0/38-1360/00 \$3.00 + .00
Copyright © 2001 Marine Resources Foundation

Globalisation and the Sustainability of World Fisheries: A View from Latin America

ANDY THORPE ELIZABETH BENNETT University of Portsmouth

Abstract This paper describes the integration of Latin American marine fisheries into the global production system in the post-1945 period and the role of foreign and domestic fleets in this process. Through reference to the state-denial theories found in the globalisation literature, it charts the impact that the globalisation process has had upon the exploitation and sustainability of fish stocks in Latin American waters. It argues that while globalisation may indeed boost environmental awareness and lead to a more sustainable level of production through the decreased influence of local political interests, this has yet to happen in the principal Latin American fishing nations.

Key words Argentina, Chile, fishing industry, globalisation, Latin America, sustainability, Mexico, Peru.

Introduction

Globalisation has not received particularly good press (Holland 1987; Rodrik 1998; Greider 1997), being perceived as a purveyor of poverty (Wilken 1996; Chossudovsky 1997), and a threat to democracy and governance as markets and production are autonomised (Schlesinger 1997; Hirst and Thompson 1992).

This is equally true in the case of fisheries. Couper and Smith (1997), for example, have argued that post-World War II globalisation processes have, by encouraging distant water fleets and flag of convenience registrations, led to global overcapacity. A consequent 'race for fish' has led to the overexploitation of global fish stocks to the detriment of local marine environments. Arbo and Hersoug (1997) concur, documenting how the emergence of a global market for raw whitefish not only dislocated local employment systems in Finnmark (Norway), but also created a new breed of fishing capital owners who had a reduced responsibility to the local community. Similar arguments as to the potentially negative effects of globalisation can be found in the works of Kurien (1998), Johnstone (1996) and Holm (1998).

Our position is somewhat different. We contend that globalisation processes, as evidenced in Latin American and other Third World fisheries, are not uni-dimensional in character but have evolved through three distinct stages. The first phase, covering the period from World War II up to the mid-1970s, saw distant water fleets

Andy Thorpe is a principal lecturer in the Department of Economics, University of Portsmouth, Milton Campus, Locksway Road, Portsmouth PO4 8JF Hampshire, England, email: andy.thorpe@port.ac.uk. Elizabeth Bennett is a socio-economist in the Centre for the Economics and Management of Aquatic Resources (CEMARE), Department of Economics, University of Portsmouth, Milton Campus, Locksway Road, Portsmouth PO4 8JF Hampshire, England, email: elizabeth.bennett@port.ac.uk.

The authors acknowledge the financial support of the University of Portsmouth, the European Union and the MacArthur Foundation for allowing us to present preliminary versions of this paper at a number of conferences and workshops.

plundering fish stocks off Third World countries (the 'globalisation' of fish production). The establishment of Extended Fisheries Jurisdiction (EFJ) within Economic Exclusion Zones (EEZs) and the introduction of neo-liberal macroeconomic strategies which facilitated the displacement of foreign vessels by domestic fishing fleets geared towards the export market, heralded the second phase, which extends from the seventies to date (the 'globalisation' of trade). These two phases have had a deleterious impact upon fish stocks (Thorpe, Ibarra, and Reid 2000). Concerns over the sustainability of such fishing practices have prompted an unexpectedly strong regulatory backlash at both national and international levels (the 'globalisation' of [regulatory] control) during the 1990s. The question is, are the regulatory policies presently emerging in this third phase sufficiently powerful to counteract the negative impacts of previous phases on stock sustainability?

The article is structured as follows. The next section provides a brief introduction to globalisation theories, highlighting their relevance in the fisheries context. The third section details how Latin American fisheries were integrated into the global production system through foreign fleet activities in the post-war period. In the fourth section, we document the trade-based globalisation phase, specifically how by crowding out foreign fleets, the domestic fleet grew (which consequently saw Latin American fish trade grow in both volume and value), and how this growth contributed to stock overexploitation and increased dependence on global markets. The fifth section examines the supra-national regulatory initiatives that have emerged to prevent global fish stocks from being fished beyond the biological point of no return, and traces their impact at the regional level. In the concluding section, we assess whether current management efforts are likely to be effective in safeguarding regional fish stocks.

Globalisation and World Fisheries

The concept of globalisation is difficult to pin down. Standard neo-classical economics, by equating globalisation to greater international economic integration is, in our minds, extremely reductionist. Debate is focused upon questioning whether commodity trade and foreign direct investment is actually increasing (van Bergeijk and Mensink 1996; Traill 1997; Perraton *et al.* 1997; Kleinknecht and ter Wengel 1998) and assessing globalisation's impact on real national incomes (Krugman and Venables 1995; Gundlach and Nunnenkamp 1996). While aggregate welfare considerations are undeniably important, forming as they do the basis for acceptance or rejection of economic liberalisation and trade deregulation arguments, they are illequipped to guide natural resource management strategies at the local level (Brander and Taylor 1998). This is particularly so in the context of marine fisheries. Here, the fugitive nature of the resource, its propensity to straddle territorial waters, and the potential for irreversible overexploitation make stocks extremely vulnerable to unregulated market forces. Export-based fisheries in the developing world are particularly susceptible (Iheduru 1995; Thorpe, Ibarra, and Reid 2000).

The rediscovery of neo-classical theories at the economic level has been paralleled by the emergence of 'state-denial' theories within the political economy literature. Here, globalisation was seen as signifying the retreat (Strange 1996; Streeten

¹ The debate is not a new one. In the 1970s, proponents of the New International Economic Order asserted that ongoing globalisation trends impacted adversely on developing countries (Toye 1987; Cypher and Dietz 1997). Today, Watkins (1997) suggests that current globalisation processes are further marginalising Sub-Saharan Africa, while Brander and Taylor (1997) illustrate how international trade may be welfare-reducing for a small, open economy with a valuable open-access resource.

2000) or demise (Ohmae 1990) of the nation state as markets and market forces assume the high ground, a scenario that appears to offer a bleak future for many of the world's marine fisheries. The 'state-denial' school of thought has recently come under fire, however, from Weiss (1997, 1998) and Phillips (1998) who instead assert that the nation-state is in a process of adaptation—rather than decline—as internationalisation gathers pace. The inexorable convergence of international macroeconomic policies and the proliferation of supranational agreements and regulatory bodies have undeniably reduced the autonomy of the nation-state. However, at the same time, it has provided an opportunity for the state to enhance its residual domestic powers through harnessing such forces in the pursuit of domestic economic reform. Yet, significantly, as Weiss (1997, the italics are ours) notes:

[The] state's capacity for a co-ordinated and strategic response [to these opportunities] primarily rests upon institutional arrangements which make key decision-makers in the economic bureaucracies at once 'autonomous'... in so far as decision-making is largely ... insulated from clientilistic political pressures.

This is critically important given the Latin American context where, historically, a strongly interventionist state has proved vulnerable to the rent-seeking behaviour of narrow sectarian interests. As a consequence, our paper sets itself the task of examining whether the current regulatory phase of globalisation will, by diluting the power of such sectarian interests, aid national fishery management efforts. Improved regulatory control, externally aided (or ordained) and domestically implemented, can potentially be beneficial from a stock sustainability perspective. Globalisation is not a uni-dimensional process, and to understand both the reasons for and the nature of this regulatory backlash, we first detail how the earlier waves of globalisation catapulted the regional marine fisheries of Latin America into their current state of crisis.

Distant Water Fleets (DWFs) and the Globalisation of Production (1945–73)

While distant water fishing is not new, French, Portuguese, and Spanish vessels having actively fished for cod in the fishing grounds of the New World since the late sixteenth century, the phenomena grew dramatically in the post-World War II period (Holm 1998; WWF 1998). The depletion of domestic fish stocks saw 'footloose' vessels relocate to those regions where fish stocks were un- or underexploited, so heralding the first phase of the globalisation process. The principal instigators of such resource seeking were the Soviet, Japanese, and Spanish fleets, with over 230 million tonnes being landed by DWFs worldwide between 1950 and 1994 (WWF 1998).²

One of the most affected areas in this era of oceanic colonialism was Latin America. As early as October 1945, the Mexican President, Manuel Avila Camacho, expressed fears over DWF activities off the Mexican coast (*El Universal* 30/10/1945, quoted by Orrego Vicuña 1984). Yet, while the subsequent 1947 and 1949 Fisheries Laws restricted access to the nine most important inshore marine and shellfish fisheries to local cooperatives and licensed limited foreign fishing within

² The same source calculates that the Soviet Union accounted for 32% (74.4 million tonnes) of the catch taken by DWFs over the 1950-1994 period. Japan (21%, 49.6 million tonnes), Spain (10%, 22.9 million tonnes), South Korea (5%, 11.1 million tonnes), and the Russian Federation (4%, 10.5 million tonnes) all landed over ten million tonnes during the same period.

