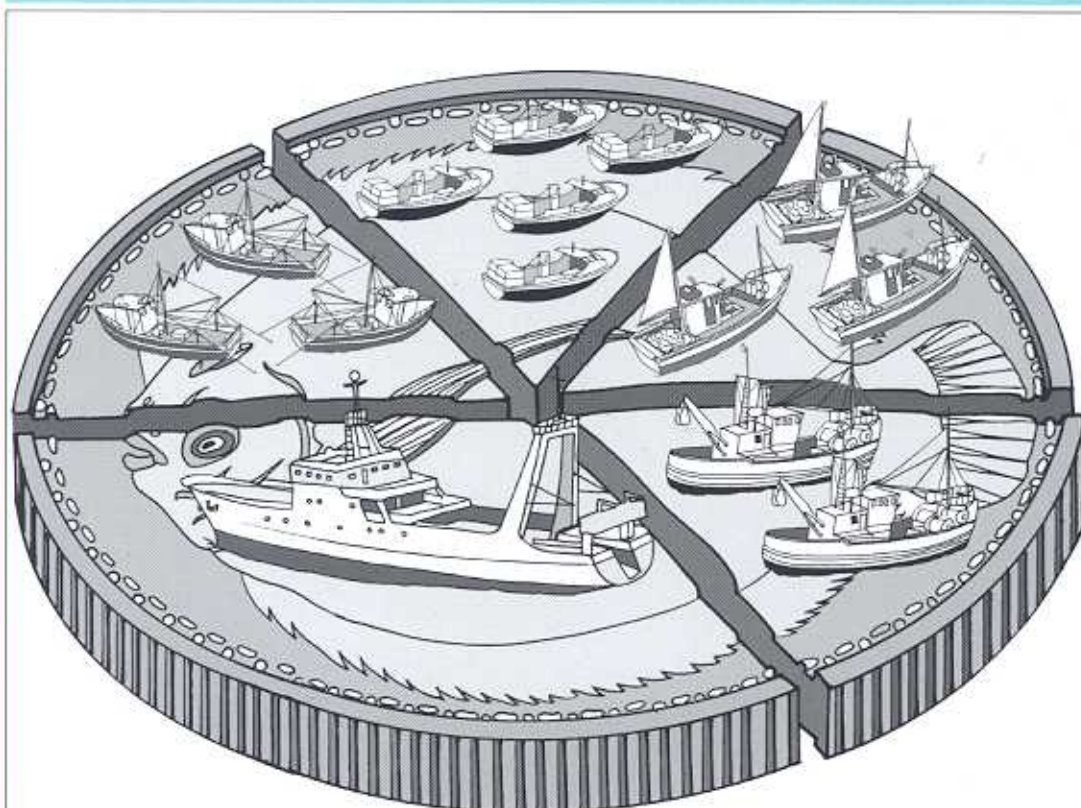


# Case studies on the effects of transferable fishing rights on fleet capacity and concentration of quota ownership

FAO  
FISHERIES  
TECHNICAL  
PAPER

412



Food  
and  
Agriculture  
Organization  
of  
the  
United  
Nations



# Case studies on the effects of transferable fishing rights on fleet capacity and concentration of quota ownership

Edited by

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and  
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Nations



Rome, 2001

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ISBN 92-5-104659-X

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## FOREWORD

This FAO Fisheries Technical Paper has been compiled to complement the discussions of its companion volume: *Case Studies on the Allocation of Transferable Quota Rights in Fisheries Management*<sup>1</sup>. It thus provides a third volume of case studies on fisheries management practices published by FAO, which started with the collection of papers describing the management of elasmobranch fisheries<sup>2</sup>. Further, it continues the series of publications on the use of Rights-based fisheries management undertaken by FAO's Fisheries Department, which, together with the publication of this volume brings these publications to six in total<sup>3</sup>. These reflect the growing importance of this topic to contemporary fisheries management.

The topic selected for this study, as with that for its companion volume, the *Allocation of Transferable Quota Rights in Fisheries Management*, arose from my oft-encountered experience when discussing this issue with fishermen and other 'stakeholders' in the fishing industry. Uppermost in the minds of fishermen facing this possible form of management is "How much quota will I get?" Immediately this question is resolved (of course providing an answer is never a trivial exercise!), the next most frequent question, "What is there to stop someone buying up all the quota and forming a monopoly?" Less frequent has been the question from administrators, "Will introducing transferable fishing quota into the fishery solve the fleet overcapacity problems?" Never heard from fishermen is a question, which I have always thought was eminently reasonable: "Will there be any constraints on my rights to sell my quota holdings, for example, to whoever I wish?"

One common response I have encountered from fishermen (which would perplex a strictly utility-maximizing economist) is that they do not think access to the fisheries they exploit should even be limited, though no such views on open-access existed, for example, in relation to their farms or woodlots whose potential harvests were obviously governed by a different cognitive rationality.

Another reason for compiling these case studies was to provide a factual basis for evaluating the claims, commonly made, that introducing individual transferable quotas (ITQs) leads to monopolies and the exclusion of small operators from fisheries. Often, these claims are made with little or no substantiation and in journals whose editors and referees should know better. In any event, the papers in this volume should partly remove the excuse for such non-substantiated claims. I say "partly remove" because what many of the papers show is the great difficulty in accurately identifying what happens in terms of fleet-capacity when a transferable rights-based management approach is adopted.

Much of what happens to the fleet depends on factors not directly associated with the fishery undergoing the management change. A further complication in determining if, all of the changes that occur in a fishery after the introduction of a Rights-based Management system are the result of the new management regime, is practically impossible. Fisheries, despite the suggestions of those who promote experimental adaptive management and because of their social and biological complexity, are too important to administer as an academic experiment. Demand changes, supply changes, resource productivity changes (with consequential changes in operator's revenues), changes in factor costs (which usually only rise), superimposed on the business cycle and consumer product-substitution, make unequivocal conclusions about the effects of a particular management regime change a rarity. While some changes may be unequivocally attributed to a new rights-based management regime, many others, particularly those relating to efficiency, will not. However, what is clear is that without monitoring, or at least good documentation, of both the pre- and post-management situations, unequivocal assertions (positive or negative) about the effects of transferable fishing-rights on fleet capacity can be dangerously misleading.

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<sup>1</sup> Shotton, R. (Ed.) 2001. *Case studies of the allocation of transferable quota rights in fisheries*. FAO Fish. Tech. Pap. No. 411. 373pp.

<sup>2</sup> Shotton, R. (Ed.) 1999. *Case studies of the management of elasmobranch fisheries*. FAO Fish. Tech. Pap. No. 378, Vols 1 and 2.

<sup>3</sup> Earlier FAO publications are:

Christy, F. 1982. *Territorial use rights in marine fisheries: Definitions and Conditions*. FAO Fish. Tech. Pap. No 227.

Morgan, G.R. 1997. *Individual quota management in fisheries. Methodologies for determining catch quotas and initial allocations*. FAO Fish. Tech. Pap. No. 371. 41pp.

Shotton, R. 2000. *Use of property rights in fisheries management. Proceedings of the FishRights99 Conference, Fremantle, Western Australia. 11-19 November 1999. Vol.1: Mini-course lectures and Core Conference presentations. FAO Fish. Tech. Pap. 404/1 (342pp). Vol 2: Workshop presentations. FAO Fish. Tech. Pap. 404/2 (468pp).*

While the interest of FAO's Fisheries Department in the costs and benefits of introducing rights-based approaches to fisheries management was a major stimulus for undertaking the compilation and publication of these papers, there was another compelling reason to address this topic. The twenty-second Session of the FAO Committee on Fisheries (COFI), held in 1997, had urged that the issues of excessive fishing-capacity and fishing-effort leading to overfishing should be given consideration by FAO. As a consequence the Fisheries Department organized a technical working group to review technical guidelines and consider an international plan of action for the management of fishing-capacity. As part of the process of addressing this issue much work was focused on how to determine the "capacity" of fishing fleets and detailed actions were identified as to how individual countries could address this issue.

Little or no detailed consideration has yet been given to the role that rights-based approaches to fisheries management might provide in reducing fleet-capacity, though some countries reported at the twenty-third Session of COFI that individual transferable quotas were being used to reduce or prevent increases in fishing-capacity. By undertaking the documentation of experiences at the national and fishery level I hope this collection of case studies will provide a factual basis on which to consider rights-based management approaches as a possible solution for solving problems of excess fishing capacity. Indeed, in my view, for many of the cases examined, a rights-based approach will provide the most practical remedy to the problems that exist, and at the same time will contribute to other desirable management objectives.

