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**UK Fisheries Management Institutions &
Mechanisms:
An Aide Memoir**

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Introduction

The principal fisheries management institutions in the UK, from government departments to Sea Fisheries Committees and Producers Organisations are outlined, together with other industry organisations with fisheries management interests. Fisheries management objectives and mechanisms employed are described. A list of fisheries and related legislation is provided in Appendix I.

This paper was written in the context of the ELSA-fisheries (Ethical, Legal & Social Aspects of Fisheries Management) project being co-ordinated by OIKOS. This EU-funded project is reviewing fisheries management systems in 10 of the main European fishing nations, and is linked to current reflections on the Common Fisheries Policy (CFP) and potential change after 2002.

1. Government Departments & Agencies

The principal UK government departments involved in fisheries management are the Ministry of Agriculture Food & Fisheries (MAFF), the Scottish Office Agriculture Environment & Fisheries Department (SOAFD), the Welsh Office Agriculture Department (WOAD) and the Department of Agriculture for Northern Ireland (DANI). Each has a Minister with responsibilities for English, Scottish, Welsh, and Northern Irish fisheries respectively.

Although MAFF is the lead ministry, scope exists for variations in approach, not least due to the different legal system in Scotland. Ministries use different systems for collating and storing fisheries data, with statistical publications produced in markedly different formats. A power struggle reportedly exists between ministries [SP95].

Like the other UK departments and public bodies with fisheries responsibilities, MAFF has frequently been regarded as essentially interested in furthering the interests of producers rather than consumers, despite having a department for food safety and the environment. Former Minister Edwina Currie recently described MAFF as « a trade union for producers» [GU98]. However, this emphasis may be shifting. In the wake of the Bovine Spongiform Encephalopathy (BSE) crisis, Jack Cunningham, Agriculture Minister in the new Labour government, declared the health and well-being of consumers and the protection of the environment to be his priorities [MA98a], with plans to establish an independent Food Standards Agency under the Department of Health (currently part of MAFF's remit).

Ensuring fishing vessel safety is the responsibility of the Department of the Environment, Transport and the Regions.

2. Fisheries Management Objectives

Government objectives include maximisation of quotas and catches within the TAC framework, equity in distribution of fishing opportunities, catching sector efficiency, vessel safety, and sustainability of fisheries and industry, including ensuring long-term continuity of supply and safeguarding employment in the sector [S91], [PJ98b], [MA98e]. The Government has stated its commitment to improving enforcement [MA98g], increasing participation of fishermen in policy development, and placing greater emphasis on environmental considerations. [HC98a], [HC98b].

In terms of the CFP review, the UK Government supports the maintenance of the principle of relative stability as the basis of national quota allocations and the retention of existing restrictions on foreign vessels fishing within national 6- and 12-mile limits on the expiry of the associated derogation in 2002 [HC98b], [MA98j].

In practice trade-offs between different objectives and their pursuit over the short-run and long-run are implicit in decisions made, but explicit acknowledgement by Government of any such incompatibility in objectives has been rare. Although the stated aim is « providing conditions for a prosperous, stable and sustainable fishing industry »[HC98b], for reasons not unconnected to perceived political expediency in relation to the 5-year electoral cycle, short-term objectives have tended to take precedence. As former Minister John Gummer recently stated, fisheries Ministers generally fight « ..for their fishermen's share of the fish rather than ensuring that fish will be there for the fishermen of the future » [HC99a].

2.2 Fisheries Management Jurisdiction

The UK's 3-mile fishing limits date from the Territorial Waters Jurisdiction Act 1878, with the Territorial Waters Order-in-Council 1964 establishing straight baselines, and the Fishery Limits Act 1964 a 12-mile Fishing zone. A 1977 Order-in-Council based on the Fishery Limits Act 1976 established 200-mile (or median) limits [US97]. (Different arrangements hold in the Channel Islands. For instance, currently Jersey has a 3-mile rather than a 6-mile exclusive fishing zone, and after prolonged negotiations by the UK government on Jersey's behalf, a new accord stipulating precise territorial limits is expected to be signed during 1999 [OF99]).

2.3 Surveillance and Enforcement

Overall responsibilities for monitoring and enforcement of UK and European fisheries legislation at sea and on land, including monitoring landings and quality control, such as ensuring shellfish hygiene under EC directive 91/492/EEC [SE97], rests with government departments' Sea Fisheries Inspectorates. These have a network of coastal Fisheries Offices and District Inspectors.

Responsibilities for fisheries surveillance and enforcement at sea are delegated to the Scottish Fisheries Protection Agency in Scotland. The navy performs these duties for the rest of the UK, apart from English and Welsh coastal waters within national 6-mile limits, where surveillance and enforcement responsibilities are delegated to Sea Fisheries Committees.

Expenditure on fisheries enforcement activities by Fisheries Departments and the Scottish Fisheries Protection Agency is around £25 million a year [MA98g].

2.4 Quota Management

Quota management in the UK dates from the mid 1970s and was initially associated with restricting catches to the maximum levels agreed by the North East Atlantic Fisheries Commission (NEAFC), with herring quotas introduced in 1974 for the North Sea and the Celtic Sea, and for the West of Scotland and Irish Sea in 1975. At first fisheries subject to quota restrictions were managed purely by closures once the quota was taken. In 1977 the first mandatory restrictions on individual vessel landings were introduced, with landings of North Sea haddock restricted on a per trip basis and landings per crew member per day restricted in the Western mackerel fishery [HC94].

While government departments allocate and devolve management responsibility for « sectoral » quotas to Producer Organisations (POs), they directly allocate separate « non-sector » quotas to vessels not belonging to POs or belonging to POs not having been allocated a sectoral quota for a given stock. Non-sector allocations are managed by means of « licence variations » which stipulate the maximum quantities of quota species that can be landed by particular categories (e.g. size) of vessel, with a view to ensuring an equitable share-out of the available fishing opportunities [SHC92]. These allocations are administered with the assistance of management committees which include industry representation, with advice also being sought from fishermen's organisations. Allocations are generally fixed

monthly and altered on the basis of previous and anticipated catch rates [E95]. In some instances maximum trip limits are stipulated.

Separate allocations are made to the under 10 metre vessel sector. These allocations are managed on an annual basis with a fishery being closed once the allocation is fully taken [E95]. These same arrangements also apply to vessels used for recreational fishing, irrespective of length of vessel used [HC98c].

Individual vessel quotas for the main pelagic species are also allocated directly by government departments to purse seiners and freezer trawlers not in membership of POs. In 1996 25% of Western mackerel and of North Sea Herring and 21% of West of Scotland herring quotas were allocated directly to individual vessels in this way, with almost all going to 9 vessels [H97].

In general, the prospect of fisheries being closed once the total quota was reached provided an incentive for vessel operators to concentrate their activity early in the season while the fishery remained open. The enhanced « race to fish » encouraged further investment (« capital stuffing »), with the resulting over-capacity exacerbating problems of under-reported catches as vessel operators reportedly attempted to maintain incomes and loan repayments [M90].

2.5 Technical measures

Government departments have responsibilities for the enforcement of community-wide technical measures and for a wide range of UK technical measures. The latter have included provisions concerning the positioning of square-mesh panels, a ban on carrying monofilament gill nets in Scottish waters, minimum landing size restrictions (whiting, crabs and lobsters), area and seasonal closures [E95], and from 1998, on the discarding of stowed fish [MA98g].

2.6 Miscellaneous input controls

Responsibilities for the operation of various national reporting-in and effort limitation schemes also lies with the departments. In an attempt to curb misreporting, regulations require vessels to report each time they cross the « 4° line » between areas IV and VI. From January 1999, vessels over 20 metres are required to provide prior notification of any intention to land whitefish or shellfish outside specified times at designated ports [MA98f].