³ SEMARNAP (1998), for example, claim that 77% of tuna consumed in the US in 1927 was extracted from waters which today form part of the Mexican EEZ.

the territorial sea,⁴ the access and registration requirements were unheeded and the territorial sea went unrespected. One of the earliest prophets of doom was John Steinbeck who, in the *Log from the Sea of Cortez* (1995), documented the rapacious nature of Japanese shrimp trawlers off Baja California during the 1950s. As Mexico became more cognisant of the wealth of her coastal waters (Frank 1946; Rosendahl 1984), enforcement procedures improved and DWFs were gradually displaced from territorial waters.⁵

Elsewhere in the region, Ecuador, Peru, and Chile, via the Santiago Declaration (August 1952), laid claim to a 200-mile territorial sea that incorporated the rich fisheries of the Humboldt Current. However, this was not ratified internationally and, consequently, did little to deter the forays of DWFs.⁶ The earliest contraventions were off Peru, where extensive operations by the Japanese tuna fleet in the late 1940s and early 1950s forced local fishing entrepreneurs to switch their attention to the anchovy (Molinari 1977).⁷ While DWF activity expanded markedly from the mid-1960s onward, it was paralleled by growth in state activism as the Latin American states increasingly sought to direct the development process and establish control over local resource extraction. Chile nationalised its copper industry in 1971, Echeverría embarked upon an extensive policy of 'Mexicanisation' during his 1970–76 Presidential term, while the Brazilian military actively promoted the expansion of state activities in the late-1960s and early-1970s.

The fisheries sector was not exempt. This was most apparent in Peru—where the anchovy fleet was nationalised following a stock collapse in May 1973—and Argentina—where the military government introduced licence fees for foreign vessels fishing hake stocks within a newly approved territorial sea (Decree No.17094, January 1967). Argentine waters had been targeted by the Soviet DWF as the international demand for hake soared following the over-fishing of Northern cod stocks. Hake production rose from 103,000 metric tonnes (MT) in 1965 to 598,000 MT in 1967 and, with 86% of the catch being taken by the Soviet fleet, fears were expressed for the future of the fishery. In October of the same year, regulations were tightened, licence fees raised, Total Allowable Catches (TACs) per vessel introduced, and skippers were required to disclose catches to the Argentine government. These new measures persuaded the Soviet DWF to re-deploy to less-policed African waters (*Marine Fisheries Review* 1989).

The tide was turning. Latin American nationalism coincided with African and Asian desires to introduce a zone of 'exclusive economic jurisdiction in the high seas contiguous to territorial waters' (Orrego Vicuña 1984). These forces, which culminated in The Third United Nations Conference on the Law of the Sea (UNCLOS III), held in Caracas in June 1974, subsequently legitimated the notion of an EEZ. Significantly, the world's major maritime powers accepted the delineation of such a

⁴ The outer limit of the territorial sea was set as nine miles from the low-water mark, although the US and other fishing nations refused to endorse this claim (Arce 1996).

⁵ Soberanes Fernandez (1994) details how 42 unlicensed foreign vessels were impounded by the Mexican authorities between 1956 and 1963. US and Cuban shrimp fishing licenses were gradually rescinded in the 1970s, while fears over the status of demersal stocks on the Campeche Bank led to the suspension of Cuban and Soviet trawling licenses in 1976 (*Marine Fisheries Review* 1979).

⁶ The same fate befell the claims of Argentina (1946), Panama (1947), Costa Rica (1948), El Salvador (1950), Honduras (1951), Nicaragua (1965), Uruguay (1969), and Brazil (1970) to either continental shelf waters off their respective coasts or a 200-mile maritime zone (Dupuy and Vignes 1991; Orrego Vicuña 1984).

⁷ Although partially underwritten by US finance capital in its early years, the dramatic growth in the Peruvian anchovy fishery offered a striking example of how resource rents could be captured locally if foreign fleets could somehow be excluded (Molinari 1977; Ibarra, Reid, and Thorpe 2000).

zone, although its 'exclusivity' was contested at the time. UNCLOS III, by placing the rights to and responsibilities for marine fisheries management in the hands of the local coastal state effectively signalled the end of the global production phase. In its place, a new, trade-based globalisation phase emerged.

EEZs and the Globalisation of Trade (1974–90s)

However, DWF activity in Latin America did not cease overnight. Many countries, having obtained the right to exploit their EEZs, now found themselves with insufficient vessels to do so. The optimal response was to licence DWFs whilst encouraging domestic fleet growth, and DWF catches continued to remain significant in volume terms until the late 1980s. The introduction of incentives to encourage a domestic 'race for fish' saw a swift buildup in local fleet capacity, converting Latin America into a major global player in the international fish trade in the process. However, it also militated against the harvesting of stocks in a sustainable manner while raising the spectre of export revenue vulnerability in those instances where nations became overdependent upon particular market outlets.

Fleet Growth and the Domestic 'Race for Fish'

Peru, which had developed the world's largest industrial fishery by the 1960s, accounted for almost 40% of the regional industrial fishing capacity at the time of UNCLOS III (table 1).

However, a lack of investment in the newly nationalised anchovy fishery, the crowding-out of private capital in the associated pelagic fisheries, and the general failure to support the development of non-pelagic fisheries stunted fleet growth (Ibarra, Reid, and Thorpe 2000). By 1995, Peru supplied just 11.2% of the regional fleet, ranking fourth in GRT terms after Mexico, Argentina, and Chile.¹⁰

The substantial growth in the Mexican fleet, in particular the buildup of its tuna operations, can largely be attributed to fisheries policy in the late 1970s. A combination of excessive liquidity on the international capital markets and burgeoning domestic oil revenues were tapped to fuel fleet expansion. The fleet grew from 22 vessels in 1975 to 106 in 1982, rivaling the United States as the world's largest. Growth slowed thereafter as a US embargo (1980–86) on Mexican tuna imports sharply curtailed the country's trade in tuna products (Rosendahl 1984; Cicin-Sain *et al.* 1986; Ibarra, Reid, and Thorpe 2000). Venezuelan fleet growth was also tuna-led and dates from the early 1980s, when a combination of low prices for second-hand tuna vessels on the US and international markets and low fuel costs encouraged investment in the sector (*Marine Fisheries Review* 1986; Weidner and Hall 1993).

In both Argentina and Chile, fisheries growth was primarily attributable to the trickle-down effects of trade-enhancing, neo-liberal policy. The aggressive exchange

⁸ This zone can extend up to 200 nautical miles from the low-water mark. The subsequent 1982 UN Convention on the Law of the Sea ratified this, reaffirming the rights of coastal states to exercise Exclusive Fisheries Jurisdiction (EFJ) within their EEZs.

⁹ DWF catches peaked at around 2.5 million MT in 1989–90 [although this represented only 13% of the 1989–90 regional catch due to the sharp expansion in regional fishing fleets]. They declined swiftly thereafter following the withdrawal of Soviet government subsidies to its mid-water fleet—which was then targeting jack mackerel and other low-value pelagic species (Weidner and Hall 1993).

¹⁰ While the biggest fleet growth recorded over the period was in Panama (and to a much lesser extent, Honduras), this was where regional 'flag of convenience' registrations were concentrated. If the Panama and Honduran data is excluded, Peru's share rises to 14.9%, the four principal regional fishing nations (Peru, Chile, Argentina, and Mexico) accounting for 79.4% of regional GRT.

Table 1			
Gross Registered Tonnage (000 GRT):			
Latin American Industrial Fishing Fleets, 1970–95 ^a			

Country	1970 GRT	1995 GRT	Average growth 1970-95
Panama ^b	12.1	346.4	14.4
Mexico	8.1	299.6	15.5
Argentina	9.5	212.6	13.3
Chile	16.0	168.2	9.9
Peru	61.6	157.0	3.8
Venezuela	26.5	95.5	5.3
Ecuador	15.7	52.7	5.0
Uruguay	1.8	20.6	10.3
Brazil	8.0	17.8	3.3
Honduras ^b	0.8	14.8	12.4
Colombia	0.1	14.1	21.9
Nicaragua	*	12.4	N/A
El Salvador	4.9	3.6	-1.2
Costa Rica	0.0	3.1	N/A
Guatemala	0.8	2.5	4.7
TOTAL	165.0	1,400.9	•••

Source: FAO (1998) and personal communication.

rate policy of the Pinochet government in Chile (1973–89), aided by reprivatisation and the removal of access restrictions in the Northern industrial pelagic fishery, encouraged both unprecedented growth and concentration (Peña-Torres 1996, 1997; Thorpe, Ibarra, and Reid 2000). By 1990, the fisheries sector directly employed about 115,000 people, utilised capital valued at around US\$3.5 billion, and accounted for one-ninth of the country's export earnings (Pavez 1994). In Argentina, recent fleet growth has been even more dramatic than table 1 suggests. When the neo-liberal government of Carlos Menem took office in 1991, fleet statistics indicated a gross registered tonnage (GRT) of 128,400—inclusive of 263 trawlers of over 150 tonnes GRT. Four years later, 371 such trawlers were registered, and total national capacity leapt to 226,000 GRT, as a combination of sharp tariff reductions on imported vessels, simplified procedures for 'naturalising' foreign vessels, and a more relaxed regulatory stance prompted a surge in domestic vessel registrations (Thorpe, Ibarra, and Reid 2000).