As those involved in managing fisheries are aware, day-to-day exigencies rarely allow the luxury of collecting detailed data that will permit the proper evaluation of new programmes (much less their soon-to-be-replaced predecessors) and, as the papers in this volume show, this situation has been the norm. Yet further, characterizing the "capacity" of a fishing fleet is a complex and difficult<sup>4</sup>, if not fruitless, task. And, rarely have the authors had access to the detailed fleet-registry records that provide sufficient details on year of vessel construction, dates of vessel conversions or upgrades, design changes, engine upgrades, *etc.*, all of which change the fishing capacity of individual vessels and thus the total for the fleet. As has been well documented<sup>5</sup>, statistics based on aggregate fleet statistics can be meaningless in trying to predict the changes that may occur when individual vessels enter or leave a fishing fleet. These vessels usually are the statistical outliers – those from the lower tail of the distribution of fishing success for vessels of similar dimensions. Not surprisingly, the challenge of obtaining these detailed data has proven difficult for many of the studies and authors have often been forced to rely on other approaches.

Of great interest will be the accounts that relate to fisheries where the measure of effort has not been most appropriately a number of fishing vessels or a corresponding proxy. Transferable quotas have also been introduced into other fisheries such as those for abalone where the effort is indicated by the number of divers. Readers should be interested to read of the experiences in these fisheries, which are most notably found in Australia.

The challenge of discerning overall or sectoral trends from the information provided in these papers is left to the reader. But, so diverse are the fisheries that now use transferable quotas as a management tool, that no longer can writers be excused for making simplistic assertions based on poorly-conceived and subjective opinions derived from one or two examples of such management. Such analysis ought be fisheries-specific and based on sector-based examination. Enabling this is one of the objectives of this Technical Paper.

The contributing authors were asked to follow a common format so as to facilitate comparative analysis of different practices. But, at the same time they were asked not to let this request limit their treatment of the topic. I emphasized that I would rather receive an appropriate treatment of the topic justified in terms of the problems of the unique fishery they were describing, than an account that was limited by attempting to follow my suggested structure of the paper. Readers must understand the various conceptual elements that were involved and interpret for themselves the individual accounts in this light.

Observant readers of the companion volume, *Case Studies on the Allocation of Transferable Quota Rights in Fisheries* (FAO Fish. Tech. Pap. No. 411), will note that some fisheries covered in that volume have, for various reasons, not been addressed in this volume. Among these lacunae is that for the South East Fishery of Australia. However, I can direct interested readers to a recent publication, "Indicators of the effectiveness of quota markets: the South East Trawl Fishery of Australia", in Volume 52(4) of, **Marine and Freshwater**

<sup>4</sup> For example, see Gréboval, D. 1999. Managing fishing capacity. Selected papers on underlying concepts and issues. FAO Fish. Tech. Paper No. 386. 206pp.

<sup>5</sup> For example, see Shotton, R. 1989. An Analysis of Factors Affecting Catch Rates of Sub-65' Groundfish fishing vessels in 4X/Sub-Area 5 of Southwest Nova Scotia. Can. Tech. Rep. Fish. Aquat. Sci. 1707. 129pp.

**Research.** This paper by Robin Connor and Dave Alden should provide much of the information about that fishery, which this volume attempts to address in other fisheries.

Once again, I must thank my secretary, **Marie-Thérèse Magnan**, for her enormous effort in preparing this paper for publication – her fourth in this series; my colleague, **Mike Mann**, in ensuring that the editorial quality of the papers is again of the highest standard, and **Françoise Schatto**, Publication Assistant, Fishery Information, Data and Statistics Unit for the difficult and unenviable responsibility of transforming the manuscript into the final document. I also thank those who have generously made photographs available, usually to illustrate a paper that is not their own – I believe that these illustrations have done much to bring these reports “to life”. Credit for the design and preparation of the cover goes entirely to **Emanuela D’Antoni** of our Service.

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Shotton, R. (ed.)

Case studies on the effects of transferable fishing rights on fleet capacity and concentration of quota ownership.

*FAO Fisheries Technical Paper*. No. 412. Rome, FAO. 2001. 238p.

### ABSTRACT

This report, consisting of 16 national, or national fishery, studies, describes how the introduction of transferable fishing (effort) or fish (catch) quotas has affected the capacity of the fleet prosecuting the target fishery for which the harvesting rights apply.

The case studies include two from the European Union (the U.K. and the Netherlands) and for Iceland. Two studies are presented for fisheries along the eastern seaboard of the United States. Seven accounts are included from Australia, two of which describe fisheries managed by the Commonwealth Government through the Australian Offshore Constitutional Settlement (the Northern Prawn Fishery and the fishery for southern bluefin tuna). The other five accounts of Australian experiences describe the (unique?) Pilbara Trap Fishery in the northern region of Western Australia, Western Australia's rock lobster fishery and the fishery for the same species and that for abalone and pilchards in South Australia. In Tasmania an account is given for the rock lobster fishery while for New South Wales, a description is given for another invertebrate fishery, that for abalone. An omnibus account is given for the situation in New Zealand. In the Western Pacific, accounts are given for the Pacific Halibut and Sablefish fisheries in Alaska, the marine trawl fisheries of British Columbia and for Patagonian toothfish in Chile.

Keywords: Fisheries Management, Property Rights, ITQs, Individual Transferable Quotas, Fisheries Policy, Fleet Capacity, Fleet Capacity Reduction

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## FISHING RIGHTS AND STRUCTURAL CHANGES IN THE UK FISHING INDUSTRY

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### 1. INTRODUCTION

#### 1.1 The UK fishing industry

The United Kingdom has a long history of fishing, reflecting its position as an island with a relatively long coastline and proximity to the productive fishing grounds of the European continental shelf (notably the North Sea, the English Channel and the West of Scotland).

The UK's fisheries are heterogeneous and this is reflected in its complex fleet structure. The shape of the modern UK fleet is the product of technological and market changes together with political developments, in particular the loss of access to traditional distant-water grounds (particularly Iceland and Greenland) in the 1970s and the development of the Common Fisheries Policy (CFP) by the European Community (EC) (which the UK joined in 1972). Under the CFP (see below) there have been national quotas for most stocks since the early 1980s, coupled with a succession of fleet-reduction programmes (the so-called MAGPs) or multi-annual guidance programmes.

There are currently just over 8000 fishing vessels in the UK, although nearly three-quarters of these are inshore boats of less than 10m in length. Table 1 shows the trend in vessel numbers for the period 1994 to 1999 by vessel type (the sector shown corresponds to the classification used by the EC for measuring fleet size).

**Table 1**  
Number and type of UK fishing-vessels 1994-99

Segment	1994	1995	1996	1997	1998	1999
Pelagic	68	67	58	49	50	46
Beam trawl	212	220	215	153	123	114
Demersal trawl	1 644	1 549	1 451	1 428	1 318	1 235
Lines/nets	300	267	224	214	187	172
Shellfish mobile	206	194	265	227	241	243
Shellfish fixed	305	283	339	352	311	301
Distant-water	13	12	15	13	14	12
Others	355	263	0	0	2	2
Inshore ( $\leq$ 10m)	7 195	6 320	5 606	5 474	6 027	5 920
Total	10 298	9 175	8 173	7 910	8 273	8 045

Source: MAFF UK Sea Fisheries Statistics.

The contraction of most of the over-10m sector of the fleet in terms of number, is not matched by an equivalent decrease in capacity as vessels have become bigger and more powerful, particularly in the pelagic, beam trawl and demersal trawl segments. Hatcher and Read (2001) consider the changes in fleet capacity in the context of the UK's attempts to comply with MAGP targets.

Employment in fishing has declined somewhat during the 1990s from around 21 000 to 18 000 jobs, but most of the decline has been in part-time employment. Full-time employment in fishing has been rather stable in recent years at around 15 000.

Tables 2 and 3 show the total landings by weight and (nominal) value made by UK vessels during 1993-1999.