Days at sea limits were operated in 1990 and 1991. However, the government's plans to introduce further schemes were postponed due to legal action by the National Federation of Fishermen's Organisations which sought a European Court of Justice ruling on their legality. Despite it eventually ruling in the government's favour, the implementation of the national scheme envisaged was abandoned. At a more local level, a ban on fishing in the Firth of Clyde at weekends operates [E95]. Although as part the UK's plans for reaching its MAGP IV targets, effort controls were introduced in 1998 in the pelagic and beam trawl sectors, management of effort allocations was mainly devolved to POs and other groups of vessel operators [MA98i], [HC99a].

2.7 Vessel Registration

All fishing vessels are required to be registered in order to participate in UK fisheries, with a list of vessels being kept by the Cardiff Vessel Registry Office. Under the Merchant Shipping Act 1894, any fishing company having their principal place of business in the UK could register vessels [M98].

As fishing opportunities became more restricted, foreign nationals increasingly took advantage of rights of establishment under British law in order to enhance their fishing opportunities. For example, Anglo-Spanish boats first joined the British fleet in 1979 [RPH98], with 53 vessels which had previously been registered in Spain re-registered under the Act, and a further 42 UK registered vessels purchased by Spanish interests from British owners and kept on the UK register [M98].

Under Article 14 of the Merchant Shipping Act 1988 the British Government attempted to tighten the registration provisions of the Merchant Shipping Act 1984. The new legislation stipulated that owners of UK fishing vessels had to be British citizens, or if company-owned, 75% of the shares had to be owned by British citizens and 75% of the directors had to be British citizens [M98].

However, the European Court of Justice ruled in July 1991 in the « Factortame » case that the UK government had acted in violation of the right of establishment under Community law [M98], vessels excluded under the new Act were allowed to re-register, with the Spanish and Dutch owners awarded £30million in compensation [RPH98]. In 1996 the so-called « flag ships » reportedly accounted for 44% of UK hake quotas, 40% of plaice and 17% of UK sole quotas [PC97], with around 25% of the UK's offshore fleet tonnage being owned and largely operated from other Member States at the beginning of 1998 [MA98a].

After an extended process of negotiation and clarification of the type of measures appropriate [EC97], the British Government reached an agreement with the European Commission to ensure that vessels maintain a genuine economic link with the populations dependent upon fisheries and allied industries in the country of registration. Rather than either having to land at least 50% of the catch of quota stocks into UK ports, or visit UK ports at least 4 times in each six month period, as previously required, from 1999 British registered fishing vessels have been required to meet at least one of four criteria to demonstrate sufficient benefit to fisheries-dependent populations [MA98d].

The first of these criteria is the same as previously, namely that at least 50% of a vessel's catch of quota stocks have to be landed into UK ports. The second criterion is that at least 50% of the crew have to be normally resident in a UK coastal area (measured in terms of annual crew man-days at sea). The third is that vessels have to incur a minimum level of operating expenditure for goods and services provided in UK coastal areas, equal to either 50% of the value of the landings of quota stocks nett of crews' wages, 50% of operating expenditure nett of crews' wages, with evidence of expenditure being certified by an accountant. The fourth option is for vessel owners to demonstrate a genuine economic link by some other means, such as starting 50% of fishing trips from UK ports and spending 50% of days in port in a UK port, (or by a combination of the other criteria, such as landing 30% of quota species into the UK ports plus spending 45% of operating expenditures in the UK) [MA98d].

Industry sources immediately criticised the new measures as being so broad as to be virtually meaningless [PJ98c], [FN98]. However, it seems likely that they will increase incomes in some UK coastal communities and reduce the profitability of the so-called « flag ships », while perhaps not markedly affecting vessel ownership patterns.

2.8 Vessel Licensing

The Sea Fish (Conservation) Act 1967 empowers the UK Government to issue licenses, to stipulate the species, area, period and fishing method allowed under the licence, to levy a charge for their issue, to limit the number issued to prevent «overfishing», to prohibit commercial fishing by vessels not holding a licence, and to prohibit fishing. The first licensing scheme dates from 1971, when licences were introduced for vessels fishing for herring in the North Sea to facilitate the operation of the seasonal closures agreed by NEAFC. Further licensing schemes were introduced in the early 1970s for fishing for herring

in the Celtic Sea, and the West of Scotland, and in several distant water fisheries, and in 1977 in the Western mackerel fishery [HC94].

Licences were issued free of charge and were initially available to any vessel operator requesting one, on the proviso that a landings declaration be submitted. The Fishery Limits Act 1976 broadened Ministers' powers, such that the number of licences could be limited, restrictions on the quantities of fish caught stipulated, and licences revoked, suspended or varied, where deemed necessary for regulatory purposes [HC94].

In 1977 the Government restricted the number of licences issued for the first time, limiting the number North Irish Sea herring licences issued to UK and Manx vessels. Although the scheme was abandoned a few years later after the European Court found similar licence limitations imposed in the fishery by the Irish Government to be in violation of Community law, restrictions introduced by the UK Government in 1980 on issuing mackerel purse seine and freezer trawler licences proved more durable [HC94].

Licensing schemes were in operation in all herring and mackerel fisheries and for fishing the most significant demersal stocks by 1983, although, with the exception of inshore herring, licences were only required by vessels over 40ft in length. The total number of licences issued remained unrestricted, except for purse seiners and pelagic freezer trawlers, and in a few herring fisheries where larger vessels were either excluded or allowed to participate only if they had previously done so [HC94].

In 1983 licensing was extended to cover all vessels over 10 metres fishing for stocks subject to TACs in compliance with EC log book regulations [HC94]. From February 1984 all such vessels were required to hold a « pressure stock licence » [S91], [S92], the issue of which was restricted to vessels which had previously participated in, or held a licence for, the fisheries affected. A separate pressure stock licensing scheme was introduced for area VII beam trawlers in 1985 to prevent further growth of this fleet segment. A system of limited pressure stock licences was initiated in 1986 covering Western (areas VI and VII) hake, North Sea sole, and area VII cod, haddock and megrim fisheries, and not permitting fishing for other pressure stocks, unless a full pressure stock licence was also held [HC94].

In accordance with EC criteria, in 1990 licensing arrangements were amended to cover all fishing vessels over 10 metres overall, rather than over 10 metres registered length, and extended to cover all such vessels. « Miscellaneous species » licences were issued for fishing for the stocks (mainly shellfish) not covered by existing licensing schemes, providing

vessels had been fishing commercially for six months or more, and the practice of issuing of new licences on request was discontinued [HC94].

A separate licensing scheme was introduced for North Sea beam trawlers in 1992 for vessels having fished for at least a year using beam trawls in the area. In 1993 licensing was extended to cover vessels under 10 metres, without restrictions on the fishery pursued, but with licences restricted to vessels having fished commercially for at least a year [HC94].

Licensing increasingly was used to determine fleet segment and by 1992 there were 154 different types of licences. The system was simplified in 1995 when licences were categorised into five basic types, Category A, Single Species, Category B (non-pressure stocks), Category C (mainly shellfish), and External Waters, with some vessels holding more than one type [E95]. It is notable that by July 1997 the number of separate types of Category A licences had increased from three to six.

Initially pressure stock licence transfers were only allowed between vessels within the specified under-40ft, 40-79ft and over-80ft length groups [S92]. Under this system, due both to transfer of licences between vessels and alterations to existing vessels, vessel size tended to increase towards the maximum allowed in each category, while widespread modification in vessel design was directed to creating so-called « rule beaters » [T88], [D97].

In 1990 this system was replaced by a «vessel capacity unit» (VCU) restriction on licence transferability, where for a given vessel, the number of VCUs is defined as $\{\text{length(m)} \times \text{breadth(m)} + 0.45 \times \text{engine power(KW)}\}$, a formula proposed by the Sea Fish Industry Authority. The latter system at first allowed for almost unrestricted transfer of the licences between vessels of different sizes, providing that the number of VCUs of the vessel to which one or more licences was transferred was sufficiently below the total VCUs of the vessel(s) from which licence(s) are transferred. However, aggregation of licences for North Sea beam trawlers over 1500KW, as well as licence transfer from the under 10 metres sector to the over 10 metres sector, was prohibited [E95].