By 1995, regional hold capacity, at 1.4 million GRT, was over eight times higher than it had been a quarter of a decade earlier in pre-UNCLOS days. It has been paralleled by a diminution in DWF activity, as the number of joint ventures between national and foreign fishing companies has grown.¹¹ This has not only allowed Latin American coastal states to expand production directed towards the domestic market, but also converted the region into a major participant in the international fish trade.¹²

^{*} Signifies less than 100 GRT.

^a GRT figures are for vessels over 100 GRT.

^b The Panamanian and Honduran figures should be viewed with some caution due to the registration of vessels under 'flags of convenience.'

¹¹ Rosendahl (1984) details foreign incursions into the Mexican tuna industry, while Thorpe, Ibarra, and Reid (2000) discuss how the neo-liberal economic model has stimulated other inward fisheries investment in the region.

¹² Between 1961 and 1993 South America saw the supply of fish rise from 6.0 kg to 8.9 kg per capita, despite the regional population rising from around 151 million to 309 million over the same period (Wiefeld 1997).

Trade Globalisation: Latin American Shares in the International Fish Market

Latin America's growing incursion into international fish markets can be illustrated by reference to the market for whitefish fillets (fresh, chilled, or frozen).¹³ This market, worth US\$294 million in 1970, was dominated by North American and northern European processors. However, overfishing of cod and related species in northern waters had already encouraged exploratory fishing by DWFs in the South Atlantic by the late 1960s and early 1970s. In Argentina, as we have already noted, Soviet vessels had been particularly prominent in harvesting hake stocks until their redeployment to African waters. Now, swift fleet growth (table 1) in the wake of UNCLOS III enabled Argentina to establish a new export-processing industry centred on frozen hake fillets (figure 1).

By 1979, Argentina had captured 12.1% of the market in volume terms (4.1% in value terms). The 1980s were a 'lost' decade, however, as adverse economic policies and fishing restrictions introduced following the Falklands/Malvinas war saw Argentina underperform the trend rate of growth, with global market share consequently slumping to 9.3% (3.9% in value terms) by 1990. The deterioration was reversed under the Menem administration, as new legislation encouraged the local registration of a number of large factory/freezer vessels, with filleted fish exports growing 58% in the 1990s (Thorpe, Ibarra, and Reid 2000). As Argentine market share was restored to around 12%, improved processing standards allowed Argentina to capture an increased share of global export revenues in this particular sub-market

Whitefish Fillet Exports (MT)

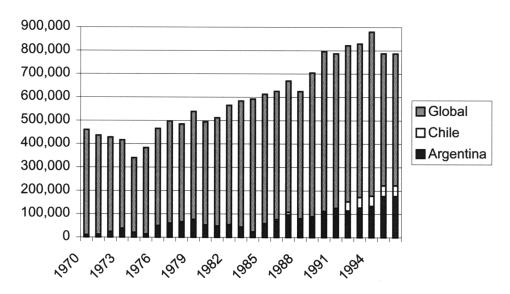


Figure 1. Whitefish Fillet Exports Source: FAO Fisheries Statistics, various years.

¹³ An earlier working paper of ours also details developments in the fishmeal and tuna markets (Thorpe and Bennett 2000).

(6.9%). A similar story emerges in Chile. Favourable credit facilities and an export-oriented development strategy underpinned a sharp expansion in hake landings during the 1980s, and Chilean market share grew from 0.2% in 1980 (0.1% of export revenues) to 3.4% by 1995 (5.2% of revenues). Elsewhere in the region, Uruguay, Brazil, Costa Rica, and Mexico established filleting plants to serve the lucrative whitefish fillet export market.

Regional Overfishing: The Extent of the Problem

The sharp escalation in global fishing activity over the last quarter of a century has precipitated growing concerns about the sustainability of such operations (FAO 2000). This has been evidenced at the regional level not only in the academic literature (Castilla 1997; Nadal Egea 1996), but also through the introduction of input (gear and boat length restrictions) and output (closed seasons and TACs) controls by national fisheries authorities during the 1980s. In Peru, the state bail-out of the beleaguered anchovy fishery following the 1973/4 El Niño offered a unique opportunity to regulate catches along maximum sustainable yield (MSY) lines, but this opportunity was sacrificed in favour of maintaining fishing incomes—and periodic stock collapses have followed. Chile, too, has not circumvented the overfishing problem. Schurman (1996) has documented the collapse of hake and loco (snail) stocks. Ibarra, Reid, and Thorpe (2000) noted the sharp reductions in pilchard and Aracuanian herring landings, while the rise and equally rapid demise of Patagonian toothfish harvests has been addressed by a number of recent papers (Ecoceanos 1998; Isofish 1999; Thorpe, Ibarra, and Reid 2000). Even jack mackerel, which had come to account for around half of Chilean landings during the 1990s following the collapse of other stocks, finally succumbed in 1998, causing the government to ban all reduction activities involving the species for almost a year (Fish Information Services, Sea-World, various).

With 10 of the 16 principal regional fish stocks now officially designated by FAO as fully to overexploited (table 2), similar trends have emerged—or are emerging—elsewhere. In Argentina, recriminations have been voiced over the assignation of harvesting rights to a rapidly diminishing *hubbsi* hake stock (Thorpe, Ibarra, and Reid 2000), while Uruguay has established a summer fishing ban to safeguard its hake stocks (Fish Information Services, Sea-World, 31/12/1999). In Mexico, the fisheries programme of the Ernesto Zedillo administration (1995–2000) was scattered with promises to 'combat resource degradation,' 'reverse overfishing,' and 'promote responsible fishing practices' (SEMARNAP 1996).

The Pitfalls of Excessive Export Dependence

As the century drew to a close, the latest concerns over the fate of the Chilean jack mackerel fishery were matched by renewed fears about the dangers of excessive dependence upon the global economy. The collapse of the East Asian economies at the end of 1997¹⁴ had profound implications for the 'direction and the composition of trade flows, particularly for primary commodities' (UNCTAD 1998). Fisheries were not exempted. Contagion, in the Latin American marine fisheries case, has been es-

¹⁴ GDP contracted significantly in the South East Asian region in 1998, with Indonesia experiencing the biggest drop (–14%). The countries that were less affected still recorded GDP growth rates of half the previous year (Economic and Social Commission for Asia and Pacific 1999). The crisis was expected to cut 1.3 percentage points (down to 3% from 4.3%) off Latin American GDP growth in 1998 (ECLAC 1998).

Status	Species	Participating Countries
Fully to overexploited	Peruvian anchovy Araucanian herring South American pilchard Argentine, South Pacific and Patagonian hake Patagonian grenadier Shortfin squid	Peru, Chile, Ecuador, Argentina, Uruguay
Fully exploited	Yellowfin tuna	Mexico, Venezuela
Moderately to fully exploited	Chilean jack mackerel Californian pilchard Pacific anchovy Southern blue whiting	Panama, Chile, Peru, Ecuador Mexico, Argentina
Moderately exploited	Chub mackerel	Chile, Ecuador, Peru
Unknown	Round sardinella	Venezuela

Table 2
Principal Latin American Marine Fisheries[‡] and Present Status of Exploitation^{‡‡}

Sources: Thorpe, Ibarra, and Reid (1999) and FAO (1997a,b).

Note: Pelagic species are in italics.

sentially transmitted in three forms. First, market reduction—as reduced purchasing power in the East Asian region was reflected in a decline in fish imports from Latin America. Second, market displacement—as rapidly depreciating currencies made East Asian fish products more competitive in the international market and squeezed Latin American exports to the rest of the world. Finally, lower license receipts—as foreign exchange shortages forced East Asian DWFs to reduce their forays in the region. These impacts were not of an identical magnitude across the region, however.

The fishery most affected by **falling license receipts** was the Falklands Islands (Malvinas) squid fishery. Already suffering from growing Argentine competition, ¹⁵ the East Asian implosion came just before payment of a 10% deposit against license fees for the 1998 season was due (1 December 1997). When no vessels came up with the deposit, the Falklands administration capitulated to Korean government pressures and reduced license fees by 10%, (the deposit to 5%) while offering extended payment terms. ¹⁶ This concession was insufficient, and the Korean DWF fishing within the Falklands EEZ dropped from 116 in 1997 to 61 in 1998 (Fish Information Services, Sea-World Market Report 26/1/1998). License receipts, the islands main foreign currency earner, consequently fell by around £2.5 million, to £18 million.

Market reduction was most noticeable with regard to fishmeal, with the East

^{3:} Criteria for inclusion: landings exceeded 50,000 tons in at least one country between 1980 and 1995.