**Table 2**  
Volume of landings by UK vessels ('000 tonnes)

	1993	1994	1995	1996	1997	1998
Demersal	359.2	371.6	386.0	407.7	426.1	456.7
Pelagic	393.8	388.9	396.3	343.9	323.2	334.4
Shellfish	104.6	114.4	129.5	140.6	142.0	132.7
Total	857.6	874.9	911.8	892.3	891.3	923.8

Cod, haddock and whiting are the main whitefish species caught by UK vessels and together they make up about 45% of the total demersal landings by weight and 36% by value. Other species landed in large quantities include ling, anglerfish, plaice, sand eels and blue whiting. Although classed as demersal the latter two species are fished by pelagic vessels and are the only species caught for reduction to meal. High-value demersal species caught

in smaller quantities include sole, hake and megrim. Herring and mackerel account for roughly 80% of pelagic landings by weight and value. The most important shellfish species are scampi or Dublin Bay prawn (*Nephrops*)

(which now rivals cod as the most valuable catch), crabs and scallops, which together account for nearly three-quarters of the value of shellfish landings.

**Table 3**  
Value of landings by UK vessels (£ millions nominal)

	1993	1994	1995	1996	1997	1998
Demersal	356.4	364.8	369.4	383.5	368.5	372.2
Pelagic	56.4	58.4	64.3	90.0	88.4	113.8
Shellfish	113.6	138.2	156.4	163.0	165.0	175.4
Total	526.0	561.4	590.1	636.5	621.9	661.5

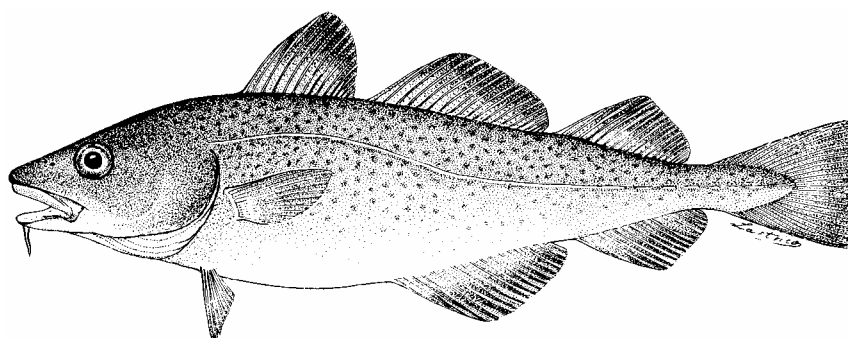
Source: MAFF UK Sea Fisheries Statistics.

An increasing proportion of landings by UK vessels are made at ports in other EC or European Economic Area countries. In 1997 around half of all catches of herring and mackerel were landed abroad (mainly into Norway and Denmark), as were UK catches of hake

(into Spain) and plaice (into the Netherlands)<sup>1</sup>. Overall, some 38% of UK landings were made into non-UK ports.

Scotland accounts for 70% by weight and 60% by value of UK landings. The majority of the Scottish fleet operates from the East coasts ports of Fraserburgh, Peterhead and, to a lesser extent, Aberdeen; the Shetland Islands are an important base for the pelagic fleet. The major fishing activity of the Scottish fleet is demersal trawling for whitefish and *Nephrops*, and pelagic trawling for species such as herring and mackerel. Scallop dredging is locally important in south-west Scotland and the Isle of Man. Scottish vessels primarily operate in the Northern North Sea (ICES area IVa) and the West of Scotland grounds (ICES area VI). There has been considerable development of the Scottish fleet during the 1990s with significant investment in new vessels and technology. Major advances that have had an impact on the efficiency of the fleet are the development of twin-rig and pair trawling.

The rest of the UK fleet is spread throughout England, Wales and Northern Ireland. The Northern Irish contribution is fairly small, and although locally important, there are only four ports with sizeable landings. The fishing fleet in Northern Ireland has contracted significantly since the early 1990s



**Atlantic Cod (*Gadus morhua*)**  
An endangered resource in the North Sea

with a 27% decrease in vessel numbers. A similar contraction has been seen elsewhere in the UK. The traditionally important ports of the Humber region on the north-east coast of England have been in steady decline and, although still very important in terms of transshipment and processing, the catching sector is barely represented in the local ports. The south-west of England, particularly Cornwall, has also seen reduced numbers of vessels during recent years, although the value of landings remains high in the region.

The UK fleet is diverse and there are fishing methods that are particular to certain regions. The predominant fishing methods in the South-West are beam trawling in the English Channel for sole and plaice, gill netting and trawling for high-value demersal species such as hake and megrim, and scallop dredging. The main markets are those of Newlyn, Brixham and Plymouth. Small-scale demersal trawling, gill-netting and crab/lobster potting is predominant in the English Channel. The North Sea fisheries of the East Coast include beam trawling for plaice and sole, but the predominant method is demersal trawling for whitefish such as cod and haddock. Also of great importance is the North Sea *Nephrops* fishery, fished mainly by small-scale demersal trawlers of under-24m. The key markets are in Lowestoft (for beam trawlers), Grimsby, and to a lesser extent, Scarborough and Whitby.

<sup>1</sup> In the case of hake and plaice the foreign landings reflect the foreign ownership of a significant part of the UK demersal fleet which is facilitated by the terms of EC membership.

## 1.2 International context and management responsibilities

The United Kingdom is a member of the European Community and its marine fisheries must therefore be managed within the framework of the EC's Common Fisheries Policy (CFP)<sup>2</sup>. Since 1983 the CFP has provided for the setting of annual total allowable catches (TACs) for most commercially important stocks within the overall zone of extended fisheries jurisdiction created by the 200-mile limits of those Member States bordering the North-East Atlantic and adjacent seas. The TACs are divided into national catch quotas according to an established allocation mechanism which gives each Member State a fixed percentage share each year (although a number of intergovernmental quota swaps are regularly and routinely undertaken).

Fishing opportunities in the waters of third countries and in international waters (such as the NAFO area in the North West Atlantic) are negotiated by the European Commission on behalf of the Community and are allocated to Member States in a similar way.

While national fleets fishing in Community waters are subject to certain common controls under the CFP (in particular technical conservation measures such as minimum mesh sizes) each Member State is able to determine the means for allocating its quotas to the national fleet and for regulating quota uptake<sup>3</sup>. EC rules nevertheless require all vessels of 10m or more in length to keep a logbook of their activities, which must include details of the quantities of TAC species caught and retained on board, and the time and location of capture<sup>4</sup>. Inshore vessels less than 10m long are not obliged to carry logbooks but Member States are still required to monitor their landings to ensure that national quota-limits are respected.

## 2. USE RIGHTS AND THEIR TRANSFERABILITY

The historical development and detailed operation of the UK's licensing and quota management systems are described in Hatcher and Read (2001). UK-registered commercial fishing vessels require a licence appropriate to the type of vessel and to the stocks targeted. As a general rule, *quantitative* restrictions on landings are imposed as licence conditions, but the majority of the offshore fleet belong to producers' organisations (POs), which receive group-quota allocations from the Government (see below). For these vessels the licence conditions simply refer to the quota-management arrangements implemented by the PO to which they belong. The relatively small number of offshore vessels which operate independently have monthly landings-limits specified in their licences. Licences are issued annually by the Government Fisheries Departments<sup>5</sup> but licence-entitlements can be transferred between vessels, subject to certain conditions, and between ownerships.

There are four main categories of fishing-vessel licences: category "A" licences for offshore vessels over 10m authorise fishing for all the commercially important stocks subject to quotas under the European Community's common fisheries policy; category "B" licences authorise fishing by vessels over 10m for a smaller number of quota stocks<sup>6</sup>; category "C" licences authorise fishing by vessels over 10m for non-quota species only (principally

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<sup>2</sup> The CFP has four principal components: a common structural policy, a common market organization, a resource conservation and management system and an external policy (concerned with fisheries agreements with third countries). The common structural policy and the common organization of the market both date back to 1971 (two years before the UK joined the EEC). In addition to provisions for common structural actions (which include aids for fleet renewal as well as capacity reduction programmes) the structural regime lays down certain fundamental conditions for fishing, notably the principle of *equal access* of Member State's fishing fleets to each other's waters (beyond the six-mile territorial limit). The common market organization provides for a system of marketing standards, minimum prices and intervention arrangements (with compensation for products withdrawn from the market at minimum prices). In 1977 all the EC Member States in concert extended their fishery limits out to 200 miles (except in the Mediterranean). Negotiations then began on a system to regulate catches within Community waters. Because of the difficulty of reaching agreement on national TAC shares the "conservation and management" system was not finally adopted until 1983.