In order to prevent tonnage increasing at the expense of engine size, licence aggregation restrictions were introduced in 1996 so that neither the gross tonnage nor the engine power of the new vessel could exceed the combined total tonnage and combined total power of the old vessels [NMA97]. Transferring a licence from one vessel to another vessel involved a 10% « capacity penalty » in the case of over 10 metres vessels, such that the new vessel had to be no more than 90% of the capacity units of the old one [E95]. Over time licence

transfer penalties have also been progressively increased in cases where licences are aggregated, increasing to 20% in 1992, and in 1994 to 30% where licences from three or more vessels are aggregated [NMA97].

In 1995 «track records» providing information on past landings used to determine future quota allocations were also incorporated into the licences of over 10 metres vessels, enabling track records to be attributed to a PO, or to the non-sector [MA97]. On the transfer of its licence, a vessel was no longer deemed to have its previous historic catch record. A new vessel entering a fishery was then deemed to have the specific track record attached to the licence which had been transferred from the previous vessel [E95].

Despite the Channel Islands not being full members of the European Union, and having different legal and management institutions [Ch97], in 1996 the UK licensing system was extended to cover vessels registered in the Channel Islands, with licenses being fully transferable with UK vessels. (Although mainly fishing for species not subject to TACs, where pressure stocks are caught, Channel Island vessels are subject to the UK quota management system, with catches generally being counted as part of the non-sector).

In 1998 licence aggregation restrictions were rescinded for vessels fishing wholly outside EU waters such that vessel replacements in this fleet segment were then allowed without the need to acquire additional domestic water licences for any increases in capacity. However, in the event of a vessel subsequently fishing in EU waters, sufficient VCUs to cover the full capacity of the vessel would have to be acquired, subject to prevailing capacity licence aggregation penalties being incurred, and any restrictions on tonnage and engine power and other licensing requirements being met [MA98h].

Although initially distributed free of charge by the government, as licensing became more restricted, licences appreciated in value, with some currently being valued in millions of pounds [PJ98a]. Average values of fishing licences traded in 1996 were reportedly £776, £1,222, and £2,083 per VCU, for Category A, beam trawler, and purse seiner licences respectively. Average prices for track record traded in the first quarter of 1997 were reportedly £700, £1,200, £2,500 and around £8,000 per tonne for mackerel, cod, hake, and sole respectively [NMA97].

Despite official recognition of the economic rationale for taxing such implicit resource rents, including cost recovery, fisheries management, and public finance grounds, as well as the use of such charges in other countries [SMA97] and the increasing introduction of user fees

in other sectors, no general attempt has been made to do so in UK fisheries. The industry remains implacably opposed to the introduction of such charges, arguing that even if justifiable, as fisheries management also benefits other sectors of the fishing industry, including fish processors and consumers, it would be « inequitable and disproportionate » for the catching sector to bear the costs of management. It is further argued not only that charges would push marginal vessels into insolvency, but they would be « damaging, unfair and inequitable », widening the « competitive gap » between UK and other EU vessels, and could also lead to increased over-quota landings [NFFO98].

It has been estimated that in order to recover total fisheries management costs (excluding decommissioning and other grants) of around £45m in 1996/7, a licence fee of £56 per VCU would have been required for the UK fleet as a whole of 811,579 VCUs. If applied only to over 10m vessels, a licence fee of £76 per VCU would be required, or a fixed licence fee per vessel of around £19,000 per annum. A tax of 7.5% on the value of all landings, or of around 11% if on quota species alone, was estimated to be capable of raising a similar level of revenue, and was argued to be more equitable, but to be more difficult to enforce [HPMA98].

Instead of attempting to tax licence values, the government is currently exploring ways of underpinning the legal status of such assets so that they can be used as collateral by banks, thereby assisting investment and fleet modernisation. As it recognises the ingenuity of vessel operators in circumventing existing licensing restrictions by such means as de-rating engines and temporarily altering vessel dimensions, it is also currently seeking ways to tighten these regulations [HC98b]. Under-reporting vessel power is reportedly one of the easiest methods of circumventing vessel capacity restrictions [MRAG98], although licensing restrictions have also resulted in widespread modification of vessel design characteristics to create so-called « rule beaters ».

2.9 Decommissioning Schemes

In an attempt to meet its agreed Multiannual Guidance Programme (MAGP) targets, government departments have been responsible for administering a series of decommissioning schemes. The 1993, 1994, 1995 and 1996 schemes under which applicants submitted tenders for grants in £s per VCU, led to 135, 162, 139, and 142 vessels respectively being decommissioned, resulting in a total reduction in the fleet of 578 vessels at a cost of £36 million. Each reduction in fleet size resulted in further appreciation in vessel and licences values, increasing the cost of subsequent schemes, so that average

decommissioning costs of these schemes was £332, £346, £436 and £536 per VCU respectively [NMA97].

All the vessels decommissioned were over 10 years old, with the largest numbers being demersal trawlers or seiners (209), or nephrops trawlers (159). As many of the vessel owners viewed the grants as a means of financing a new vessel, the schemes have been argued to be akin to a scrap and build policy, with a significant proportion of the £36 million being re-invested in new vessels [NMA97].

A further £10.5 million is to be made available for decommissioning schemes over three years from 1999/2000 [HC99a].

2.10 Miscellaneous Grant & Loan Schemes

Government departments administer grants for upgrading harbours and auxiliary onshore facilities which are awarded on the basis of cost-benefit appraisals of the proposed investment submitted by the applicant. Investment in new quayside fish markets at Scottish ports has been estimated to lead to average landings price increases of around 3% associated with quality improvements [V98]. Administration of grant schemes for vessel construction or modification is delegated to the Sea Fish Industry Authority (SFIA).

Although EU grants are available in other Member States for a wide range of purposes in the sector, including for early retirement and satellite monitoring equipment installation costs, the UK Government operates a relatively limited number of such schemes. It is notable that under the Fontainebleau agreement the EU recovers most money paid to UK recipients of Community grants [NFFO98].

In 1997/8 central and regional government, and EU grants to the fishing industry and fisheries-dependent areas totalled £38 million [HC98b].

2.11 Stock assessments & fisheries research

Stock assessment and other biological research, including the provision of scientific and technical advice, is the responsibility of the Fisheries Research Services (FRS) in Scotland, and of the Centre for Environment Fisheries and Aquaculture Science (CEFAS) in England and Wales. FRS, which includes the Marine Laboratory, Aberdeen, is an Executive Agency within SOAEFD, with a Director responsible to the Secretary of State for Scotland. CEFAS includes the Fisheries Laboratory, Lowestoft, and is an Executive Agency of MAFF. In 1998

a total of £36.8 million was spent on fisheries science research and development, and research and monitoring of fish stocks [HC99b].

In addition to work carried out by the Executive Agencies, Ministries also commission studies from outside consultants (academic, and non-governmental institutions, private consultancy firms, etc), with some of the more recent reports being published electronically on the internet (eg [NMA97], [HPMA98]).

2.12 Safety provisions

Ensuring safety through regular vessel inspections is the responsibility of the Department of the Environment, Transport and the Regions' Maritime and Coastguard Agency (MCA), which was formed on 1 April 1998 on the merger of the Coastguard Agency and the Maritime Safety Agency. Fishing remains one of the most dangerous occupations, with 31 vessels lost and 29 fishermen dying at sea in 1997 according to the Department's Marine Accident Investigation Branch (MAIB), and over 20 lives lost during 1998 [PJ98d], [HC98b].