^{‡‡:} As defined by FAO (1997a).

¹⁵ As squid stocks straddle Argentine/Falklands waters, one nation's catch impinges adversely on the other in the absence of any voluntary restraint agreements. Hence, the rapid buildup in the Argentine domestic fleet and cheaper Argentine DWF squid license fees saw Argentine landings rise from 46,000 tonnes in 1991 to 260,000 tonnes by 1996. In contrast, the Falkland's catch fell from 174,745 tonnes to 79,803 tonnes over the same period (*World Fishing* December 1997).

¹⁶ Korea, which generally accounts for 80% of the total squid catch off the islands (Japan 18%, Taiwan 2%) requested a 30% reduction in license fees.

Asian aquaculture industry accounting for around 60% of Chilean and Peruvian exports in the early 1990s. Peru emerged relatively unscathed from the Asian crisis as China, its main market in the region (38% of 1997 fishmeal exports), stood firm. Chile was less fortunate. The baht's free-fall in late 1997 and throughout 1998 led Thai aquaculturists to reduce their purchases of Chilean fishmeal by US\$31.2 million (63.9%) during the first 11 months of 1998. Chilean fishmeal exports to Taiwan also fell sharply, down US\$35.5 million (29%) over the preceding year. While export growth to the UK and German markets helped offset these losses, the loss of the East Asian markets compounded the effect of the 1997/8 El Niño event, and fish meal revenues were down US\$81.4 million compared to 1997 (Subsecretaria de Pesca 1998). Market displacement details are much harder to disentangle and quantify, although Korean 'dumping' of illex squid in the American market in April 1998, by severely depressing US market prices, undoubtedly prejudiced Mexican squid exporters. There are also suggestions that Latin American tuna exporters saw their market position deteriorate following the 20% drop in US prices as the Asian tuna fleet redirected its catch to the more profitable US market in September 1998. South American shrimp exporters also saw margins squeezed as South East Asian shrimp trade flows shifted from Japan to the US (Fish Information Services, Sea-World, 7/10/1998 and 12/2/1999).

While vulnerability to international market forces and disturbances is nothing new, the magnitude of—and the dislocations caused by—such exogenous shocks could, in this global age, encourage:

the state [to] re-invent and strengthen itself at the domestic level...and to implement a set of preferences which crucially, were entirely consistent with the 'interests' of the globalised international system (Phillips 1998).

This notion is particularly appealing given the depleted state of regional fish stocks and the growth in supranational authority and environmental consciousness at the global level. But just how realistic is it to expect international institutions and conservationist ideals to feed into, and thereby reenforce, (sustainable) fisheries management policies in Latin America?

The Globalisation of [Regulatory] Control (1990s-)

Supranational pressures which encourage/coerce coastal nations to regulate their marine fisheries more effectively have no one particular source, but emanate from a plethora of international and quasi-international bodies. Although some of these pressures date from earlier decades, they are nevertheless best viewed as precursors of what is an ongoing and accentuating process of regulatory control. Equally, these processes are clearly not unique to Latin America. Unfortunately, however, as we shall illustrate within the Latin American context, while their collective effect is to strengthen global control mechanisms—at present these efforts are largely uncoordinated and, at times, can be contradictory in intent. In order to systematise these distinctive global and local regulatory influences, we differentiate between those global pressures that seek to influence fisheries management from a consumption perspective (demand-side pressures) and those which are more likely to reduce or modify harvesting levels (supply-side pressures). We then examine how local regulatory responses have evolved during the last decade.

Global Supply-Side Pressures

Current supply-side pressures on Latin American fisheries can be decomposed into four elements. First, those which, by resolving ill-defined territorial rights to fish stocks, indirectly offer/strengthen opportunities to restrict fishing activity [access clarification measures]. Second, proposals intended to reduce pressures on non-target species ['bycatch' reduction measures]. Third, initiatives which seek to safeguard (selected) fish stocks by reducing or restricting fishing effort [explicit effort reduction measures], and finally, those which propose market-based solutions to curb overfishing [implicit effort reduction measures].

The most important example of **access clarification measures** is the 1995 UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks (UNASFS). Although UNCLOS III provided states with the opportunity to manage resources falling within their EEZs, the obligation to cooperate to conserve either high-seas or straddling stocks was less clear. UNASFS, which represented a 'sea-change' in international fisheries management, rectified this and:

...for the first time, the objective of international fisheries management became sustainable fishing, ecosystem protection, conservation of biodiversity, and the precautionary approach to fisheries management (Weber 1998).

Although UNASFS provided a global management blueprint, operationalisation of its recommendations is delegated to regional fisheries organisations which, having identified the stocks to be managed and local competencies, are expected to carry out 13 specified tasks—including developing, monitoring, and enforcing appropriate conservation measures (Arts. 9, 10). In Latin America, the UNASFS regime has most relevance for the pelagic fisheries of the South–East Pacific and the squid (and, to a lesser extent, hake) fisheries in the South-West Atlantic.¹⁸

In the case of the South-West Atlantic, fisheries jurisdiction has been complicated by the contiguity and, in some instances, overlapping, of the Argentine EEZ and the Falklands Islands Maritime Exclusion Zone (MEZ). The conclusion of military warfare in 1982 was succeeded by a period of oceanic economic warfare in which the main victims were local fish stocks. British failure to institute an effective fisheries management policy within the MEZ simply encouraged DWF activity and, by 1985, it was clear that the local illex squid fishery was under threat (FICZ 1987/ 8). As Argentina sought to reestablish its rights to manage local fish stocks by licensing Soviet and Bulgarian trawlers to fish Argentine waters in 1986, the British government responded by creating the Falkland Islands Interim Conservation and Management Zone [FICZ] (Bisbal 1993). Competition ensued as the two states engaged in a license war with scant regard as to the sustainability of the underlying squid stocks. Although partial agreement regarding joint control and management of stocks within a Falklands Outer Conservation Zone was reached in 1990, competition subsequently escalated once more as a neo-liberal inclined Argentine government pursued a more aggressive fisheries expansion policy (see footnote 15). Fears over the effect that such competition was having upon its principal income source

¹⁷ Although UNCLOS III did oblige states to introduce measures to conserve the living resources of the high seas both individually, and in cooperation with other states (Art.117), the precise form which these obligations were to take was not spelled out (FAO 1992). In the Latin American case, Orrego Vicuña (1995) attributes the failing to a combination of the region ignoring the interests of other nations which fished migratory species on the high seas and a 'too close' adherence to the historic US position on the issue

¹⁸ As tuna, a highly migratory stock, is regulated by its own independent authority, we analyze this control mechanism under part (*iii*) — 'attempts to safeguard specified stocks.'

caused the Falklands legislature to become one of the first to endorse the UNASFS regime in 1995. When Argentina ratified the agreement in 1997, it not only contributed to the easing of tension between the two countries, but also opened up the possibility of improved regional fisheries management via greater collaboration within the framework of the South Atlantic Fisheries Commission (SAFC). Yet, while Anglo-Argentine scientific cooperation has indeed taken place regarding the regional high seas fishery, there is impatience regarding the lack of progress in international forums for protecting stocks in international waters (Communiqué of XVII Meeting of the SAFC, 15–6 June 2000, as reported by Fish Information Services, Sea-World, various).

The situation in the South East Pacific pelagic fishery is somewhat different, however, as none of the coastal states has ratified UNASFS, despite the existence of mature jack mackerel stocks up to 1,500 miles off the coast. Instead, Chile took the unilateral decision to advance the notion of a Presencial Sea¹⁹ within which it intended to develop national economic interests (Article 154 of the 1991 'enabling' legislation specifically dealt with the need to establish standards for the conservation and management of migratory/straddling stocks). While the concept is viewed within Chile as a logical geographical extension of the EEZ (Joyner and DeCola 1993), it is nevertheless diametrically opposed to the ethos of the UNASFS initiative, which allows DWFs a voice in regional management plans. A compromise position, proposed by the Southeast Pacific Convention for Conserving Straddling Stocks (Ecuador, Peru, and Chile) in 1997, permits coastal nations to retain a veto authority in quota and licensing negotiations (Kibel 2000).

Unfortunately, as these two contrasting examples show, the effectiveness of this supranational impulse to clarify access rights to potentially vulnerable fish stocks is diminished by low, local ratification rates²⁰ and the lack of progress in securing international agreement on high-seas management issues.