<sup>3</sup> Article 9 of Council Regulation (EEC) No 3760/92 establishing a Community system for fisheries and aquaculture (*Official Journal of the European Communities*, No L 389, 31.12.92, p.1).

<sup>4</sup> Article 6 of Council Regulation (EEC) No 2847/93 establishing a control system applicable to the common fisheries policy (*Official Journal of the European Communities*, No L 261, 20.10.93, p.1).

<sup>5</sup> In the UK responsibility for the day-to-day management of fisheries is shared between the Ministry of Agriculture, Fisheries and Food (for fisheries in England), the Agriculture and Fisheries Departments of the Scottish Executive, Welsh Assembly and Northern Ireland. MAFF, however, remains the "lead" Department and takes overall responsibility for national policy and international responsibilities.

<sup>6</sup> The stocks available to holders of category B licences include those which were considered to be subject to lighter exploitation when the equivalent of category A licences were introduced in 1984.

shellfish). All vessels of 10m or under in length are issued with a special class of Category A licence<sup>7</sup>.

The licence system also controls vessel-capacity, measured in terms of GRT (in the process of conversion to the GT measure) and rated engine-power (in kW). Each licence carries an entitlement to employ a number of “vessel capacity units” (VCUs) which must match the number of units calculated for the vessel according to a standard formula<sup>8</sup>. If a licence is transferred to another vessel a VCU “penalty” is incurred (unless the recipient vessel is identical or has the same number of VCUs with a lower tonnage). The system also allows licences from a number of vessels to be aggregated onto a larger or more powerful vessel, again with an overall VCU penalty.

The capacity penalties and other licence-transfer rules have been altered a number of times since they were introduced ten years ago. The main rules are currently as follows:

- i. in general, licences cannot be “upgraded” by transfer or aggregation, *i.e.* vessels under-10m to vessels over-10m, C to B, B to A, *etc*; also category A demersal species licences cannot be transferred onto pelagic vessels, and ordinary pelagic licences cannot be transferred to pelagic purse-seiners or freezer-trawlers<sup>9</sup>
- ii. a 10% penalty is imposed for most licence-transfers (except in the case of vessels 10m-and-under, and pelagic purser/freezer licences)
- iii. a 20% penalty is imposed for aggregating two licences and 30% for aggregating three or more licences (except in the case of pelagic purser and freezer licences, for which the penalty is 10%)
- iv. no licence transfers or aggregations may result in any increase in either total tonnage or engine-power<sup>10</sup> and
- v. there is an exemption from the penalties, subject to certain conditions, for distant-water vessels.

A system for regulating the uptake of national quotas is linked to the licensing scheme. This involves the allocation of percentage quota-shares each year mainly to groups of vessels, although some individual vessel allocations are made by Government in the case of pelagic and distant-water stocks. Until 1998 these allocations were based on the track-record vessels’ landings during the previous three years (the reference period for the majority of stocks), but in 1999 this was replaced by a system of fixed-quota allocations (FQAs). The allocations for 1999 and 1998 were based on track records over the period 1994-1996 which was the reference period for the 1997 allocations (in order to avoid any inflation of track record over a qualifying period)<sup>11</sup>. The 1994-1996 track records were converted into allocations of “quota units” with an initial value of 100kg to produce the 1999 allocations. Although a “one-off” reallocation of units between licences was allowed for the 1999 allocations to let the POs resolve outstanding quota deals (see below), the allocations for 2000 and thereafter, in theory at least, should be the same as the 1999 allocations on a percentage basis, *i.e.* adjusted only according to changes in the UK quota allocations<sup>12</sup>.

In the case of the offshore (over-10m) fleet, each vessel, in effect, is given a set of *notional* individual quota allocations each year. By aggregating these individual notional quotas, group allocations are made by Government to Producers’ Organisations (POs)<sup>13</sup>, which are then allowed to manage those allocations as they wish, for example, by means of monthly landings-limits from a common quota pool, or by allocating annual individual vessel- or company-quotas<sup>14</sup>. There are now 20 recognised POs in the UK representing roughly two-thirds of the fleet over 10m. The POs together account for some three-quarters of total landings by UK vessels and over 95% (by weight) of UK quota allocations in Community waters.

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<sup>7</sup> Within these main licence categories there are a number of specific licence types which apply to particular fisheries or which authorise fishing using certain types of vessel or gear. Category A or B beam trawl licences are required, for example, for the use of beam trawls by over 10m vessels in the North Sea and in Area VII (the English Channel and Western Waters) and specific licences are also required for the use of scallop dredges. There are special category A licences for pelagic purse-seiners and freezer-trawlers. There are also category “D” licences which authorise distant-water fishing.

<sup>8</sup> (overall length in metres x maximum breadth in metres) + (engine-power in kW x 0.45).

<sup>9</sup> However, there is a partial suspension of this rule for new pelagic freezer trawlers until 30 June 2001.

<sup>10</sup> In addition no aggregations of beam trawler licences may result in an engine-power in excess of 1,500kW and no aggregations of 10m and under licences may result in a VCU total of over 100.

<sup>11</sup> Sources indicate that the practice of artificially inflating track records, for example by over-recording landings or attributing catches to the wrong sea area (and hence stock), was widespread by 1996.

<sup>12</sup> The UK Government, however, reserves the right to issue or withdraw quota units. Because of the growing trading in quota between and within a number of the POs there is increasing pressure on the Government to allow annual reallocations.

<sup>13</sup> Producers’ Organisations are vessel owners’ associations recognised under EC law. Their primary role is the orderly marketing of fish and the implementation of common marketing rules and standards but they are encouraged to take on resource management responsibility.

<sup>14</sup> The management of quota allocations by the various UK producers’ organisations was surveyed in Hatcher, A.C. 1997, Producers’ organizations and devolved fisheries management in the United Kingdom: collective and individual quota systems, *Marine Policy* 21(6): 519-534.

The quota-shares allocated to vessels that are not members of a PO (the so-called “non-sector”) are managed directly by the Government Fisheries Departments by monthly landings-limits. Uptake of the quota shares reserved for the inshore (10m and under) sector is not normally regulated unless the level of estimated landings dictates an early fishery closure, although increasing pressure on some inshore fisheries means that the use of monthly catch-limits is likely to become routine for this sector too.

Quota is allocated in 100kg units and attached to the vessel’s licence, but individual-quota allocations remain entirely notional except for members of POs operating an IQ system, where the PO usually allocates each vessel an individual-quota based on its FQA.

As licences are transferred and aggregated, so are the FQAs attached to them. Clearly, however, there is no incentive for vessels to acquire notional-quota unless they can realise an individual quota-entitlement. Acquiring quota through the licence market is therefore only valuable for vessels which belong to a PO that operates an internal IQ system, although a “quota pooling” PO may not accept a new member unless he carries an adequate number of units. It is also not possible for (notional) quota to be divisible in movements between individual vessels through the licence transfer/aggregation system: FQA is transferred in its entirety.

The feature of the management system that greatly facilitates quota-trading is the relative freedom the POs have to exchange quota between themselves. As the quota management-system developed, POs were allowed to swap quota but initially all swaps had to balance in terms of “cod equivalents” (by value). This was later relaxed to allow non-balancing swaps, and then to allow “gifts”, *i.e.* one-way movements of quota. Although all quota movements are subject to Government approval, in practice POs can now trade quota between themselves in any quantity, and the Government takes no interest in any financial transactions that may accompany quota-exchanges or gifts.

Since quota can be traded between POs, it can effectively be traded between a member of one PO and a member of another PO, either “permanently” (a straight quota sale) or on an annual lease basis. Under the FQA system as it is presently configured, however, a sale of one tonne of quota from a vessel in one PO to a vessel in another PO necessitates the transfer between the POs of one tonne of quota each year *in perpetuity*. This assumes that no annual adjustments of vessels’ FQAs are permitted to take account of quota movements either between, or indeed within, POs (where quota-trading is obviously much more straightforward), which is the Government’s current stated policy. At the time of writing the Fisheries Departments have indicated that annual adjustments will not be allowed, but industry pressure may result in a change of policy.