2.13 Inshore Fisheries Management

In both Scotland and Northern Ireland inshore fisheries management remains the prerogative of government departments. In Scotland the Cameron Report (1970) examined the case for devolved inshore fisheries management, but noting the costs and difficulties entailed, as well as the lack of enthusiasm of Scottish fishermen's organisations, it recommended that fisheries management remain the prerogative of the Scottish Office. Nonetheless, in some cases, voluntary agreements formulated by local Area Access Management Committees and Port Committees are used to regulate mobile and static gear fisheries in localities in the Western Isles.

In Northern Ireland following the 1964 London Fisheries Convention, a « viosinage » principle operates which allows vessels from Northern Ireland and those from the Irish Republic to fish within either country's 6-mile limits in compliance with local regulations [SP97].

3. Sea Fisheries Committees

Representing a form of «delegated management» [S91], in English and Welsh coastal waters within 6 miles of national baselines, fisheries management responsibilities are devolved to Sea Fisheries Committees (SFCs), to the Environmental Agency (formerly the National Rivers Authority) in the case of estuaries (e.g. the Severn), and more locally, to individual harbour authorities. With MAFF approval, these bodies have powers to establish Byelaws concerning gear use, minimum landing sizes, ground restrictions, as well as shellfish Orders, and most SFCs have enacted Byelaws prohibiting vessels over 20 metres in length fishing certain areas within 3-mile limits [SP97].

Under section 3 of the Sea Fisheries (Shellfish) Act 1967, SFCs may be granted Regulating Orders for a period of 30 years in mollusc fisheries, including powers to levy tolls and royalties, deposit or propagate. For example, under the Wash Order, the Eastern SFC introduced a system of maximum daily landings limits for mussels and cockles, and £200 annual or £30 monthly licence fees used for stock enhancement projects [SP97]. SFCs may also be empowered by MAFF to issue Several Orders allotting exclusive fishing and propagation rights in specified areas to particular fishermen for up to 60 years.

The responsibilities of the SFCs were initially defined by the Sea Fisheries Regulation Act 1888, which stipulated that England & Wales would be divided into 12 Sea Fisheries Districts. Members are appointed rather than elected. The composition of SFCs is set out in the Sea Fisheries (Regulation) Act 1966, which provides for equal representation of County council & MAFF appointees, with one appointee per river authority having jurisdiction within the district. Changing every 3 years, council appointees consist of local representatives of the fishing industry, while those appointed by MAFF are drawn from a wider spectrum, including those with marine environment expertise [SE97]. The Act 1966 provides powers for the creation of sea fisheries districts in any part of national or territorial waters and for defining their limits by means of Statutory Instrument.

SFCs monitor local fishing activity, formulate local fisheries policy & prosecute individuals who do not comply with the local regulations through the civil courts. Funded by local authorities, each SFC is financially responsible for its own vessels to monitor and enforce local regulations, and employs several fishery officers to undertake its work.

In 1994/95 just under £3.5 million was spent by the SFCs in total. All SFCs are members of the Association of Sea Fisheries Committees, which meets with the fisheries Minister on an annual basis [SP97].

During the 1990s SFCs have increasingly been required also to take environmental considerations into account in making decisions. A general duty in this regard was placed on SFCs under the Sea Fisheries (Wildlife Conservation) Act 1992, with the Conservation (Natural Habitats etc.) Regulations 1994 requiring SFCs to ensure that management of designated Special Areas of Conservation comply with the Habitats Directive. Providing for the inclusion of members with environmental expertise among those appointed, the Environment Act 1995 further extends the powers of SFCs in this area, with Section 102 stipulating duties for conservation and enhancement of marine and coastal areas [SE97].

The system of appointments has been criticised both as essentially undemocratic [SP97], and as leading to a lack of regulatory resolve in allowing too great an accommodation of industry interests due to the role played by certain individual members [SE97]. As it can take several years for new Bye-laws, Regulating Orders, and Several Orders to be introduced, SFCs suffer from a cumbersome legal process [SE97].

In some cases, multiple jurisdictions, differing management objectives, and a lack of monitoring or evaluation of fishery management performance can result in poor and incoherent regulation, while financial constraints compound monitoring and enforcement deficiencies [SE97]. Despite allowing greater adaptation to local conditions, differences between SFCs can also result in incoherent regulation, increasing monitoring and enforcement problems [SP97].

In general, regulation within the UK's coastal zone is extremely fragmented, with an estimated total of 240 different government departments, local authorities and public agencies having responsibilities and with activities regulated by over 80 Acts of Parliament. Lack of an integrated coastal zone management framework can mean that measures applied in one sector can unwittingly worsen conditions in others [WHP93].

4. Producers' Organisations

Membership of Producer Organisations (POs) is confined to vessel owners. In 1996 a total of 1 725 of the 2 939 UK registered fishing vessels over 10 metres (representing around 80% of this sector in terms of GRT & KW) were in PO membership (ranging in size from 11 to 450 members), compared to only 3.5% of vessels in the under 10 metre sector [H97].

Constituted as co-operatives or as limited companies, POs are financed by means such as landing levies, entrance fees and company earnings, with levies ranging between 0.25% and 1% of grossings [E95]. Each PO has a board of directors appointed by the members, and employs a Chief Executive and other support staff. Although some POs are more egalitarian than others, decision-making is reported to be mainly by consensus and compromise [P97].

POs can generally be categorised into 3 groups: those whose members mainly fish inshore waters include the Anglo-North Irish FPO, Cornish FPO, Fife FPO, Shetland FPO, South Western FPO, Yorkshire & Anglia FPO ; those whose members mainly fish offshore waters include the Aberdeen FPO, Anglo-Scottish FPO, Fleetwood FPO, NE of Scotland Fishermen's Organisation, and the Scottish Fishermen's Organisation ; and those whose members mainly fish the high seas include The Fish Producers' Organisation, and Grimsby FPO [SHC92], [S91].

In 1998 17 of the 19 POs belonged to the Edinburgh-based UK Association of Fish Producer Organisations (UKAFPO), which promotes co-operation between POs, and has one part-time employee with secretarial support from the Scottish Fishermen's Organisation, the biggest PO [NCGILS98]. However, several POs have recently resigned their membership of UKAFPO in protest at the North Sea Fishermen's Organisation being admitted, a PO in which so-called « quota hoppers » account for roughly half the membership [PJ99].

A list of the 19 UK POs and their membership at the beginning of 1998 is given below:

Table 1. List of UK POs and number of over 10 metre vessels in membership on 1/1/98

PO	Year officially recognised	No. of over 10 metre vessels
The Fish Producers' Organisation	1973	39
Aberdeen Fish Producers' Organisation	1974	62
Scottish Fishermen's Organisation	1974	436
South Western Fish Producers' Organisation	1974	106
Anglo-Scottish Fish Producers' Organisation	1975	113
Cornish Fish Producers' Organisation	1975	126
Anglo-North Irish Fish Producers' Organisation	1976	69
Northern Ireland Fish Producers' Organisation	1976	128
Yorkshire & Anglia Fish Producers' Organisation	1977	26
Fife Fish Producers' Organisation	1980	37

North-East of Scotland Fish Producers' Organisation	1980	94
Grimsby Fish Producers' Organisation	1981	49
Shetland Fish Producers' Organisation	1982	49
Fleetwood Fish Producers' Organisation	1983	24
Lowestoft Fish Producers' Organisation	1993	11
North Sea Fishermen's Organisation	1993	33
Wales & West Coast Fish Producers' Organisation	1993	55
Northern Producers' Organisation	1995	23
West of Scotland Fish Producers' Organisation	1995	47

Source : MAFF

Risks of declining fishing opportunities to existing vessel operators due to the non-sector being open to new entrants (e.g. through transfers from other fisheries) [H97] and transfers out of vessels with relatively good track records [S92] helps to explain the growth of POs. This process was accompanied by declining economic and political influence of the non-sector [P97], which increasingly became viewed by some vessel operators as non-viable [YSM95].