A similar ratification problem dogs the operationalisation of the FAO Code of Conduct for Responsible Fisheries (CCRF), as well as the managerial effectiveness of the Inter-American Tropical Tuna Commission (IATTC), to cite two **explicit effort reduction measures**. The CCRF, whose origins can be traced to the 1984 Rome Conference on Fisheries Management and Development, was formally approved by FAO in October 1995. Global in scope, the code seeks to realise ten key objectives via the promotion of wide-ranging controls on effort and ecosystem management in line with the precautionary approach.²¹ The Code has two weaknesses, however. First, as it is largely a voluntary code, its impact is more subliminal than overt, attempting to encourage nation states to incorporate CCRF provisions within national maritime legislation [see penultimate section, Steinberg 1999; Feidi 1999]. Second, while the Code does have teeth insofar as it absorbs the binding 1993 FAO Compliance Agreement,²² the Agreement remains inoperative, as just 14 of the necessary 25 signatories have been collected to date—Argentina (1996) and Mexico (1999) being the only Latin American signatories.

¹⁹ The Presential Sea extends Chile's jurisdictional responsibility to a further 19,967,337 kilometres² (EEZ = 3,490,175 kilometres²) by incorporating all the ocean space enclosed within the triangle extending from the tip of northern Chile, out to Easter Island, and down to the South Pole.

²⁰ Presently, only Argentina, Belize, Brazil, Uruguay, and the British government (on behalf of dependencies in the region) are signatories (source: www.un.org/Depts/los/los164st.htm).

²¹ These include: to establish principles for responsible fishing practices, facilitating international cooperation in the protection of fisheries resources, promoting the contribution of fish products to food security/quality, and to promote responsible trade in fish products (www.fao.org/fi/agreem/codecond/ficonde.asp).

²² The Agreement to Promote Compliance with Management Measures by Fishing Vessels on the High Seas (The 'Compliance Agreement') allows states to exercise control over any fishing vessel flying its flag.

Unlike the CCRF, which is non-stock specific, the IATTC seeks to regulate tuna catches in the Eastern Pacific Ocean through effort restriction.²³ Formed in 1949, the IATTC introduced yellowfin tuna quotas as long ago as 1962 in an effort to establish maximum sustained catch. These quotas, determined on a 'first-come, first-served' basis, became a source of intense discord in the following decades on two counts. First, the US refused to acknowledge that the establishment of 200-mile EEZs took precedence over IATTC-determined yellowfin quotas, a stance that resulted in the 1980-86 US embargo of Mexican tuna products, as documented earlier. Second, the rapid buildup of the regional fleet, most notably in Mexico, led to Latin American demands for greater quota shares. A failure to resolve these issues satisfactorily caused Mexico (1978), Costa Rica (1979), and Ecuador (1980) to withdraw from the IATTC, leaving the East Pacific tuna fishery bereft of any internationally agreed conservation measure (Pulvenis 1989; Nadal Egea 1996; Constance and Bonanno 1999). Yet the IATTC may well reemerge as an effective regulatory authority as a consequence of the mediatory role it has played during the 'dolphin-safe' controversy (discussed in more detail below), causing Mexico and Venezuela to rejoin the IATTC in 1994 and pledge significant funds for 'dolphin-safe fishing research' (SEMARNAP 1998; Constance and Bonanno 1999).

In contrast, **bycatch reduction measures** seek to refine—as opposed to necessarily reduce—the fishing effort applied in order to reduce mortality rates among non-target species. While the commitment can remain a voluntary one, in instances such as the US embargo on non-dolphin safe tuna from Mexico, Ecuador, Panama, and Venezuela, it may be statutorily enforced. The embargo stems from the early 1980s, when US corporate initiatives to increase tuna sales through retailing dolphin-safe tuna were reflected in legislative amendments to the 1972 US Marine Mammals Protection Act (MMPA), which compelled the US tuna fleet to sharply reduce dolphin bycatch. In 1988, a further modification of the MMPA extended these provisions to countries which exported East Pacific tuna to the US.²⁴ The true significance of these modifications became apparent only after the US embargoed tuna exports from non-complying countries following a successful petition by the ecological group, Earth Island Institute, and others to the US courts in 1990.²⁵

The embargo ran contrary to the strong global currents in favour of free international trade, however, and the US action was condoned after a GATT panel was convened at Mexico's request in late 1991.²⁶ Despite this ruling, Mexico chose not to pursue the panel's recommendations—and obtain a full GATT Council decision upon the issue—in order to avoid prejudicing the ongoing NAFTA negotiations. Instead, voluntary Mexican and Latin American attempts to reduce dolphin mortality rates, combined with local ratification of the newly established International Programme for the Conservation of Dolphins (1998), were sufficient to satisfy most

²³ A kindred body, the International Commission for the Conservation of Atlantic Tunas (ICCAT) established in 1969, which is charged with determining appropriate management measures for Atlantic tuna has been 'rather less interventionist' to date (Weber 1998).

²⁴ Although the original 1972 MMPA had not laid down bycatch limits, 1976 and 1984 amendments established maximum annual dolphin mortality rates of 76,000 and 20,500 animals, respectively. A subsequent 1988 amendment required third countries to restrict mortality rates to 1.25 times the US mortality rate (Nadal Egea 1996).

²⁵ The embargo applied to more than 20 countries (including Venezuela, Mexico, Panama, and Colombia).

²⁶ The GATT line was unequivocal; the US needed to treat the products of importing/exporting countries on a par with their domestically produced equivalents rather than comparing the regulations determining the production thereof. An acceptance of the US position would have been tantamount to allowing states to use embargoes and the like in order to foist national environmental laws upon third countries (de Andrade 1999).

US environmental considerations, and the embargo was removed the following year.²⁷ In a similar vein, the threat of US sanctions being applied to shrimp exporting countries which had failed to adopt turtle-excluder devices (TEDs) encouraged Latin American states to consider regional self-regulation. The Inter-American Convention for the Protection and Conservation of Sea Turtles was approved in 1996 and was subsequently signed by Brazil, Costa Rica, Nicaragua, Peru, the US, and Venezuela (de Andrade 1999; SEMARNAP 1998; Nadal Egea 1996; San Miguel 1995; Fish Information Services, Sea-World).

Finally, we contend that market-based solutions derived from the neo-classical economic orthodoxy currently ascendant across the globe offers opportunities for an implicit reduction in fishing effort. Christy (1997), for example, noted that, "Economic measures that indirectly restrain the tendency for over investment might be of value in certain kinds of situations." His ensuing proposal, that governments remove subsidies and extract resource rents, has found favour within the World Bank and the Inter-American Development Bank, two institutions highly influential in regional policy development in Latin America (Lemay 1998). Yet the removal of subsidies estimated to be worth between US\$14-20.5 billion globally, and equivalent to 20-25% of the sector's annual revenues (Milazzo 1998), has only a lagged, albeit growing, impact upon the industry's cost structure. 28 Consequently, unless vessels are decommissioned in the short-term, pressures upon underlying resource stocks remain undiminished. To date, there is little support for decommissioning; however, governments are viewing the laying up of residual state fleets and processing plants as an opportunity forgone given the fiscally more attractive option of privatisation. Nevertheless, some market-induced restructuring is beginning to take place. This is most notable in Chile, where the private sector response to declining fish stocks and corporate profits has seen the three major northern industrial fishing companies combining forces and cutting its fleet (Ecoceanos News, 31 Aug. 1999; Fish Information Services, Sea-World, 1 Sept. 1999).

While subsidy removal operates to curb effort at the input level, ITQs and TACs tackle the problem of excessive effort at the output level. Setting an appropriate TAC can protect the stock from depletion, while the introduction of ITQs not only allows resource rents to be extracted, but has the additional advantage of removing the overcapitalisation problem by squeezing the least efficient vessels out of the industry/fishery (Hannesson 1994). Yet regional attempts to support 'market Darwinism' have generally floundered to date. First, doubts have been expressed regarding the constitutional validity of state actions to limit access to Chilean fish stocks (Peña-Torres 1997; Bernal and Aliaga 1999). Second, there is strong skepticism, most evident within the Peruvian fishing lobby, as to the ability of the state to effectively enforce such quotas (Fishing News International, Nov. 1998). Finally, and most significantly, the ITQ preoccupation with efficiency is perceived to ride roughshod over alternative fisheries management goals, such as improving employment and incomes in fishing communities (Bernal and Aliaga 1999) and sparked a strong, ultimately successful, anti-ITQ community protest in Chile in 1999 (Ecoceanos News, 12 November 1999). Consequently, although ITQs have not disappeared from the Latin American fisheries agenda, their present ambit is restricted to five small Chilean stocks. However, there are signs that this may change in the future.²⁹

²⁷ Constance and Bonanno (1999) provide a detailed synopsis of the passage of dolphin safe legislation through the US Congress.

²⁸ While the removal of fuel subsidies can have an almost instantaneous effect upon the decision to put to sea, the elimination of cheap credit and loan guarantees, accelerated depreciation allowances, and tax deferral programmes impact long-run cost structures.

²⁹ The Chilean Congress, for example, is expected to introduce a quota-based fisheries law covering its pelagic fisheries before the end of 2001.

Global Demand-Side Pressures

Current demand-side pressures originate primarily from customer concerns as to the quality and nature of internationally traded seafood products.