A further significant feature of the UK quota management-system is that it is essentially an informal arrangement between Government and industry. Legislation provides for the issuing of fishing licences and for the attachment of certain conditions to those licences, including quantitative restrictions on landings. There is no legal basis, however, for the notional individual quota-allocations which are used to calculate group-allocations, they are merely an administrative tool used by the Government Fisheries Departments in the exercise of the Government’s discretionary right to issue licences in order to regulate sea fishing. Fishermen have no legal right to receive a licence nor any legal title to a share of national quotas<sup>15</sup>.

### **3. MEASUREMENT AND ADJUSTMENT OF FISHING CAPACITY**

#### **3.1 Objectives**

UK policy on the measurement and adjustment of fishing-capacity is largely dictated by the fisheries structural policy of the EU<sup>16</sup>. This requires member states to adjust their fishing capacity in line with the EU’s so-called *Multi-Annual Guidance Programmes* (MAGPs) which impose target levels of fleet capacity measured in terms of gross tonnage (GT) and engine-power (in kW). Although the MAGPs date back to 1984, it was the third MAGP for 1993-1996 that first imposed significant cuts in (nominal) fishing capacity on the EU member states. This section concentrates on the UK’s attempts to meet the objectives of MAGP III through a combination of measures, including a series of annual decommissioning schemes and the licence “market”. Reference is also made to MAGP IV, which covers the period 1997-2001. It should be appreciated that the nominal capacity-reductions required under the MAGPs are dictated simply (and more or less *pro rata*) by biological estimates of excess fishing mortality for the various exploited stocks.

The MAGPs divide fishing fleets up by sector, with each segment by and large being defined according to fishing method, although in some cases sectors are distinguished by vessel size or target species. Targets must be achieved for each sector as well as overall. For the UK the third MAGP, approved by the European Commission in

<sup>15</sup> Legal opinion, however, suggests that in the event of a challenge a fisherman may well have claim to a “legitimate expectation” of quota.

<sup>16</sup> See Hatcher, A.C. 2000, Subsidies for European fishing fleets: the European Community’s structural policy for fisheries 1971-1999, *Marine Policy* 24(2): 129-140.

December 1992, required the UK Government to achieve an overall cut in the size of the registered fishing fleet from 214 733GRT and 1 228 922kW (the reported situation at 1 January 1992) to 173 455GRT and 995 627kW by 31 December 1996<sup>17</sup>. These figures represented overall reductions of 19.2% in GRT and 19.0% in engine-power (measured in kW)<sup>18</sup>. The UK's targets were however amended in June 1995: the reductions required for the "Nephrops trawl" and "shellfish mobile" fleet-segments were relaxed in the light of information supplied by the Government to the Commission on the rates of by-catch of demersal species by these segments<sup>19</sup>. As a result, the overall reductions required for the UK fleet as a whole were reduced slightly to 17.6% in GRT and 17.4% in engine-power.

Table 4 summarises the original and revised objectives for each of the UK fleet-segments under MAGP III. It can be seen that the biggest cuts were required for the "beam trawl" and the "demersal trawl and seiners" segments. For other segments the cuts required were intended only to take account of the effects of technical progress. Under the terms of MAGP III, up to 45% of the overall reductions required could be achieved by reductions in activity (measured in terms of days at sea)<sup>20</sup>.

**Table 4**  
UK objectives by fleet-segment under MAGP III

Fleet segment		Situation at 1.1.92	Original objective for 31.12.96	Initial % reduction required	Amended objective for 31.12.96	Final % reduction required
Pelagic trawl	GRT	25 178	22 633	10.1%	22 633	10.1%
	kW	80 858	72 060	10.9%	72 060	10.9%
Beam trawl	GRT	23 062	17 621	23.6%	17 621	23.6%
	kW	107 542	81 465	24.2%	81 465	24.2%
Demersal trawl and seiners	GRT	71 956	51 746	28.1%	51 746	28.1%
	kW	368 194	262 505	28.7%	262 505	28.7%
Nephrops trawl	GRT	18 140	13 860	23.6%	16 306	10.1%
	kW	100 142	75 859	24.2%	89 246	10.9%
Netters liners and other static gears	GRT	12 121	10 896	10.1%	10 896	10.1%
	kW	58 503	52 137	10.9%	52 137	10.9%
Shellfish mobile	GRT	6 007	4 320	28.1%	5 400	10.1%
	kW	34 725	24 757	28.7%	30 947	10.9%
Shellfish fixed	GRT	2 636	2 370	10.1%	2 370	10.1%
	kW	18 397	16 395	10.9%	16 395	10.9%
Distant-water	GRT	10 987	9 876	10.1%	9 876	10.1%
	kW	23 829	21 235	10.9%	21 236	10.9%
Mixed (non-trawlers) <10m	GRT	24 438	21 968	10.1%	21 968	10.1%
	kW	304 630	271 484	10.9%	271 484	10.9%
Others >10m	GRT	20 208	18 165	10.1%	18 165	10.1%
	kW	132 102	117 728	10.9%	117 728	10.9%
Total	GRT	214 733	173 455	19.2%	176 981	17.6%
	kW	1 228 922	995 627	19.0%	1 015 204	17.4%

Note: The figures for the fleet situation at 1.1.92 do not include vessels registered in the Isle of Man or the Channel Islands (estimated to represent an additional 2 500 GRT and 33 000kW at the time); the objectives however do include this part of the UK fleet.

### 3.2 Implementation

#### 3.2.1 Technical measures

In February 1992 the UK Minister of Agriculture, Fisheries and Food announced a package of measures designed to "reduce fishing effort over the period up to 1996, to meet a target which we shall need to quantify and

<sup>17</sup> Commission Decision 92/593/EEC (OJ No L 401, 31.12.92, p33).

<sup>18</sup> The MAGPs adopted at the end of 1992 took into account the objectives for the transitional guidance programmes for 1992: see Commission Decision 92/363/EEC (OJ No L 193, 13.7.92, p25) in the case of the UK.

<sup>19</sup> Commission Decision 95/243/EC (OJ No L 166, 15.7.95, p21).

<sup>20</sup> In the 1995 amended MAGPs "fishing effort" was defined by the Commission in GT x days and kW x days, GT to be estimated by the Commission according to the provisions of Commission Decision 95/84/EC (OJ No L 67, 25.3.95, p33).

agree with the Commission in line with our Community obligation under the 1992-1996 Multi-Annual Guidance Programme<sup>21</sup>. These measures were to include the following:

- i. the introduction of (tradeable) days-at-sea entitlements
- ii. a series of annual decommissioning schemes
- iii. increased capacity penalties for fishing-vessel licence-transfers and aggregations and
- iv. the extension of restrictive licensing to vessels of 10m-or-under.

At the time the Government estimated that around a 5-6% reduction in capacity would be achieved through the decommissioning scheme, and that other measures would achieve the balance of the reductions required to meet the 1996 MAGP targets.

### **3.2.2 Days-at-sea limitation**

At the end of 1992 new primary legislation was enacted to enable days-at-sea entitlements to be attached to fishing-vessel licences, and secondary legislation to establish the general rules for days allocations was put in place in May 1993<sup>22</sup>. The Government had originally planned to freeze effort at 1991-levels in 1993, and then to reduce it as necessary in the years 1994-1996, depending on the contribution of other measures to overall capacity-reduction<sup>23</sup>. Under the terms of MAGP III, a reduction of 8.6% in overall fleet activity could have been made to contribute a 45% achievement of the final objectives.

However, opposition from the fishing industry led first to a postponement of the scheme's implementation until 1994, and then to an indefinite suspension following a legal challenge by the National Federation of Fishermen's Organisations, which was referred by the British High Court to the European Court of Justice. In October 1995 the Court found in favour of the UK Government, but the Government decided against trying to reintroduce the scheme at this time (ostensibly because of the introduction in 1996 - in principle at least - of effort-limits for all Community vessels over-18m fishing in Western waters).

### **3.2.3 Decommissioning schemes**

It was originally intended that a decommissioning scheme would run for two years with a total (gross) budget of £25m. In June 1994 the scheme was extended for a third year, and in January 1995 it was extended until the 1997-98 financial year with the total budget being increased to £53m<sup>24</sup>.