4.1 Quota Management

In the UK, POs are responsible for managing « sectoral » quotas allocated by the government on an annual basis, which set out the maximum level of landings of quota species that may be landed by all the over 10 metre vessels belonging to the PO. The first « sectoral allocation » was made to Shetland FPO in 1984, when it was given responsibilities for managing its own Area IV & VI haddock quotas. The system has gradually been extended to other POs, and by 1991 all UK POs were managing quotas on behalf of their members. The extension of the system in area VII was associated with the attempt by the government to curb the misreporting of catches [E95]. In 1996 sectoral allocations accounted for 96%, 91% and 84% of demersal quotas in Areas IV, VI, and VII respectively [H97].

Sectoral allocations to POs are based upon a formula agreed between government, PO and non-sector interests, with ministers retaining the power to reallocate quotas if a PO fails to fully utilise an allocation. Until 1998, allocations were based upon the historic « track records » of member vessels, reflecting the past fishing patterns (grounds fished, species targeted, etc.) of member vessels, originally over the previous 5-year period. As a

consequence of pressure from the industry, the reference period used was progressively reduced to 3-years in the case of demersal species, and 2-years for pelagic and distant-water species [E95].

Initially the system provided incentives for POs to build up their track records prior to requesting a sectoral allocation, and to decline taking a sectoral quota in years when their members' track record was worse than that of the non-sector, unless obtaining a sectoral allocation was deemed advantageous to prevent an early closure of the fishery [S92]. However, in order to reduce misreporting problems associated with fish being recorded as being caught in a different area from where they were in fact caught [E95], from 1995 POs were obliged to accept sectoral allocations for all demersal species (but not pelagics) [H97].

It became widely recognised that the rolling system of track records used to make annual allocations provided an incentive for vessel operators to over-declare catches («ghost fish») rather than risk losing future fishing opportunities by failing to fully take a current quota allocation. The resulting data degradation, and pressure to reduce delays and annual fluctuation in allocations [E95], spurred MAFF to change the allocation system for ICES areas IV, VI and VII from one based upon rolling track records, to one based upon a fixed reference period (1994 - 1996), with effect from 1999. In order to smooth out any anomalies in changing to a fixed quota allocations system, each PO was then given 2.5% of the total sectoral allocation as a central «pool» to allocate as it deemed necessary [MA98b]. This change to a fixed reference period system originated as a proposal from the industry [HC98b].

Regional and other characteristics of POs tend to be reflected in their sectoral allocations. For example, in 1996 the five east of Scotland POs together with the Shetland FPO were allocated over 90% of the North Sea haddock quota, with a similar proportion of the UK's Area VII nephrops quota being allocated to the two Northern Irish POs, and roughly half the UK's Western mackerel, North Sea and West of Scotland herring quotas being allocated to the Scottish Fishermen's Organisation [H97].

Membership can also reflect the method of quota allocation used. For instance, vessel owners with relatively high track records might be expected to prefer belonging to POs which allocate individual quotas on the basis of track records.

POs are free to decide how to manage their sectoral allocations, and to swap quotas with other POs, although until 1993 such swaps had to balance in terms of «cod-equivalents».

From 1996 « gifting » of quotas was allowed, with any associated financial arrangements being solely a matter for the POs [H97].

Since 1994 POs have been allowed to retain and « ring fence » the track records of member vessels voluntarily surrendering their licence, with the vessel's owners generally being financially compensated by the PO and the PO retaining the track record in the event of other vessels leaving the PO. In the case of the Shetland FPO, around 20% of its cod quota is ring-fenced in this way [P97].

Historically, most POs have used fixed maximum monthly landings restrictions to allocate their sectoral quotas between member vessels. In the case of the Aberdeen Fish Producers' Organisation these also vary between different vessel lengths in an analogous manner to the allocation of non-sector quota by government departments, but in most cases POs have applied the same landings limits to all vessels [H97]. In aiming for an equitable distribution of fishing opportunities, a few POs, such as the Anglo Scottish FPO, have allocated quotas on a per-man basis [E95].

An individual vessel quota (IQ) system with quotas being allocated on the basis of individual vessel's track records has been used by the Fish Producers' Organisation since 1986 and similar systems have increasingly been introduced for particular species by other existing POs, and the newly established POs. IQs are generally allocated on an annual basis, although the Shetland FPO has used monthly allocations for some quotas. Where more than one vessel has the same owner, individual vessel allocations can usually be combined to give added flexibility and within POs, vessel operators are generally free to swap and trade their IQs [HHC95].

The ability to acquire additional fishing entitlements through licence purchases, implies that the current IQ allocation methods resemble individual transferable quota (ITQ) systems for some vessel operators [E95]. However, IQs at present represent more intangible fishing rights, as they currently have no legal status [H97] and fisheries can be closed before an IQ is fully taken if other fishermen overshoot their quota.

The allocation system can also vary within POs. For instance, Scarborough members of the Yorkshire & Anglia Fish Producers' Organisation reportedly used «per man» quotas, while other regions used an IQ system [S91]. Some POs devolve the management of specific allocations to smaller groups within the PO [E95].

The method of quota allocation used can be an important influence on a vessel operator's decision to join a particular PO [P97]. As an influence upon the PO's sectoral allocations, the decision to accept a vessel into membership may also be influenced by the vessel's track record [S92]. Alterations in the system used to allocate quotas can result in membership changes [P97], as can relative fishing opportunities more generally [YSM95].

By enabling vessel owners themselves to decide how to allocate quotas over the year in order to maximise fishing returns, the sectoral allocation system is in line with the subsidiarity principle. It was broadly welcomed by the industry as an improvement on the previous system of fixed weekly or monthly quotas administered by government departments, which had been criticised by the industry as inefficient and inflexible, unable to take regional disparities, weather or market conditions into account [G92].

Under the Sea Fishing (Enforcement of Community Control Measures)(Order) 1994, POs are empowered to fine member vessels which exceed their quota allocations and in persistent cases, can apply for the vessel's licence to be withdrawn [E95].

Representing a form of co-management, the sectoral allocation system has been trumpeted by fisheries departments as giving «..fishermen real and tangible control over the management arrangements », amounting to « ..autonomous management by the industry itself » [R93]. While many vessel operators have undoubtedly benefited from the new arrangements, they also resulted in competition for sectoral quotas between POs and between the sector and non-sector, which may have exacerbated compliance problems [S92].

The sectoral allocation system resulted in friction between fishermen fishing the same stock from the same port but facing different fishing opportunities associated with PO membership differences [SP95]. This was particularly apparent when some POs overshot their sectoral quotas resulting in the early closure of a fishery without any immediate process for compensating vessel operators with remaining quota allocations [S91]. The system also seems to have presented fisheries departments with a convenient mechanism for distancing themselves from management failures such as early closures by blaming the fishermen themselves (see [R93]).

4.2 Withdrawal schemes

EC intervention payments based upon minimum landings prices are only available to PO members, and prior to the mid 1980s most POs were established with a view to taking

advantage of these. However, as quota restrictions tightened, quota management arrangements became more important, and not all of the more recently established POs avail themselves of these EU withdrawal schemes. In 1993 three POs operated no scheme, and five POs operated autonomous self-funded schemes, allowing flexibility in setting the levels of withdrawal prices. The volume of fish withdrawn is generally below 3% of the total landed [HHC95].

4.3 Miscellaneous functions

Within their objective of fostering the commercial interests of their members, POs have a marketing remit and a few are involved in fish processing ventures, especially for species which tend not to be sold at auction. The Scottish Fishermen's Organisation has herring, mackerel and prawn processing facilities [P97] and the Shetland Fish Producers' Organisation has pelagic processing interests [HHC95].

While all have rules concerning the use of refrigeration or ice, some POs have additional restrictions aimed at ensuring the quality of fish landed. For instance, vessels belonging to the North Sea Fishermen's Organisation are required to land their catches within a week, those belonging to the Fleetwood Fish Producers' Organisation are barred from landing the smallest grades of some species, while several POs prohibit the landing of « rounders » (e.g. ungutted haddock and whiting) [HHC95].