Wessells (1998a) argued that with the increased economic integration of world economies and a growing international seafood trade, the importance of product quality standards has become evermore paramount. Such quality concerns are legitimated by the 1994 WTO Sanitary and Phytosanitary Agreement (SPA), which permits countries to invoke trade sanctions when genuine health and safety concerns can be identified. Although, theoretically, there are no upper quality bounds, in the absence of further scientific evidence countries are expected to harmonise their health regulations with existing international standards, guidelines, and recommendations. The most common global standard is the seven-point Hazard Analysis Critical Control Point (HACCP) programme which seeks to eliminate microbiological hazards at various points in the food processing chain (Caswell and Hooker 1996). Adopted by the EU, Canada, and the US, and with a similar set of standards applying in Japan, the programme is a powerful weapon in the pursuit of improved international hygiene levels. In Latin America, Chile, Argentina, Uruguay, Ecuador, Peru, Cuba, Mexico, Venezuela, and Brazil have all implemented such procedures (Cato 1998). Unfortunately, while quality standards of this type remain 'general guidelines for government behaviour' (Filhol 1995), they are likely to have a counter-productive impact on two counts when viewed from a fisheries sustainability perspective. First, the growing adoption—either nationally or internationally—of HACCP standards creates a dual market for traded fish products, allowing HACCP-approved operators to expand capacity to take up any slack arising as non-compliant producers are forced out of the 'quality' market.30 Second, as the HACCP programme is a fixed-cost system, it encourages high rates of harvesting/ processing in order to drive-down unit processing costs.

Sustainability, however, was a critical consideration in the articulation of consumer preferences vis-à-vis **the nature of internationally traded seafood products** in the case of the Marine Stewardship Council (MSC). The MSC, formed in 1996 as a consequence of a joint initiative by the World Wildlife Fund and Unilever (a leading international fish buyer and processor), promotes sustainable fishing practices across the globe, with independent MSC-accredited certifiers awarding 'eco-labels' to complying harvesters (Scott 1998; Constance and Bonanno 1999). Consumers express their preference by voting for (purchasing) eco-labelled products, thereby introducing a market-based approach—as opposed to a state-directed initiative, as in the case of dolphin-safe tuna noted earlier—to sustainable seafood production which circumvents possible WTO objections (Guðmundsson and Wessells 2000).

Although in its infancy, the scheme has aroused tremendous interest at both the academic and industry levels. The ability of the MSC to help redirect global fisheries exploitation along a more sustainable path, however, will be dependent upon a number of critical factors. These include whether: enforceable private, or sole, ownership rights to the fish stock can be established; all relevant stakeholders can be brought on board (Long 1999; Braathen 1999); consumer preferences for sustainable fishing practices outweigh any eco-label price premium which may arise due to certification costs (Wessells 1998b:); Unilever shares a common interest in sustainable fisheries management practices—and, moreover, whether the public believes this to be the case (Steinberg 1999; Wessells 1998b); the creation of yet another supra-na-

³⁰ The extent to which additional pressures are placed upon the underlying fish stock will depend upon the degree to which non-certified producers are able to place their catch in secondary markets.

tional body clouds the global regulatory framework further to the detriment of the fisheries concerned (Hersoug, Holm, and Rånes 1999). To date the MSC has been less influential on Latin American fisheries management systems than product quality harmonisation standards.³¹

Local Regulatory Responses

Local fisheries management policies were, by and large, driven by the desire to annex coastal waters into territorial seas, as we have noted earlier. The exception was Mexico where, in line with local revolutionary ideals, legislation delegated exclusive access rights over the country's principal marine and shellfish fisheries to the cooperative sector. Although pelagic stock collapses in Chile (1964/5) and Peru (1972/3) proved to be harbingers of what was to come, an illusion of resource abundance continued to determine management strategies in the immediate post-UNCLOS era. Although policy remained essentially productionist in orientation, management focus gradually shifted from supporting large-scale, parastatal harvesting and processing operations to aiding private sector resource extraction in line with the newly ascendant neo-liberal development beliefs. Yet, neo-liberal preoccupations to privatise the fleet rather than the resource merely transformed the 'race for fish' into a sprint, highlighting the need for more coherent and comprehensive fisheries policies (Thorpe, Ibarra, and Reid 2000). It is no coincidence that the region's four principal marine fishing nations introduced far-reaching fisheries laws during the 1990s, legislation which, we contend, marks the local beginnings of the third globalisation phase. These laws (and related ancillary legislation) confirm the virtual exclusion of DWFs from national waters, embrace the CCRF either explicitly (Argentina and Mexico) or implicitly (case of Peru),³² institute HACCP standards (most countries), and incorporate dolphin and sea turtle bycatch measures (the majority of Latin American countries). Market-based access and regulatory strategies are also stressed as a means of tackling the overfishing problem.

In spite of this, current regulatory stances are extremely distinctive. In Argentina, while 30 species are subject to annual TACs, the decision to assign a TAC in the country's hake fishery on the basis of historic catches became a major source of conflict (Thorpe, Ibarra, and Reid 2000). The conflict was somewhat unsatisfactorily resolved, and despite local scientific objections, grounded in stock sustainability arguments (Fish Information Services, Sea-World, 4/10/1999).

The Mexican regulatory approach has been somewhat different. While the 1992 Fisheries Law replaced the 'preferred access' granted to cooperatives with a permit-based access system, the country has, to date, refrained from introducing TACs, despite concerns over the level of fishing effort deployed in a number of critical marine fisheries (SEMARNAP 2000).

Chile, whilst having moved the furthest towards a market-driven TAC/ITQ solution, has presently only used ITQs in the management of five relatively minor fisheries (Ecoceanos 2000; Bernal and Aliaga 1999). Although it was industrial fishing interests that first opposed the introduction of ITQs in the country's pelagic fisheries (Ibarra, Reid, and Thorpe 2000), subsequent attempts to introduce such measures were frustrated by an amalgam of artisanal fishermen, fish workers, and local envi-

³¹ At present, a number of fisheries, including hake and scallop, are in the initial pre-assessment stage, although it is not known how long it will be before certification is granted (MSC 2000)

³² In August/September 1999, the Fisheries Ministry distributed 30,000 copies of the FAO document on Code of Behaviour for a Responsible Artisanal Fishery to local fishermen's associations (Fish Information Services, Sea-World 1/9/1999).

ronmentalists (*World Fishing* Sept. 1999:3).³³ Nevertheless, the seriousness of the situation has already induced corporate restructuring within the sector and is likely to lead to further industry rationalisation (Fish Information Services, Sea-World 2001).

In Peru, although politically powerful industrial fishing interests have historically stymied attempts to introduce ITQs within the country's main pelagic fisheries, the present Fisheries Minister has announced plans to introduce pelagic catch quotas in the current year (Fish Information Services, Sea-World January 22 2001). Nevertheless, given the magnitude of the emerging regional fishing crisis, one must query whether such management strategies—as they currently stand and are likely to evolve—will be capable of instituting effective regulatory mechanisms which will guarantee stock sustainability over the long term.

Conclusion

Effective management depends upon the extent to which national regulatory institutions, aided and abetted (where necessary) by supranational regulatory forces such as those delineated above, are able to insulate themselves from local sectarian interests (Weiss 1997).

In Latin America, these global regulatory trends have been complemented by neo-liberal economic policy prescriptions which, by pressurizing governments to improve economic performance whilst simultaneously reducing government outlays, favour the development of more efficient national fisheries through improved management policies (Arnason 1998). One inevitable casualty of this has been the openaccess status of the region's fisheries. Having first been 'nationalised' through the introduction of ocean law regimes during the global trade phase, the emphasis in this current global regulatory phase favours the assignation of property rights as a tool to aid in the preservation of designated fish stocks. Although regulatory intervention is predicated on the need to ensure desirable social, economic, and biological consequences for the designated fishery, the specific policies adopted (and subsequently implemented and enforced) cannot be abstracted from their institutional context. Given that effort and/or access restraints are unlikely to meet with universal industry approval, there is a strong possibility that the management process will become increasingly politicized, with any consequent political compact serving to compromise effective resource management (Long 1999; Bernal and Aliaga 1999).

This certainly seems to be the case in Latin America, where narrow sectarian interests continue to dominate fisheries policy. In Chile, regulatory capture by local fishery industrialists has successfully pressurised the government to drop any modifications to existing fisheries legislation that are likely to curb industrial access and/or fishing effort (Peña-Torres 1997; Fish Information Services, Sea-World 25/10/1999). Moreover, SONAPESCA, a lobbying group for the country's large private fishmeal companies, was instrumental in helping broker the Southeast Pacific Convention for Conserving Straddling Stocks (Kibel 2000). In Argentina, it is a case of old sectarian interests [as represented by the refrigerated fleet] confronting new sectarian interests [freezer and factory vessels], with a pliant state sacrificing resource sustainability as part of a local conflict minimisation strategy (Thorpe, Ibarra, and Reid 2000). Effective management was further compromised in Argentina by the

³³ These rejected the ITQ project on the basis that it was a scheme devised by representatives of the large fishmeal producers and companies operating in the country's southern demersal fishery which, by seeking to allocate special fishing licenses in perpetuity, severely prejudiced artisanal interests.

ease with which provincial fisheries representatives could emasculate the operations of the main fisheries management body [the Federal Fisheries Council], through the simple expedient of walking out when proposals unacceptable to their members were debated, thus leaving the Council without a quorum. A similar story emerges in Mexico. Here the transition to a new fisheries regime merely encouraged the emergence of a new interest grouping of 'banker-owners' within an already overexploited coastal shrimp fishery (Vásquez León and McGuire 1993).