The key operational features of the decommissioning schemes were as follows: (a) vessel owners were invited to submit tenders for compensation, which were ranked in terms of £ per vessel-capacity unit withdrawn<sup>25</sup>; (b) successful applicants had to surrender their licences and the vessels had to be scrapped after de-registration (despite the other options under EC rules of disposal outside the Community, or use for purposes other than fishing); and (c), eligible vessels had to be UK-registered (not registered in the Isle of Man or Channel Islands), seaworthy (with appropriate safety certificates if necessary) and over 10m in length. In order to be consistent with EC rules, grants were also limited to vessels that were at least ten years old. It was the responsibility of the vessel owner to supply proof of scrapping by the required date (and so, by implication, to bear all of the costs involved in scrapping the vessel).

The first scheme was announced in May 1993. In addition to the general rules outlined above, the following criteria were applied:

- i. the vessel must have been fishing for at least 100 days in 1991 and in 1992 and
- ii. the vessel's licence had to be no less restrictive in terms of the stocks authorised than at 27.2.92 (the date of the first announcement of the decommissioning schemes).

The rules for the 1994-scheme were modified in order to target vessels fishing for the most sensitive stocks (and those in the fleet-segments requiring the largest cuts) and to exclude distant-water vessels. The detailed criteria were now as follows:

- i. the vessel must have been fishing in Community waters for at least 100 days in 1992 and in 1993 as a UK-registered vessel and
- ii. the vessel's licence had to be a "full pressure stock licence" (the old equivalent of a category A licence).

<sup>21</sup> MAFF News Release No 73/92, 27.2.92.

<sup>22</sup> Sea Fish (Conservation) Act 1992; Sea Fish Licensing (Time at Sea) (Principles) Order 1993.

<sup>23</sup> MAFF News Release No 73/92, 27.2.92.

<sup>24</sup> MAFF News Release No 227/94, 15.6.94, and No 23/95, 18.1.95.

<sup>25</sup> The Government rejected the option of simply paying flat-rate compensation payments up to the maxima allowed under EU rules as being unlikely to produce value for money.



For the 1995-scheme the prawn (*Nephrops*) trawlers were excluded as were other shellfish boats, because these segments were considered to have already met their MAGP targets. The detailed criteria were now:

- i. the vessel must have been fishing in Community waters (or Norwegian waters south of 62°N) for at least 100 days in 1993 and in 1994
- ii. the vessel's licence had to be a category A or category B licence (or category C with certain individual species entitlements) and
- iii. the vessel should not have been predominantly involved in the *Nephrops* fishery in 1994.

The eligibility rules announced for the 1996 scheme were relaxed to include all vessels over 10m in length, including distant-water vessels and prawn trawlers. The criteria were now simply:

- i. the vessel must have been fishing for at least 75 days (the EC minimum) in 1994 and in 1995 and
- ii. the vessel had to have a valid licence.

During consultations on the terms of the 1996-scheme, the Government proposed that the owners of decommissioned vessels should be allowed to retain their landings track-records, to be transferred to another vessel or sold, thus encouraging lower bids. The industry, however, rejected this option at the time.

Although MAGP III finished at the end of 1996, the 1997-scheme was designed to make up any shortfall under MAGP III. The main changes in the eligibility criteria were that applications were once more restricted to vessels with category A licences, and that *Nephrops* trawlers were again excluded (the Government left open the option of excluding vessels from other segments which were found to have met their MAGP targets). Most significantly, the industry had by now agreed that landings track-records could be retained by owners who decommissioned their vessels.

### **3.2.4 Licensing**

The UK Government clearly hoped that the fishing-vessel licensing-system would make a significant contribution to reducing fleet-capacity in line with the MAGP III targets, in particular through increased capacity penalties for licence transfers and aggregations, and through administrative changes designed to limit the expansion of certain fisheries.

The UK licensing-system was and remains complex, having evolved in largely a piece-meal manner since 1984 as new restrictions were introduced in order to control the growth of various fisheries (and, in some cases, to try and limit the size of the Spanish- and Dutch-owned sectors).

By 1992, restrictive licensing applied to all vessels over-10m but still did not apply to vessels of 10m-or under. Following a period in which there were rather complicated restrictions on transferability, most licences had since 1990 been transferable both between vessels and between owners, but capacity penalties (described in Section 2. above) were incurred whenever licences were transferred or aggregated. A number of licensing measures were introduced during this period as follows:

- i. In 1992 the aggregation of pressure stock licences onto beam trawlers in ICES Area IV was dis-allowed, and the VCU penalty for all transfers and aggregations was increased to 20%.
- ii. In 1993 restrictive-licensing was extended to the sector 10m-and-under. The VCU penalty was again reduced to 10% for aggregations where the increase in engine-power was no more than 15% and for all over-10m licence-transfers. There was to be no penalty applied to transfers of vessels 10m-and-under (no increase in VCUs was allowed) but no licence-transfers from vessels 10m-and-under to vessels over-10m, or aggregations combining both under-10m and over-10m licences were permitted. In addition, no more than two vessels in the 10-17m band could be involved in aggregations. From 1993 it was also no longer possible to retain indefinitely a licence entitlement that was not actually assigned to a vessel.
- iii. In 1995 the overall structure of the licensing system was revised. All licences were now fully transferable independently of vessels, but still as a general rule



**An early example of an early Scottish purse seiner that would have depended on a producer's organization for its quota entitlement**

only similar licences could be aggregated. An exception was made for purse-seiners and freezer-trawlers which could receive demersal licences for engine modifications up to +15% with a 10% VCU penalty. Also in 1995 the penalty for aggregating three or more licences was increased to 30% (except in the case of purse-seiners and freezer-trawlers), aggregations of more than two licences between 10-17m were now permitted, and Area IV beam trawl licences could now be aggregated if the resultant engine-power did not exceed 1500kW. Another significant change at this time was that vessels' landings track-records (which were normally assessed over the previous three years) were now attached to the licence rather than the vessel.

- iv. Early in 1996 it was announced that no further licence transfers or aggregations would be allowed which would increase either tonnage or engine-power, and that no aggregations of vessels 10m-and-under would be allowed to result in a VCU total of more than 100.

### 3.3 Results

#### 3.3.1 Progress of MAGPs

The data in Table 5 are taken from the European Commission's report on the progress of the MAGPs at the end of 1996<sup>26</sup>. They are based on the Community fleet register but take account of the UK Government's reallocation of vessels from the "others" segment<sup>27</sup>. From the Table it appears that at the end of 1996 for the UK fleet there was still an overall reduction-backlog of some 5.0% in GRT and 2.9% in engine-power, but for certain fleet-segments the deficit was more significant, in particular for the segments: beam trawl, demersal trawl, and shellfish (fixed). Because of discrepancies between the UK register and the Community register, however, which affected the figures for 1992 as well as 1996, this situation was a provisional result.

**Table 5**  
UK progress towards MAGP III targets

Fleet segment		Situation at 1.1.92	Situation at 31.12.96	Revised objective for 31.12.96	% reduction still required
Pelagic trawl	GRT	25 178	27 132	23 541	13.2%
	kW	80 858	73 896	77 955	--
Beam trawl	GRT	23 062	20 966	18 393	12.3%
	kW	107 542	109 259	86 467	20.9%
Demersal trawl and seiners	GRT	71 956	64 111	57 559	10.2%
	kW	368 194	323 184	300 176	7.1%
<i>Nephrops</i> trawl	GRT	18 140	14 350	18 123	--
	kW	100 142	83 820	101 018	--
Netters liners and other static gears	GRT	12 121	14 588	12 712	12.9%
	kW	58 503	54 738	63 910	--
Shellfish mobile	GRT	6 007	8 110	8 125	--
	kW	34 725	45 558	48 606	--
Shellfish fixed	GRT	2 636	5 839	5 094	12.8%
	kW	18 397	36 539	34 054	6.8%
Distant-water	GRT	10 987	7 107	9 876	--
	kW	23 829	18 120	21 236	--
Mixed (non-trawlers) <10m	GRT	24 438	19 577	21 968	--
	kW	304 630	264 868	271 482	--
Others >10m	GRT	20 208	0	0	
	kW	132 102	0	0	
Unclassified	GRT	--	2 760	--	
	kW	--	24 518	--	
Total	GRT	214 733	184 539	175 391	5.0%
	kW	1 228 922	1 034 498	1 004 903	2.9%

Notes: 1992 figures from amended MAGP III for the UK (Commission Decision 95/243/EC); the 1996 figures are from the Community register and still do not include all vessels registered in the Isle of Man and the Channel Islands (see text).

