registered a significant expansion in market share from 42 percent in 1985 to 61 percent in 2005; as with the German market, this has contributed directly to displacing competing product from Southeast Asia (from 31 percent in 1985 to 21 percent by 2005).

Shifting the emphasis and re-enforcing the point made in Chapters 3 and 5, among the major 'winners' from the protection afforded by EU tuna tariff policy were EU-based tuna canneries (particular those in Spain). In fact, market share for canned tuna produced in Spain has grown substantially in France from 0 percent in 1985 to 27 percent in 2005. Spain's share of the other three major EU markets has declined in relative terms over the same period, but in absolute terms it has grown steadily in Germany (from 1,300mt in 1985 to 6,600mt in 2005), and dramatically in Italy (from 4,700mt in 1985 to 44,400mt in 2005). Given that the import data for Italy includes tuna loins for processing by domestic canneries, Spain's relative market share is likely to be significantly higher for canned tuna. Only the UK market has seen Spanish share decline in both relative and absolute terms.

Reform of the 'standard' GSP in mid-2005 provided a marginal improvement in competitive advantage on paper and, in parallel, represented a degree of preference erosion for the ACP (i.e. the ACP margin of preference became less valuable relative

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<sup>30</sup> In order of productive importance Thailand, the Philippines and Indonesia.

<sup>31</sup> Spanish firms were deepening their investment base in loining facilities in Latin American GSP+ countries and source the vast majority of their supply of loins from there.

<sup>32</sup> It is worth noting that, in absolute volume terms, the Southeast Asian group of countries continued to register growth in Germany. Only the UK registered a decline in Southeast Asian volume between 1995 and 2005.

to the standard GSP).<sup>33</sup> In practice however, this 3.5 percent difference in tariff is unlikely to have provided much increased market access for firms in standard GSP recipient countries; at the most it might have served to boost profitability for firms based in Southeast Asia that were previously exporting to the EU at 24 percent. A major barrier to accessing the preference was the necessity of meeting EU GSP rules of origin (RoO) for fish, which is problematic for Thailand (the world's most important exporter of canned tuna) as it had only a very limited domestic fleet and had to rely on supply from EU vessels to qualify for only a 3.5 percent preference (CTA 2005). As a result, since 2006 the Thai government and tuna industry planned to expand domestic tuna fishing capacity.<sup>34</sup> On the surface, meeting GSP RoO is less problematic for Indonesia and the Philippines as both have significant domestic tuna fleets that meet EU GSP RoO, but the extent to which all this potential supply complies with EU SPS measures for fish and fish products is another question. In light of the limited commercial value of the standard GSP for canned tuna it might seem unworthy of consideration here, but Southeast Asian tuna exporters made it clear that they would push for a further tariff reduction by a minimum of 3 percent during the review of the GSP regime.<sup>35</sup> Such shifts in the standard GSP represent an important source of potential preference erosion for the ACP.

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<sup>33</sup> The remaining EU GSP scheme – the Everything But Arms (EBA) initiative for LDCs – is far less significant in shaping EU market dynamics for imported tuna products. Data for non-ACP EBA beneficiary countries are not included in Table 5C.1 because it is marginal and does not appear to have impacted the competitiveness of equivalent ACP product. The only significant exporter is the Maldives which – while very important to the Maldivian economy – had only 5 percent share of the UK market in 1995 and 3.4 percent in 2005. Exports from non-ACP LDCs did not register for any of the three other major EU markets for imported canned tuna assessed here.

<sup>34</sup> For example, three purse seine vessels were reportedly purchased by Thai interests in 2006, although these were apparently former Russian IUU vessels. (Interviews, Thai industry representatives and international fisheries specialist, Bangkok 2006.) Chanintr Chalisarapong, Chairman of the Tuna Packers' Group, stated clearly in May 2006: 'We want to build-up, step-by-step, our tuna fleet. We have many Thai packers who have money to invest in fleets with current distant water fleets' (Speech at the INFOFISH Tuna 2006 conference). This possibility was confirmed in interviews with US industry representatives in 2006 and was one of the stated aims of enforcing strict rules of origin in a proposed US-Thai FTA (i.e. to protect US industry). In addition to its support for the development of an industrial tuna fleet, the Thai government acceded to the Indian Ocean Tuna Commission (IOTC) to improve access to Indian Ocean stocks (see Chapter 4); and it supported the rehabilitation of the Fish Marketing Organisation of Thailand through financing infrastructure such as expanded wharf space and improved capacity to meet SPS requirements. (Speech by Dr Jaranthada Karnasuta, Director General of Fisheries, Government of Thailand, at the INFOFISH Tuna 2006 conference.)

<sup>35</sup> Speech by Francisco Tui-Laurel Jr., President of Frabelle Fishing Corporation, Philippines, at the INFOFISH Tuna 2006 conference.



**Table 5C.1: Canned tuna import volumes by major EU importing countries and market share by exporting country groups**

	France			Germany			Italy (including loins)			UK		
	1985	1995	2005	1985	1995	2005	1985 <sup>36</sup>	1995	2005	1985	1995	2005
Known imports from ACP (in 1,000mt) <sup>37</sup>	36.6	67.2	62.7	-	2.5	20.2	0.1	5.5	24.5	10	26.6	81.3
Known imports from Southeast Asia (in 1,000mt)	-	-	-	14.6	24	38.8	-	1.6	1.7	7.3	36.1	28.2
Known imports from GSP+ (Latin America) (in 1,000mt)	-	-	7.2	-	0.1	14.6	-	5.5	33.7	-	0.2	6.7
Known intra-EU imports (excluding known re-exports) (in 1,000mt)	-	5.3	29.9	1.3	5.8	6.6	4.7	21.8	44.4	-	6.3	3.9
<b>Total Vol. (in 1,000mt)</b>	<b>36.8</b>	<b>78.8</b>	<b>107.9</b>	<b>19.8</b>	<b>44.7</b>	<b>83.8</b>	<b>4.8</b>	<b>37.9</b>	<b>112.1</b>	<b>23.8</b>	<b>85.9</b>	<b>132.6</b>
Total ACP share	99.5%	85.3%	58.1%	0%	5.6%	24.1%	2%	14.5%	21.9%	42%	30.9%	61.3%
Total Southeast Asian share	0%	0%	0%	73.7%	53.7%	46.3%	0%	4%	1.5%	30.7%	42%	21.3%
Total GSP+ (Latin America) share	0%	0%	6.7%	0%	0.2%	17.4%	0%	14.5%	30%	0%	0.2%	5%
Total EU (excluding re-exports) share	0%	6.7%	27.7%	6.6%	12.9%	7.9%	97.9%	57.5%	39.6%	0%	7.3%	2.9%

Source: Globefish (2006: 48, 50, 51 and 54); UK data for 1985 from ADB/INFOFISH (1991: 101).

<sup>36</sup> Italy import volumes for 1985 are marginal because supply was dominated by domestic production. The rise in imports correlates with the decline in domestic production and (less so) with rising per capita consumption

<sup>37</sup> The table refers to 'known imports' because smaller quantities of exports from some of the more minor supplying countries within the four groupings used here may be included under 'Others' in the original data set. However, the quantities provided here are broadly representative of total trade flows.