While the proliferation of international agreements, institutions, and supra-national regulatory mechanisms affords opportunities for the local 'internationalisation' of state capabilities and management tools in a way which responds to growing concerns about sustainability issues, in Latin America this potential remains largely thwarted. Rodrik (1998) is perhaps right when he asserts that the question is not so much to 'globalise,' but in the context of global marine fisheries, how to accomplish this in a desirable (sustainable) way.

References

- Arbo, P., and B. Hersoug. 1997. Globalization of the Fishing Industry and the Case of Finnmark. *Marine Policy* 21(2):121–42.
- Arce, A.V. 1996. A Review of Recent Changes in Mexico's Fishing Policy, Masters in Marine Policy Thesis, University of Delaware.
- Arnason, R. 1998. Ocean Fisheries Management: Implications for the Volume and Quality of Fish Supply. *Fisheries Research* 34:215–25.
- Bernal, P.A. and B. Aliaga. 1999. ITQs in Chilean Fisheries. *The Definition and Allocation of Use Rights in European Fisheries*, A. Hatcher and K. Robinson, eds., pp. 117-30. Portsmouth: University of Portsmouth.
- Bisbal, G.A. 1993. Fisheries Management on the Patagonian Shelf a Decade after the 1982 Falklands/Malvinas Conflict. *Marine Policy* 17(3):213–29.
- Braathen, J.N. 1999. Label Gabble. Samudra April:24-8.
- Brander, J.A., and M.S. Taylor. 1997. International Trade and Open-Access Renewable Resources: The Small Open Economy Case. *Canadian Journal of Economics* XXX(3):524–52.
- ____. 1998. Open Access Renewable Resources: Trade and Trade Policy in a Two-Country Model. *Journal of International Economics* 44 (2):181–209.
- Castilla, J.C. 1997. Chilean Resources of Benthic Invertebrates: Fishery, Collapses, Stock Rebuilding and the Role of Coastal Management Areas and National Parks, *Developing and Sustaining World Fisheries Resources. The State of Science and Management*, D.A. Hancock, D.C. Smith, A. Grant, and J.P. Beumer, eds. Australia: Collingwood.
- Caswell, J., and N. Hooker. 1996. HACCP as an International Trade Barrier. *American Journal of Agricultural Economics* 78:775–79.
- Cato, J.C. 1998. Seafood Safety: Economics of Hazard Analysis and Critical Control Point (HACCP) Programmes, FAO Fisheries Technical Paper No. 381, Rome: FAO.
- Chossudovsky, M. 1997. *The Globalisation of Poverty: Impacts of IMF and World Bank Reforms*. London and Atlantic Highlands, NJ: Zed Books; Penang, Malaysia: Third World Network.
- Christy, F.T. 1997. The Development and Management of Marine Fisheries in Latin America, Inter-American Development Bank, Social Programs and Sustainable Development Department (Environment Division) Policy Research Paper, Washington, DC.
- Cicin-Sain, B., M.K. Orbach, S.J. Sellers, and E. Manzanilla. 1986. Conflictual In-

- terdependence: United States-Mexican Relations on Fishery Resources. *Natural Resources Journal* 26:769–92.
- Constance, D.H., and A. Bonanno. 1999. Contested Terrain of the Global Fisheries: 'Dolphin-Safe' Tuna, the Panama Declaration and the Marine Stewardship Council. *Rural Sociology* 64(4):597–623.
- Couper, A.D., and H.D. Smith. 1997. The Development of Fishermen-Based Policies. *Marine Policy* 21(2):111–9.
- Cypher, J. M., and J.L. Dietz. 1997. *The Process of Economic Development*. London: Routledge.
- de Andrade, R. 1999. Fisheries Disputes in Latin America. ECLAC Environment and Development Series Paper No.5, Santiago, Chile.
- Dupuy, R.J., and D. Vignes, eds., 1991. *A Handbook on the New Law of the Sea.* Hingham: Kluwer Academic Publishers.
- Ecoceanos. 1998. Chilean and Argentinean Companies/Individuals involved in the Patagonian Toothfish Fishery and Trade in the Southern Ocean, Consultancy Report. Valparaiso, Chile.
- Ecoceanos News. Various Issues. Valparaiso, Chile.
- Economic Commission for Latin America and the Caribbean (ECLAC). 1998. *Economic Survey of Latin America and the Caribbean*. Santiago de Chile: United Nations.
- Economic and Social Commission for Asia and the Pacific. 1999. *Economic and Social Survey of Asia and the Pacific*. New York: United Nations.
- FAO. 1992. Papers Presented at the Technical Consultation on High Seas Fishing, FAO Fisheries Report No. 484 Supplement, 7-15 September, Rome.
- ____. 1997a. Review of the State of World Fishery Resources: Marine Fisheries. Rome: FAO.
- ____. 1997b. Yearbook of Fisheries Statistics: Catches and Landings. Rome: FAO.
- ____. 1998. Bulletin of Fisheries Statistics: Fishery Fleet Statistics 35. Rome: FAO.
- . 2000. State of the World Fisheries and Aquaculture. Rome: FAO
- ____. www.fao.org/fi/agreem/codecond/ficonde.asp (Code of Conduct for Responsible Fishing).
- Feidi, I.H. 1999. The Implementation of the Code of Conduct for Responsible Fisheries. *Infofish International* 5/99:56–61.
- FICZ (Falkland Islands Interim Conservation and Management Zone). 1987/8. Fisheries Report, Port Stanley.
- Filhol, A. 1995. Impact of the Uruguay Round on International Fish Trade, FAO/Globefish Research Programme Vol. 38, Rome.
- Fish Information Services, Sea-World, www.sea-world.com, various.
- Fishing News International. 1998. We'll Scrap Ships. November, p. 56.
- Frank, M. 1946. The Fishing Industry. *Industrialisation of Latin America*, L.J. Hughlett, ed., pp.124–41. New York: McGraw-Hill.
- Greider, W. 1997. One World Ready or Not: The Manic Logic of Globalisation, New York: Simon and Schuster.
- Gu∂mundsson, E., and C.R. Wessells. 2000. Ecolabeling Seafood for Sustainable Production: Implications for Fisheries Management. *Marine Resource Economics* 15(2):97–113.
- Gundlach, E., and P. Nunnenkamp. 1996. Some Consequences of Globalization for Developing Countries. Kiel Institute of World Economics Working Paper No.756, Kiel.
- Hannesson, R. 1994. Trends in Fisheries Management. Managing Fishery Resources: Proceedings of a Symposium Co-Sponsored by the World Bank and the Peruvian Ministry of Fisheries held in Lima, Peru, June 1992, E.A. Loayza, ed. World Bank Discussion Papers (Fishery Series) No. 217, Washington, DC.