<sup>26</sup> COM(97) 352 final, 11.7.97.

<sup>27</sup> The Community register at that time still did not contain a complete record of vessels registered in the Channel Islands and the Isle of Man.

More up-to-date figures on the situation at the end of MAGP III are given in the decision on MAGP IV, which was approved at the end of 1997<sup>28</sup> (although these figures are still subject to revision because of the transition from GRT to GT as the common measure of vessel tonnage). These figures are shown in Table 6. Direct comparison with Table 5 is difficult because of the change from GRT to GT, the grouping of certain fleet segments and further adjustments to the UK register. Nevertheless, it is clear that by this stage that the overall objectives for MAGP III had more or less been met, but significant deficits remained in certain fleet segments, most notably the beam trawl segment. Table 6 also shows the capacity figures for the beginning of 1998 and the objectives which the UK is supposed to meet by the end of 2001 under MAGP IV<sup>29</sup>.

**Table 6**  
UK progress towards MAGP III targets (MAGP IV figures)

Fleet segment		Situation at 1.1.97	Revised objective for 31.12.96	Situation at 1.1.98	Objective for 31.12.01 under MAGP IV
Pelagic trawl and purse seines	GT	37 453	34 876	41 220	34 876
	kW	71 876	82 168	69 757	82 168
Beam trawl	GT	28 240	26 062	26 323	26 062
	kW	117 616	103 054	106 143	103 054
Demersal trawls seines and <i>Nephrops</i> trawls	GT	116 581	120 630	115 468	120 630
	kW	400 127	422 876	390 150	422 876
Netters liners and other static gears	GT	16 431	15 854	16 282	14 538
	kW	51 977	67 364	51 550	61 744
Shellfish mobile	GT	11 766	11 615	10 197	11 552
	kW	55 648	51 232	46 872	50 958
Shellfish fixed	GT	6 413	6 267	7 305	6 242
	kW	44 463	35 895	49 512	35 768
Distant-water	GT	15 567	14 883	15 829	14 883
	kW	25 400	23 741	25 004	24 281
Small-scale coastal (<10m)	GT	20 120	21 901	19 991	21 901
	kW	286 367	286 154	287 554	286 154
Total	GT	252 571	252 088	252 615	250 684
	kW	1 054 474	1 072 484	1 026 542	1 066 463

Notes: the 1997 GT figures include some estimations and are therefore subject to revision; the 1996 GRT objectives were converted to GT according to the relationship between GT and GRT for the fleet at 1.1.97.

### 3.3.2 Decommissioning

The four decommissioning schemes operated during 1993-96 removed a total of 578 vessels over-10m from the UK fleet, representing 19% of the 1992 total of 3036 vessels over 10m. Table 7 shows the capacity withdrawn by segment, compared to the 1992 situation, and the 1996 objectives as specified in the 1995 amended MAGP for the UK. Because of the adjustments to the UK register during 1996-7, these are probably the most appropriate comparisons available.

It is apparent that while the decommissioning schemes removed around a half of the required tonnage, they removed only one third of the required engine-power. Certain fleet segments (*Nephrops*-trawlers, shellfish-mobile and shellfish-fixed) were clearly over-represented in the decommissioning process, while other segments were under-represented.

The total gross expenditure on the 1993-6 schemes was £36.24m. The 1997-scheme, which cost around £14.3m, removed a further 108 vessels and 4406 GRT<sup>30</sup>. At the time of writing details of the capacity removed under this last scheme are not currently available.

### 3.3.3 Fishing vessel licensing

The only data presently available on the effects of licence-transfers and aggregations over the period 1992-1996 come from a 1997 report on the decommissioning schemes undertaken for the UK Government<sup>31</sup>. No data are

<sup>28</sup> Commission Decision 98/124/EC (OJ No L 39, 12.2.98, p34).

<sup>29</sup> COM(99) 175 final, 27.04.99.

<sup>30</sup> MAFF News Release No 383/97, 3.12.97.

<sup>31</sup> *Economic Evaluation of the Fishing Vessels (Decommissioning) Schemes*. Report to the UK Fisheries Departments. Nautilus Consultants, Edinburgh, September 1997.

currently available on transactions concerning vessel-licences 10m-and-under in the inshore sector, or the results of licence-transfers and aggregations since 1996.

During the period a total of 397 transactions involving vessels over-10m (measured in terms of the number of recipient vessels) resulted in a reduction of 39 737kW (17%) from the donor licence total of 232 478kW. This represented some 19% of the overall reduction in engine-power required under MAGP III (based on the 1995 amended targets). The contribution of licence transfers and aggregations in terms of tonnage is not known because of changes from GRT to GT, and because the VCU system does not take account of vessel tonnage directly.

**Table 7**  
Capacity withdrawn by decommissioning 1993-1996

Fleet segment		Situation at 1.1.92	Amended objective for 31.12.96	% reduction required	Nominal capacity withdrawn	% 1992 capacity withdrawn
Pelagic trawl	GRT	25 178	22 633	10.1%	437	1.7%
	kW	80 858	72 060	10.9%	850	1.1%
Beam trawl	GRT	23 062	17 621	23.6%	2 138	9.3%
	kW	107 542	81 465	24.2%	9 791	9.1%
Demersal trawl and seiners	GRT	71 956	51 746	28.1%	6 916	9.6%
	kW	368 194	262 505	28.7%	25 805	7.0%
<i>Nephrops</i> trawl	GRT	18 140	16 306	10.1%	5 174	28.5%
	kW	100 142	89 246	10.9%	17 134	17.1%
Netters liners and other static gears	GRT	12 121	10 896	10.1%	841	6.9%
	kW	58 503	52 137	10.9%	3 849	6.6%
Shellfish mobile	GRT	6 007	5 400	10.1%	713	11.9%
	kW	34 725	30 947	10.9%	4 539	13.1%
Shellfish fixed	GRT	2 636	2 370	10.1%	697	26.4%
	kW	18 397	16 395	10.9%	3 735	20.3%
Distant-water	GRT	10 987	9 876	10.1%	228	2.1%
	kW	23 829	21 236	10.9%	1 214	5.1%
Mixed (non-trawlers) <10m	GRT	24 438	21 968	10.1%	0	0.0%
	kW	304 630	271 484	10.9%	0	0.0%
Others >10m [non-active/unknown]	GRT	20 208	18 165	10.1%	500	2.5%
	kW	132 102	117 728	10.9%	3 209	2.4%
Total	GRT	214 733	176 981	17.6%	17 643	8.2%
	kW	1 228 922	1 015 204	17.4%	70 126	5.7%

Notes: 1992 figures and 1996 targets as in 1995 amended MAGP; data on decommissioned vessels from MAFF published in Nautilus Consultants (1997).

In terms of engine-power at least (again calculations for tonnage are difficult because of the re-measurement/estimation in terms of GT and the lack of tonnage figures for the licence contribution) decommissioning and licence penalties together removed around 71% of the observed decrease in the size of the fleet over-10m from 1992 to 1996 (45% by decommissioning, 26% through licence transactions). It is difficult to say how the remaining 29% was achieved, although some of the apparent decrease is almost certainly due to administrative adjustments to the UK register.

#### 4. CONSEQUENCES OF TRANSFERABLE USE RIGHTS

##### 4.1 Licence and quota trading

Obtaining comprehensive and reliable data on licence-trading in the UK is extremely difficult, since the Government takes no interest in the financial transactions that accompany licence-transfers, and all trading takes place privately either directly or via licence brokers. The Government also does not routinely produce statistics on licence-transfers and aggregations. Nevertheless, there is no doubt that the volume of licence and quota-trading has increased greatly since 1995.

The report on the UK decommissioning schemes<sup>31</sup> investigated trends in licence/track-record prices during the period of MAGP III. Data was obtained from licence-brokers showing that in early 1997 track-record prices (as a component of total licence values) ranged from £350/t for herring, to £1200/t for cod, and up to £10 000/t for sole. The figures are reproduced in Table 8 below. The consultants also obtained data on licence prices over the period

1993-1996. These figures are summarised in Table 9 (with the pre-1995 licence-types expressed in terms of their current equivalents).

It is difficult to interpret the apparently chaotic price movements during 1993-1995, but the big jump in the prices for category A licences (which authorise fishing for all quota stocks) from 1995 to 1996 reflects the marked strengthening of demand for licences which started to occur around this time.