5. Fishermen's Organisations

The principal UK fishermen's organisations are the National Federation of Fishermen's Organisations (NFFO) and the Scottish Fishermen's Federation (SFF). In 1998 these together had 8850 fishermen and 2200 vessels in membership, representing around 70% of total UK landings value [NCGILS98].

Established in 1973, the SFF represents fishermen belonging to six Scottish regional associations (each of which maintains its own secretariat), as well as members of the Fishsalesmen's Association (Scotland) Ltd. In 1998 the SFF had 4295 fishermen and around 800 vessels in membership [NCGILS98].

Founded in 1977, the NFFO represents 8 POs and 46 port associations based in England, Wales, Northern Ireland, and the Channel Islands. In 1998 the NFFO had 4554 fishermen and 1428 vessels in membership [NCGILS98].

For both the NFFO and the SFF, representatives are appointed by constituent associations to a central decision-making body. In the case of the NFFO's executive committee, decisions are reportedly made by consensus whenever possible, with members drawn from its 5 regional committees and from six POs [C97]. At central level, both organisations maintain a small secretariat of permanent staff.

The Northern Ireland Fishermen's Federation (NIFF) represents fishermen belonging to the Northern Ireland Fish Producers' Organisation (but not those of the Anglo-North Irish Fish Producers' Organisation), and in 1998 had 580 fishermen and 132 vessels in membership. The Federation of Highlands and Islands Fishermen represents fishermen belonging to four associations based in the North and West of Scotland, and in 1998 had 1600 fishermen and 400 vessels in membership [NCGILS98].

Other fishermen's organisations not affiliated to the national organisations include the South Devon Fishermen Ltd and the South West Handliners Association. So-called « flag ships » belonging to the North Sea PO, and the Wales and West PO, (which in 1998 had 32 and 43 vessels respectively in membership, covering 190 and 300 fishermen respectively), are also not affiliated to the national organisations [NCGILS98].

In contrast to other UK fishermen's organisations which have grown on a regional basis, the Fishermen's Association Limited (FAL) represents fishermen who support the « Save Britain's Fish » (SBF) campaign which argues that sustainable fisheries management can only be achieved once the UK withdraws from the CFP and has its own 200 mile exclusive fishing zone [N98]. Founded in 1995 by former SFF members from Fraserburgh, FAL soon achieved wider support, particularly from fishermen in the other principal Scottish East Coast whitefish ports and in 1998 had 700 fishermen and 140 vessels in membership, accounting for around 7% of total UK landings [NCGILS98].

Support for FAL increased not least due to disaffection with the CFP, and the quota system in particular, which is widely viewed by fishermen as the major cause of crises in the industry [N98], including the activities of the «quota hoppers ». Not only are the latter viewed as depriving UK fishermen of their birthright, but it is claimed that UK waters contain some four-fifths of EU stocks, while under the CFP the UK has been allocated only two-fifths of the TACs, with an associated value of around one sixth of the total, implying that they failed to receive their rightful share of fishing opportunities. This view of the necessity of reasserting

national control over fisheries policy apparently now represents the position of the Official Opposition party (the Conservatives), although it is not held by all its Members [see HC99b].

As debate in the fishing press has intensified and become more acrimonious concerning whether withdrawal from the CFP is either feasible or desirable, individual fishermen have increasingly called for the main fishermen's associations to clarify their positions and strategic aims. Increasing support for SBF allegedly was a major factor in the resignation of the Chief Executive of one of the main fishermen's associations [P1].

Echoing some of the arguments used by SBF campaigners but without calling for a complete withdrawal from the CFP, in May 1997 the NFFO issued a policy statement urging greater subsidiarity within the CFP, and for management responsibilities to be devolved entirely to each coastal state within its own 200 mile exclusive fishing zone. While implicitly calling for an increase in the UK share of fishing opportunities by stating that « ..the only fair, rational and consistent basis for national allocations, in the long term, is to align national quota availability with that country's contribution to resources.. », it also recognised that attempting to alter the « agreed relative stability keys » could destabilise relations between member states [NFFO97], [C97].

In January 1999 the NFFO and the SFF issued a joint policy statement calling for the establishment of exclusive 12-mile limits, the implementation of Coastal State Management of fisheries based upon Zonal Management Committees and of a « Relative Stability Plus » principle to reward states adopting additional conservation measures. Zonal Management Committees are envisaged to comprise of Ministers only from Member States having quota allocations in the particular sea areas concerned [NFFOS99].

Although UK fishermen's organisations have no legal fisheries management responsibilities, they are consulted on proposed changes and lobby at national and international levels on behalf of their members, not least to press for parity with other member states and access to EU and other public funding for such purposes as fleet modernisation. For instance, almost 80 per cent of UK fishing vessels over 10 metres are reported to be over 20 years old, with the average age being higher than in other Member States, which fishermen's organisations argue implies high fishing costs, impairing international competitiveness, as well as affecting crew safety [NFFO98].

In order to increase mutual understanding, fishermen's organisations have in recent years arranged regional meetings to discuss stock assessment methods and results between the

UK scientists involved and local fishermen. Meetings were often timed to take place prior to the ICES Working Group meetings at which TACs would be recommended for the following year [NFFO98].

On an ad hoc basis, informal fishery management initiatives are also initiated locally by groups of fishermen. For example, dissatisfaction with official scientific advice led the Mallaig & North West Fishermen's Association to employ their own biologist to carry out stock assessments. Oyster fishermen in the Medina Estuary, Isle of Wight initiated an informal agreement to use the same rules as applied by the Southern Sea Fisheries Committee in the adjacent area, and in 1996 formed a company in an attempt to formalise these arrangements [SE97].

6. The Sea Fish Industry Authority

The Sea Fish Industry Authority (SFIA) was established under the Fisheries Act 1981 with a duty to promote the efficiency of the sea fish industry while "having regard to the interests of consumers". A non-departmental public body (NDPB) or « QUANGO » (Quasi-autonomous Non-governmental Organisation), it combines the responsibilities of the former Herring Industry Board (founded in 1935) and the White Fish Authority (created in 1951). Salmon and trout are excluded from its remit [MA98c].

With responsibility for administering a series of grant schemes on behalf of Fisheries Departments for fishing vessel construction and modernisation, and currently for the Fishing Vessel Safety Grant Scheme, SFIA also carries out research and development, provides advice and training, and promotes fish consumption and exports [MA98c]. Apart from the grant and loan schemes, it has no direct fishery management responsibilities, although its research in fields such as gear selectivity and stock enhancement have obvious management applications, and it provides a range of economic and technical advice on fisheries management issues.

SFIA tries (often with limited success) to collect data on vessel costs and earnings, as well as other statistical information of relevance to fisheries management, and undertakes economic appraisals of vessel viability in connection with applications for preferential rate loans from the Ship Mortgage Finance Company (SFMC). It publishes an international compilation of fisheries economics abstracts, and a UK and European legislative review.

Commissioning ad hoc surveys of skippers and other industry personnel on matters of fisheries management interest (eg [V90], [ADSM97]), SFIA also organises meetings for fishing industry representatives to discuss management and other issues of concern, which occasionally lead to regulatory changes. For example, meetings organised by the Authority to address inshore fishermen's concerns regarding the granting of exclusive shellfish cultivation rights, eight years later led to the introduction of the Sea Fisheries (Shellfish) (Amendment) Bill 1999 to permit the use of creels and other non-damaging gear in areas covered by Several Orders [HL99].

The Authority is funded primarily by a mandatory levy on the first-hand sale of sea fish, with the formal incidence of this charge being on buyers. The levy provided £8.2 million in revenue in 1997/98, compared to £0.5 million in direct government funding (including Board Members salaries) and £1.9 million from all other sources (e.g. consultancy fees and contributions towards specific projects). Restricted by the Act to a maximum of 2p per kilogram or 1% by value, the levy rate stood at 0.84p per Kg for the main white fish species in 1998 [MA98c].