- Hersoug, B., P. Holm, and S.A. Rånes. 1999. Three Challenges to the Future of Fisheries Management in Norway: ITQs, Regional Co-Management and Eco-labelling. *Alternative Management Systems for Fisheries*, D. Symes, ed., pp.136–44. Oxford: Fishing News Books.
- Hirst, P., and G. Thompson. 1992. The Problem of 'Globalization': International Economic Relations, National Economic Management and the Formation of Trading Blocs. *Economy and Society* 21(4):357–96.
- Holland, S. 1987. The Global Economy. London: Weidenfeld and Nicolson.
- Holm, P. 1998. The Global Fish Market, 1850–1995. Global Markets: The Internationalisation of the Sea Transport Industries Since 1850, C.E. Nunez, ed. Proceedings of the 12th International Economic History Congress, Fundación Fomento de la Historia Económica: Madrid, August 1998.
- Ibarra, A.A., C. Reid, and A. Thorpe. 2000. The Political Economy of Marine Fisheries Development in Peru, Chile and Mexico. *Journal of Latin American Studies* 32:503–27.
- Iheduru, O.C. 1995. The Political Economy of Euro-African Fishing Agreements. *Journal of Developing Areas* 30(1):63–90.
- *Isofish.* 1999. The Chilean Fishing Industry: its Involvement in and Connections to the Illegal, Unreported and Unregulated Exploitation of Patagonian Toothfish in the Southern Ocean, Occasional Report No. 2, Tasmania.
- Johnstone, M. 1996. The Economics Of Fisheries Access Agreements: Perspectives On The EU-Senegal Case. London: IIED.
- Joyner, C., and P. DeCola. 1993. Chile's Presential Sea Proposal: Implications for Straddling Stocks and the International Law of Fisheries. *Ocean Development and International Law* 24:99–121.
- Kibel, P.S. 2000. Alone at Sea: Chile's Presencial Ocean Policy. *Journal of Environmental Law* 12 (1):43–63.
- Kleinknecht, A., and J. ter Wengel. 1998. The Myth of Economic Globalisation. *Cambridge Journal of Economics* 22:637–47.
- Krugman, P., and A.J. Venables. 1995. Globalization and the Inequality of Nations. *Quarterly Journal of Economics* CX(4):857–80.
- Kurien, J. 1998. Small-Scale Fisheries in the Context of Globalisation, Centre for Development Studies Working Paper No. 289, Kerala, India.
- Lemay, M.H. 1998. Coastal and Marine Resources Management in Latin America and the Caribbean, Inter-American Bank Technical Study No. ENV-129, Washington, DC.
- Long, A. 1999. The Marine Stewardship Council Initiative: The Development of a Market Incentive Approach to Achieving Sustainable Fisheries. Alternative Management Systems for Fisheries, D. Symes, ed., pp. 143–56. Oxford: Fishing News Books.
- Marine Fisheries Review. 1979. Mexico's Marine Fisheries Enforcement. April:38–39.
- ____. 1986. US Tuna Imports from Latin America, 1978–85. 48 (4):78–82.
- . 1989. Argentine-Soviet Fishery Relations Reviewed, 1966–88. 51(2):55–68.
- Marine Stewardship Council (MSC). 2000. Personal communication. London, United Kingdom.
- Milazzo, M. 1998. Subsidies in World Fisheries: A Reexamination. World Bank Technical Paper (Fisheries Series) No. 406, Washington, DC.
- Molinari, B.C. 1977. The State and the Bourgeoisie in the Peruvian Fishmeal Industry. *Latin American Perspectives* IV(3):103–21.
- Nadal Egea, A. 1996. Esfuerzo y Captura. Mexico D.F: El Colegio de México.
- Ohmae, K. 1990. The Borderless World: Power and Strategy in the Interlinked Economy. New York: Harper-Collins.

- Orrego Vicuña, F., ed. 1984. The Exclusive Economic Zone: A Latin American Perspective. Boulder, CO: Westview.
- ____. 1995. Trends and Issues in the Law of the Sea as Applied in Latin America.

 Ocean Development and International Law 26:93–103.
- Pavez, P. 1994. Chile's General Law of Fisheries and Aquaculture. Managing Fishery Resources: Proceedings of a Symposium Co-Sponsored by the World Bank and the Peruvian Ministry of Fisheries held in Lima, Peru, June 1992, E.A. Loayza, ed. World Bank Discussion Papers (Fishery Series) No. 217, Washington, DC.
- Peña-Torres, J. 1996. Economic Analysis of Marine Industrial Fisheries, Doctoral Thesis, Queen Mary and Westfield College, London.
- ____. 1997. The Political Economy of Fishing Regulation: The Case of Chile. *Marine Resource Economics* 12:253–80.
- Perraton, J., D. Goldblatt, D. Held, and A. McGrew. 1997. The Globalisation of Economic Activity. *New Political Economy* 2(2):257–77.
- Phillips, N. 1998. Globalisation and the "Paradox of State Power": Perspectives from Latin America. CSGR Working Paper No.16/98, University of Warwick, UK.
- Pulvenis, J-F. 1989. Vers une Emprise des Etats Riverains sur la Haute Mer au Titre des Grands Migrateurs? Le Regime International de la Peche au Thôn dans le Pacifique Oriental. *Annuaire Français de Droit International* XXXV:774–806.
- Rodrik, D. 1998. Globalisation, Social Conflict and Economic Growth. *World Economy* 22(2):143–58.
- Rosendahl, R.W. 1984. The Development of Mexican Fisheries and Its Effect on United States-Mexican Relations. *Pacific Basin Law Journal* 3(1):1–20.
- San Miguel, L. 1995. The Latin American Tuna Industry, 4th World Tuna Conference, 25–27th October 1995, Manila: Philippines.
- Schlesinger, A., Jr. 1997. Has Democracy a Future? Foreign Affairs 76(5):2–12.
- Schurman, R.A. 1996. Snails, Southern Hake and Sustainability: Neo-liberalism and Natural Resource Exports in Chile. *World Development* 24:1695–709.
- Scott, P. 1998. The Marine Stewardship Council: Principles and Criteria for Sustainable Fishing. *Marine Environmental Management Review of 1997 and Future Trends* 5(21):151–54.
- SEMARNAP. 1996. Programa de Pesca y Acuacultura 1995-2000, Mexico D.F.
- ____. 1998. Pesca del Atún y Protección del Delfin, Cuadernos de SEMARNAP, Mexico D.F.
- . 2000. Programa de Trabajo, Mexico D.F.
- Soberanes Fernández, J.L. 1994. Historia Contemporánea de la Legislación Pesquera en México. *El Régimen Jurídico de la Pesca en México*, M. González Oropeza and M.A. Garita Alonso, eds., pp.1–26. Mexico D.F: UNAM.
- Steinbeck, J. 1995. Log from the Sea of Cortez. London: Heinemann.
- Steinberg, P.E. 1999. Fish or Foul: Investigating the Politics of the Marine Stewardship Council, Paper presented at the Marine Environmental Politics in the 21st Century Conference, MacArthur Program on Multilateral Governance, Institute of International Studies, UC Berkeley, 30 April 2 May.
- Strange, S. 1996. The Retreat of the State: The Diffusion of World Power in the World Economy. Cambridge: Cambridge University Press.
- Streeten, P. 2000. Globalisation: Threat or Opportunity? *Applying Public Administration in Development: Guideposts to the Future*, P. Collins, ed. Oxford: Wiley. Subsecretaria de Pesca. 1998. www.ecored.cl/subpesca/index.html.
- Thorpe, A., and E. Bennett. 2000. Globalisation and the Sustainability of World Fisheries: A View from Latin America. CEMARE Research Paper 147. Portsmouth: University of Portsmouth.

- Thorpe, A., A.A. Ibarra, and C. Reid. 1999. *The New Economic Model and Fisheries Development in Latin America*. CEMARE Research Paper 141. Portsmouth: University of Portsmouth.
- ____. 2000. The New Economic Model and Fisheries Development in Latin America. *World Development* 28(9):1689–702.
- Toye, J. 1987. Dilemmas of Development. Oxford: Basil Blackwell.
- Traill, B. 1997. Globalisation in the Food Industries? European Review of Agricultural Economics 24:390–410.
- UNCTAD. 1998. Trade and Development Report 1998. Geneva and New York.
- van Bergeijk, P.A.G., and N.W. Mensink. 1996. Measuring Globalization. *Journal of World Trade* 13:159–68.
- Vásquez León, M., and T.R. McGuire. 1993. La Iniciativa Privada in the Mexican Shrimp Fishery. *Maritime Anthropological Studies* 6:59–73.
- Watkins, K. 1997. Globalisation and Liberalisation: Implications for Poverty, Distribution and Inequality, UN Development Programme Occasional Paper No. 32 (www.undp.org/hdro/oc32a.htm).
- Weber, M.L. 1998. A Global Assessment of Major Fisheries at Risk, Relevant Management Regimes, and Non-Governmental Organisations. Report of the Pew Charitable Trusts, Philadelphia, PA, USA.
- Weidner, D.M., and D.L. Hall. 1993. World Fishing Fleets: An Analysis of Distant-Water Fleet Operations, Past-Present-Future: Volume 4, Latin America. Maryland: National Marine Fisheries Service.
- Weiss, L. 1997. Globalization and the Myth of the Powerless State. *New Left Review* 225:3–27.
- ____. 1998. The Myth of the Powerless State. Cambridge: Polity Press.
- Wessells, C.R. 1998a. Barriers to International Trade in Fisheries, Discussion Paper prepared for the First FAO E-mail Conference on Fish Trade and Food Security, October-November 1998.
- _____. 1998b. Assessment of the Effectiveness of Ecolabeling as a Market-Based Approach to Sustainable Seafood Production. Proceedings of the 9th IIFET Conference, 1998, Tromsø, Norway.
- Wiefeld, R.C. 1997. Latin American Fisheries—Growth Potential. *INFOFISH International* 6/97:18-22.
- Wilken, P. 1996. New Myths for the South: Globalisation and the Conflict Between Private Power and Freedom. *Third World Quarterly* 17(2):227–38.
- World Fishing. 1997. Falklands Finds New Path. December, pp. 6–7.
- . 1999. Senate Blocks Chilean ITO Plan. September, p. 3.
- WWF (World Wildlife Fund). 1998. *The Footprint of Distant Water Fleets on World Fisheries*. Godalming, UK: WWF International.