**Table 8**  
Average track-record prices in 1997

Species	£ per tonne
cod	1 200
plaice	1 200
saithe	2 500
hake	2 000
monkfish (anglers)	3 300
sole	6 000 to 10 000
herring	350
mackerel	700

**Table 9**  
Average licence prices (per VCU) 1993-1997

Licence type category	£ per VCU			
	1993	1994	1995	1996
<b>A</b>	179	269	184	776
<b>A purser</b>	na	395	na	2 083
<b>A beam trawl</b>	700	391	276	1 222
<b>B</b>	62	189	88	182
<b>C</b>	47	na	na	184

The report (1997) considered only that there was “some evidence” of quota-leasing arrangements between PO members. We find that in recent years quota-leasing and selling within and between POs has grown significantly in importance. A report for the Scottish Whitefish Producers Association<sup>32</sup>, which represents the majority of catching power in the Scottish demersal fleet, found that almost a third of the Scottish fleet had bought quota in some form or other during the conversion of rolling track records to FQAs. Leasing, although becoming more widespread, was less prevalent at the time, with less than 10% of vessels leasing quota. This number, however, is still much greater than seen in previous years, when the only leasing that had taken place was between Dutch-owned vessels in the North Sea Fishermen’s Organisation and in the Fife Fish Producers Organisation, which had already had experience of this while operating under the Dutch ITQ system. The same report indicated that the ten or so quota-trading and leasing arrangements currently in operation would increase rapidly, as skippers coming up for retirement opt to keep their quota entitlements and lease them out.

The average quota-prices given in Table 10 were obtained from the records of a company representing a significant proportion of the quota-trading in the UK. This company remarked that the prices of a number of stocks were largely driven by purchases by foreign-owned vessels (so-called “quota-hoppers”), with Spanish interests buying quota for monkfish (angler) and hake, and Dutch-owned companies buying quota for North Sea sole and plaice.

#### 4.2 Impact of trading on fleet structure

We estimated previously that from 1992-96 around 45% of the observed decrease in the capacity of the fleet over-10m (in terms of engine-power in kW) was attributable to decommissioning, while around 26% was achieved through the capacity-penalties applied to licence-transactions.

The figures for the UK fleet for the beginning of 1997 (from Table 6) and the latest figures available from the Ministry are shown in Table 11. There has been a 3% overall increase in registered tonnage and a 7% decrease in rated engine-power<sup>33</sup>. However, this result masks some significant changes in the capacity of certain fleet segments.

<sup>32</sup> *Problems Associated with trading in fish quota: solutions for the benefit of the fishery and dependent communities*. Report prepared for the SWFPA by Rodgers, P. The Centre for Fishery Economics Research, December 1999.

<sup>33</sup> At the time of writing efforts are underway to tighten up the measurement of engine-power which may result in an increase in the measured total.

For example, the tonnage of the pelagic sector increased by 27%, while the beam trawl sector decreased by 13% in GT and 22% in engine-power.

**Table 10**  
Average quota-prices (per tonne) 1995-2000

Quota stock	£ per tonne						
	1995	1996	1997	1998	01/1999	08/1999	01/2000
NS cod	250	400	1 000	1 000	1 500	2 000	2 200
NS haddock				1 000	1 200	1 800	3 000
NS plaice		1 800	2 000	1 800	1 500	1 500	1 200
NS sole		10 000	10 000	8 000	8 000	8 000	10 000
NS anglers				2 500	2 400		2 200
NS <i>Nephrops</i>				1 500	2 500		3 500
WOS anglers				3 500	5 500		6 000
WOS <i>Nephrops</i>				700	1 800		2 000
VIIa sole					7 000		6 000
VIIe sole					7 000		9 000
VIIfg sole					8 000		9 000
VIIa plaice					1 000		1 000
VIIde plaice					1 200		1 200
VI/VII hake				2 500	3 500		4 500
VII anglers				2 500	3 500		5 000
VII <i>Nephrops</i>				1 000	1 500		1 700

NS = North Sea (ICES area IV); WOS = West of Scotland (ICES area VI); VII = ICES Area VII.

Despite the lack of data on licence-transfers and aggregations during 1997-99 it is apparent that the licence market has not resulted in any significant overall rationalisation of fleet capacity during the last two years, although there has been some reallocation of capacity-entitlements between sectors and some reduction in licence/vessel numbers (see Table 1). The ability to “strip” licences during the move to FQAs in 1998 may nevertheless have assisted the rationalisation of the UK fleet. Abuse of the VCU system, with many new vessels built since 1996 under-declaring their engine-power, is now accepted to be widespread. The Government, realising the widespread extent of the problem, recently announced steps to ensure compliance with the regulations. Vessel owners have until 30 June 2000 to admit to any power “irregularities”, after which they will have 4 years to obtain the required VCUs. The existence of a number of “stripped” licences, bought from ageing vessels by quota-traders during the move to FQAs in 1998, has provided a ready source of VCUs for those vessels wishing to become legitimate, without the added difficulty of buying quota that they could not afford and did not require. The “disappearance” of the tonnage associated with these licences when they are amalgamated onto existing vessels, may well form a significant component of the tonnage-reduction required under MAGP IV.

The increasing trade in licences certainly had an effect on the operation of the 1992-97 decommissioning schemes, as did the decommissioning schemes on the licence market, by reducing the overall supply of licences and injecting liquid capital into the industry. It became clear during the schemes, that the fleet segments with the highest average licence-plus-vessel values were the least represented among the vessels successfully decommissioned. Given the current level of licence-prices, a tender-based decommissioning scheme, even based on EC maximum rates<sup>34</sup> would now be likely to remove few vessels from the most profitable fleet segments.

Whether the recent growth in quota-trading will start to have a significant effect on fleet capacity remains to be seen. Nevertheless, there are indications at least that the ability of many within the industry to separate quota and licence may result in a rationalisation of capacity.

For example, licences are currently allowed to lie unused as entitlements for 3 years. A number of vessel-owners have sold vessels, and for 2 years at least are renting their quotas, while keeping their licences and deciding whether to replace the vessels or leave the industry all together. In addition, the few deals that have taken place in the pelagic sector within the last 3 years have seen quota divided, in several cases, between purchasers. This is certainly having at least a short-term effect on capacity, as the licences are currently unused while the quota is being caught by others.

<sup>34</sup> See Annex III (point 1.1) to Council Regulation 3699/93 (OJ No L 346, 31.12.93, p1) as amended by Council Regulation 1624/95 (OJ No L 155, 6.7.95, p1).

**Table 11**  
Changes in UK fleet capacity 1997-9

Fleet segment		Situation at 1.1.97	Situation at 31.12.99	% change
Pelagic trawl and purse seines	GT	37 453	47 661	27%
	Kw	71 876	77 209	7%
Beam trawl	GT	28 240	24 498	-13%
	kW	117 616	91 417	-22%
Demersal trawls, seines and <i>Nephrops</i> trawls	GT	116 581	116 752	0%
	kW	400 127	357 128	-11%
Netters, liners and other static gears	GT	16 431	15 046	-8%
	kW	51 977	43 968	-15%
Shellfish mobile	GT	11 766	12 317	5%
	kW	55 648	52 607	-5%
Shellfish fixed	GT	6 413	6 443	0%
	kW	44 463	43 353	-2%
Distant-water	GT	15 567	16 664	7%
	kW	25 400	25 015	-2%
Small-scale coastal (<10m)	GT	20 120	20 309	1%
	kW	286 367	288 239	1%
Total	GT	252 571	259 812	3%
	kW	1 054 474	979 473	-7%

## 5. CONCLUDING REMARKS

The operation of a series of annual decommissioning schemes during the 1990s, and the changing nature of the possibilities for quota-trading under the UK's quota-management system, makes it difficult to attribute any changes in the size and capacity of the fleet to the emergence of transferable quota rights. From the figures that are available, the licence market did, however, contribute to the reduction in fleet size that was observed during the course of the decommissioning schemes.

Nevertheless, as might be expected, there are signs that the huge growth in quota-trading in the last couple of years may be starting to lead to some rationalisation of fleet capacity, if yet on a relatively small scale. Whether there will be a significant rationalisation in the future depends on the direction taken by the Government policy on quota-rights, and hence on the subsequent characteristics of the quota-market as well as the efficiency of quota-enforcement.

## 6. LITERATURE CITED

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