Although the levy could also be used as a fisheries management tool, in practice this has never been attempted. On the contrary, rather reducing fishing on over-exploited stocks by increasing costs, the levy has largely been used to try to stimulate demand for fish, which could be expected to encourage further investment by the catching sector and intensification of fishing pressure.

Under the management of a Chief Executive, the SFIA had a total of 151 employees at the end of 1997. The board is appointed by Ministers and has up to 12 members. The Chairman, Deputy Chairman and two others are appointed on the basis of having no financial or commercial interests in the industry, with the others appointed on the basis of being representative of the sector, with nominations being requested from the main industry representative bodies [MA98c].

Reporting that only four of the 46 industry responses were in favour of abolition, while the majority favoured continuation, the quinquennial review of the Authority published in October 1998 recommended that the SFIA should be retained. In line with the greater government emphasis on consumer protection, the Review suggested that consumer representatives join the appropriate Advisory Committees and that the SFIA produce a policy statement on consumers needs in the areas of hygiene, health, environment and price and how the Authority will respond to these [MA98c].

Reflecting current government thinking on the appointments system, the review argued that: « Industry selection of Board Members is unlikely to be an improvement on the present system of selection ». It noted that « Members appointed as representatives of particular interest groups would be likely to attach more importance to the interests of the Groups which they represented than to the wider aims of the Authority with the risk that some interest groups might benefit at the expense of the industry as a whole » and « could lead to demands from the many diverse areas for representation. » [MA98c (6.3.1)].

7. Summary & Conclusions

The above survey of UK fisheries management illustrates the diversity of institutions and arrangements in operation. It also demonstrates the somewhat haphazard evolution of the fisheries management mechanisms employed. Rather than representing a stable regulatory framework for vessel operators, there have been frequent changes over the past couple of decades.

The current system has few admirers and, due in part to the fragmentary nature of the changes, has unwittingly led to some outcomes generally considered undesirable, such as the escalation in licence and track record values, and distortionary affects associated with widespread modifications in vessel design to create so-called « rule beaters ». Indeed, the incremental process of change might perhaps be compared to attempting to fix a leaking bath with a new sticking plaster each time a substantial new leak appears, with each subsequent measure tending to further complicate the regulatory system.

It is perhaps unsurprising given the very low ratio of economists to biologists and gear specialists employed, that management measures introduced in the UK have been of an administrative/technical type, and only very exceptionally seem to have been influenced by economic advice. Economic data, such as vessel costs and earnings, which could provide a reliable indicator of the state of the sector, barely exists at national level for the UK fleet, and the quality of the data collected appears to be deteriorating despite calls for improving its collection [eg HPMA98]. (Although it is also notable that in many fisheries stock assessment data is severely limited too, particularly in those subject to precautionary TACs).

As with many other European fleets, misreporting of catches by UK vessels has in the past been deemed a very significant problem. Although evaluation of the true extent of any illegal

activity is always difficult, it is widely considered that under-reporting of catches has declined markedly since the mid 1990s [eg MRAG98], and that recent measures, notably the designated ports scheme, have had considerable success for the moment in reducing the problem of misreporting [HC98b]. However, unequal treatment in terms of relatively poor enforcement in other countries (eg France and Spain) remains a particular concern of British fishermen.

In an era of the pre-eminence of Public Relations managers and « spin doctors », it is heartening that the UK Government is becoming more open to scrutiny in some quite significant respects. Increasingly information is being made freely available on the internet, with official web sites publishing recent legislation, parliamentary proceedings, and many other reports. The appointments system also seems to be becoming less secretive and less a matter purely of political patronage.

However, scope remains for increasing transparency, openness and impartiality, and for ensuring that research on matters of public interest is not simply shelved for reasons of expediency and that those who espouse openness are not harassed, or worse. Although it is difficult to gauge the extent to which it exists, unfortunately such bad practice occurs even in the fisheries sector. Only a year ago there was a case of a report being suppressed, with strong circumstantial evidence linking this to subsequent extraordinary events. (Notably, the head of department who had initially sanctioned the report's release was made redundant, while the next most senior member who had been less favourable to it's release remained in post within a new management structure under the director of the department whose work had been scrutinised and not found to be effective).

As illustrated at a wider level by the extraordinary events of the last few weeks culminating in the resignation of all 20 European Commissioners, transparency, openness and impartiality are concerns not confined to the UK. Indeed in his recent annual report to the European Parliament, EU Ombudsman Jacob Soderman also highlighted « unnecessary and inappropriate » limitations on his enquiries, stating that if understood literally, existing rules governing testimony by officials of EU institutions could « ..oblige a witness to lie .. if instructed to do so by superiors » [EO99].

Facilitated by greater transparency in bridging gulfs in perception, the Government's intention of increasing fishermen's participation in the regulatory process is warmly welcomed by the industry, and could be expected to ease the current crisis of legitimacy and improve compliance [NFFO97]. One suggestion mooted by the industry is to forge closer

relationships with scientists and administrators by fishermen becoming more involved in stock assessments and other scientific research, with scientists spending time aboard commercial fishing vessels gathering data, as is current practice in Danish fisheries. Barrie Deas, NFFO Chief Executive, recently pointed out that if « scientists.. have a sound understanding of the commercial realities under which fishermen operate and equally fishermen have some kind of understanding of the objectives and techniques that the scientists are pursuing and why they are pursued, you are well down the road to some sort of collaborative approach » [HC99c].

In moving towards co-management, it might be argued that there may be further risks of regulations being made purely to benefit the industry. For instance, fishing industry objectives may diverge markedly from what is deemed socially desirable, if vessel operators value short term returns relatively highly (implying that their preferences are based upon high implicit discount rates). Potential conflicts of interest also relate to environmental concerns, such as fishing gear interactions with marine mammals or seabirds, and biodiversity concerns, which tend to be perceived to be of greater importance by the general public than the fishing industry. Questions such as a potential cull of the seal population is an obvious example of a contentious issue where such a mismatch of perceptions seems to exist [HC99c].

Although some shift in emphasis towards representing the interests of consumers more fully is apparent, the description of MAFF by a former Minister as «a trade union for producers» is indicative of the extent to which government has traditionally allied itself with industry concerns. An obvious divergence of interests is evident regarding issues such as public expenditure on advertising, as particularly where fish supplies are restricted by quotas, any increase in demand is bound to push up prices, a result of no benefit to consumers, unless genuine improvements in public health or other social objectives also result.

It is beyond the scope of this paper to analyse in detail potential improvements, (for a preliminary discussion from an economic perspective of some of the management options see [RV97]). However, it is notable that the appreciation in value and trade in licences and track records has increased inertia mitigating against many forms of more fundamental regulatory change. After all, purchasers, in particular, of such fishing rights cannot be expected to welcome regulatory changes which diminish the values paid for these assets. Despite Government statements that there are no plans to introduce ITQs [HC99a], on the basis of past trends and the « one-way street » type transition from IQs experienced in the

Netherlands, it is perhaps most probable that, more by accident than design, UK quota management will increasingly come to resemble an ITQ system.

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Appendix I

UK Sea Fisheries & Fisheries-related Legislation¹

1967 The Sea Fish (Conservation) Act
1992 The Sea Fish (Conservation Act)
1977 SI No. 1244: The Sea Fish (Conservation) (Isle of Man) Order
1982 SI No. 80: Receiving of Trans-shipped Sea Fish (Licensing) Order
1983 SI No. 1139: The Receiving of Trans-shipped Sea Fish (Licensing) (Variation) Order
1984 SI No. 1522: The Undersized Scallops (West Coast) Order
1984 SI No. 1523: The Scallops (Irish Sea) (Prohibition of Fishing) Order
1986 SI No. 496: The Crab Claws (Prohibition of Landing) Order
1986 SI No. 497: The Undersized Crabs Order
1986 SI No. 988: The Scallops (Irish Sea) (Prohibition of Fishing) (Variation) Order
1989 SI No. 919: The Undersized Velvet Crab Order
1989 SI No. 1066: The Sandeels Licensing Order
1989 SI No. 1284: The Sea Fish (Specified Sea Area) (Regulation of Nets and Prohibition of Fishing Methods) Order
1989 SI No. 1285: The Undersized Bass Order
1989 SI No. 2443: The Undersized Crabs (Variation) Order
1990 SI No. 2051: The Sea Fish (Specified Manx Waters) Licensing Order
1990 SI No. 2052: The Sea Fishing (Specified Western Waters) (Restrictions on Landing) Order
1991 SI No. 1380: The Sea Fish (Specified Sea Areas) (Regulation of Nets and Other Fishing Gear) Order
1991 SI No. 2565: The Sea Fishing (Specified Western Waters) (Restriction on Landing) (Variation) Order
1992 SI No. 1212: The Undersized Whiting Order
1992 SI No. 1344: The Sea Fish (Specified Sea Areas) (Regulation of Nets and Other Fishing Gear) (Variation) Order
1992 SI No. 2633: The Sea Fish Licensing Order
1993 SI No. 188: The Sea Fish Licensing (Variation) Order
1993 SI No. 1178: The Undersized Lobsters Order
1993 SI No. 1196: The Sea Fish Licensing (Time at Sea) (Principles) Order
1993 SI No. 1887: The Norway Lobsters (Prohibitions of Methods of Fishing) Order
1993 SI No. 2291: The Sea Fish Licensing (Variation) (No. 2) Order
1994 SI No. 2813: The Sea Fishing (Licences & Notices) Regulations

1967 The Sea Fisheries (Shellfish) Act

¹ Excludes salmon & trout regulations

1974 SI No. 1555: The Molluscan Shellfish (Control of Deposit) Order
1978 SI No. 560: The Molluscan Shellfish (Control of Deposit) (Scotland) Order
1981 SI No. 994: The Lobsters (Control of Deposit) Order
1981 SI No. 995: The Lobsters (Control of Importation) Order
1983 SI No. 159: The Molluscan Shellfish (Control of Deposit) (Variation) Order
1993 SI No. 177: The Loch Crinan Scallop Fishery Order

1968 The Sea Fisheries Act

1970 SI No. 318: The Foreign Fishing Boats (Stowage of Gear) Order

1976 The Fisheries Limits Act

1983 SI No. 253: The Fishing Boats (European Economic Community) Designation Order
1986 SI No. 382: The Fishing Boats (European Economic Community) Designation (Variation) Order
1992 SI No. 3108: The Fishing Boats (European Economic Community) Designation (Variation) Order
1996 SI No. 248: The Fishing Boats (European Economic Community) Designation (Variation) Order
1996 SI No. 1035: The Fishing Boats (Specified Countries) Designation Order
1997 SI No. 1630: The Fishing Boats (Specified Countries) Designation (Variation) Order
1997 SI No. 1750: The Fishery Limits Order

1981 The Fisheries Act

1984 SI No. 291: The Sea Fishing (Enforcement of Community Licensing Measures) (North of Scotland Box) Order
1989 SI No. 1190: The Fisheries Act 1981 (Amendment) Regulations
1993 SI No. 2015: The Fishing Boats (Marketing and Documentation) (Enforcement) Order
1994 SI No. 451: The Sea Fishing (Enforcement of Community Control Measures)(Order)
1996 SI No. 2: The Sea Fishing (Enforcement of Community Control Measures) (Amendment) Order
1997 SI No. 1949: The Sea Fishing (Enforcement of Community Conservation Measures) Order
1997 SI No. 2841: The Sea Fishing (Enforcement of Community Conservation Measures) (Amendment) Order
1998 SI No. 268: The Sea Fishing (Enforcement of Community Quota Measures) Order
1998 SI No. 269: The Third Country Fishing (Fishing Enforcement) Order

1983 The British Fishing Boats Act

1983 SI No. 482: The British Fishing Boats Order

1984 The Inshore Fishing (Scotland) Act

1994 The Inshore Fishing (Scotland) Act

1989 SI No. 2307: The Inshore Fishing (Prohibition of Fishing and Fishing Methods) (Scotland) Order
1994 SI No. 326: The Inshore Fishing (Prohibition of Fishing and Fishing Methods) (Scotland) Amendment Order

1994 SI No. 2124: The Inshore Fishing (Scotland) Act 1994 (Commencement) Order
1995 SI No. 1373: The Inshore Fishing (Prohibition of Fishing for Cockles)(Scotland) Order
1996 SI No. 1475: The Inshore Fishing (Prohibition of Fishing and Fishing Methods) (Scotland) Amendment Order
1996 SI No. 1907: The Inshore Fishing (Monofilament Gill Nets) (Scotland) Order

1972 The European Communities Act
1986 SI No. 1272: The Sea Fish (Marketing Standards) Regulations
1989 SI No. 687: The Sea Fish (Marketing Standards) (Amendment) Regulations
1994 SI No. 452: The Sea Fish (Marketing Standards) (Amendment) Regulations

1988 Merchant Shipping Act (c. 12)
1975 The Merchant Shipping (Crew Accommodation) (Fishing) Regulations
1988 The Merchant Shipping (Fishing Vessels -Tonnage) Regulations
1993 The Merchant Shipping (Registration of Ships) Regulations
1998 SI No. 929: The Merchant Shipping (Crew Accommodation) (Fishing) (Amendment) Regulations
1998 SI No. 1915: The Merchant Shipping (Registration of Ships) (Tonnage Amendment) Regulations
1998 SI No. 1916: The Merchant Shipping (Tonnage) (Fishing Vessels) (Amendment) Regulations
1998 SI No. 2976: the Merchant Shipping Registration (Registration of Ships) (Amendment) Regulations

1975 The Fishing Vessels (Safety Provisions) Rules
1988 The Fishing Vessels (Life-Saving Appliances) Regulations
1998 SI No. 927: The Fishing Vessels (Life-Saving Appliances) (Amendment) Regulations
1998 SI No. 928: The Fishing Vessels (Safety Provisions) (Amendment) Rules
1998 SI No. 2411: The Merchant Shipping and Fishing Vessels (Health and Safety at Work) (Employment of Young Persons) Regulations

1995 The Merchant Shipping Act
1998 SI No. 2857: The Merchant Shipping and Fishing Vessels (Manual Handling Operations) Regulations

1997 SI No. 1924: The Fishing Vessels (Decommissioning) Scheme

The Sea Fisheries Regulation Act 1888
1966 The Sea Fisheries (Regulation) Act
1992 The Sea Fisheries (Wildlife Conservation) Act
1994 The Conservation (Natural Habitats etc.) Regulations
1995 The Environment Act

1997 The Food Protection (Emergency Prohibitions) (Dounreay Nuclear Establishment) Order.

1878 Territorial Waters Jurisdiction Act

1987 Territorial Sea Bill

1964 Territorial Waters Order-in-Council

1979 Territorial Waters (Amendment) Order-in-Council

1964 Continental Shelf Act

1964 Continental Shelf (Designation of Areas) Order

1965 SI No. 1531 Continental Shelf Order

1968 SI No. 891 Continental Shelf Order

1971 SI No. 594 Continental Shelf Order

1974 SI No. 1489 Continental Shelf Order

1976 SI No. 1153 Continental Shelf Order

1977 SI No. 1871 Continental Shelf Order

1978 SI No. 178 Continental Shelf Order

1978 SI No. 1029 Continental Shelf Order

1979 SI No. 1447 Continental Shelf Order

1964 Fishery Limits Act

1976 Fishery Limits Act

1977 Order-in-Council