Sharing responsibilities in fisheries management
Part 2 - Annex: case studies

Luc van Hoof (co-ordinator)
Ellen Hoefnagel
Jan Willem van der Schans
Jesper Raakjær Nielsen (IFM, Denmark)
Anne-Sofie Christensen (IFM, Denmark)
Sten Sverdrup-Jensen (IFM, Denmark)
Alyne Delaney (IFM, Denmark)
Svein Jentoft (University of Tromsø, Norway)
Knut Mikalsen (University of Tromsø, Norway)
Geir R. Karlsen (University of Tromsø, Norway)
Clotilde Bodiguel (IDDRA, France)
Joseph Catanzano (IDDRA, France)
Juan Luis Suarez de Vivero (University of Seville, Spain)
Inmaculada Martínez Alba (University of Seville, Spain)
Sonia Feria Domínguez (University of Seville, Spain)
Dominique Rommel (PHAROS Atlantic, UK)

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1.1.1 Introduction

The CFP policy is an instrument used by the European Union (EU) to manage common pool fish resources in compliance with the original European Community's treaties. Introduced in 1983, the CFP was preceded by a boom in stock of several important fish species that occurred in the 1970s (Symes, 1997). The CFP operates in four areas (Hatcher, 2000):

- a common structural policy;
- a common market organisation;
- a resource conservation and management system; and
- an external policy (concerned with fisheries agreements with third countries).

The Common structural policy section of the CFP dates back to the 1970s when the six original members of the EU adopted regulation to establish common rules and actions to promote harmonisation and balanced development of the fishing industry. Additionally, the regulation also lays down the equal-access of Members States fishing fleets into each other's waters (Hatcher, 2000).

The Common market organisation provides a system of marketing standards, including minimum prices (linked in to a set of trade provisions designed to protect EU fishers from imports priced below going market rates) and compensation payments for products withdrawn from the market at minimum price levels.

In 1977 all EC member states extended their fishery limit from 12 miles to 200 miles (except the Mediterranean), creating a Community fishing zone. Soon after, negotiations on limiting catches in the zone began, with much difficulty; finally in 1983 an agreement was reached. Although referred to often as the Common Fisheries Policy, the resource management system provides for the setting of Total Allowable Catch (TAC) for a number of key stocks and allocation of these national quotas at the same levels is based on the principle of 'relative stability'. The International Council for the Exploration of the Sea (ICES) gives biological advice on the state of the stocks and fishing mortality. TACs adopted must be agreed upon by the Council if Ministers agree (Hatcher, 2000).

Although there are many technical and conservation measures that effect decisions concerning the TACs and fishing effort levels, the final use of national quotas are left to the Member States themselves, provided that the basic principles of the EU membership are adhered to.

Adoption of the CFP

The CFP had its early beginnings with the Hague Resolution 1976 (a special meeting at The Hague attended by Foreign Ministers which laid down the future development of the CFP). Although initiatives were taken, the formation of the CFP proved to be lengthy as Member states procrastinated the outcome of such a policy. A Council Declaration made in May 1980, showed that the Council was in agreement that the completion of the CFP was essential and that a policy had to be put in effect by 1 January 1981. However, it was not until December 1982 that there was agreement to adopt Council Resolution (EEC) No. 170/83 establishing a Community System for the conservation and management of fisheries resources. This regulation came into effect on 25 January 1983 (Long and Curran, 2000). The council agreed on the means by which the majority of stocks were to be assigned to Member States.

CFP Implementation Measures, History and Development

With the adoption of the 1983 Management Regulation, the Council agreed upon a set of technical measures for the conservation of fishery resources. The 1983 Technical Regulation (Council Regulation No. 171/83) contains detailed rules consisting of minimum mesh sizes and fish sizes, maximum by-catches and closed seasons, for the conservation of the Atlantic and North Sea. The technical measures are aimed at protecting small classes of fish and protecting marine ecosystems by improving the inter-species selectivity of fishing gear (Long and Curran, 2000).

The original Technical Regulation for the North Sea was amended six times and ultimately repealed when the Council adopted Regulation 3094/86, which was also subjected to 20 amendments. After the adoption of Regulation 3094/86 and two years of debate in Council working groups, a new regulation was adopted on March 30 1997. However, the measures of the 1997 regulation, which were aimed at reducing the exploitation of immature fish and to reduce the number of undersize fish discarded by fisherman at sea, were not implemented till 2000. The regulation, which also prohibited the sale and marketing of undersize fish, was implemented later to allow for industry to adjust to their new obligations (Long and Curran, 2000).

Enforcement Measures

The CFP has evolved from a basic policy in its earlier days to a comprehensive fisheries regime today. The CFP regulates all aspects of the fishing industry. In 1993, a new control regulation was created after a review of the CFP in 1992 concluded that the policy had to be more effective and weaknesses were identified and new measures were adopted to improve surveillance in various strands of the CFP. The 1993 regulation measures, reinforced the role of surveillance and extended its area of actions from direct conservation measures to include implementation in the field of structure, marketing, transport and sale of fish and shellfish (EC, 1995-2002).

Other than the rules governing the CFP that are adopted at the Community, the main responsibility for ensuring the rules are applied and enforced rests with the competent

inspection and control authorities in each Member State. Each Member State has to police its own waters and consequently control the activities in its territory. The organisation for Monitoring, Controlling and Surveillance (MCS) services differs between to Member States, as some Member States have inspection services specifically for fisheries activities and others rely on several government departments, which also perform functions other than fisheries surveillance. The Dutch organisation AID (General Inspection Service) which serves with the Ministry of Agriculture, Nature Management and Fisheries, inspects all CAP (Common Agricultural Policy) and CFP regulations (Verborgh, 2000).

Member States have to ensure that vessels that fly their flags comply with regulations in force wherever they operate (which is a problem for Member States who have vessels that are quota hopping and using their flag for purely economic purposes). In order to manage their water and territories and vessels, Member States require a network of services including surveillance and inspection activities, landing, marketing and transportation of fish products, administrative surveillance of structural and other measures as well as procedures for the prosecution and punishment of the wrongdoers in courts (EC, 1995-2002).

The inspection service that exists at Community level (Community Inspectorate) has a role ensuring effective enforcement, fairly and equally across the Community. Although, the Inspectorate does not carry out any direct inspections (except when operating in international water within the framework of regional fisheries organisations), they accompany and observe national inspectors in the course of their operations and report their findings to the Commission. The inspection service also monitors that Member States extend enforcement to their vessels, which fish in third countries and international waters (EC, 1995-2002).

Initially, the enforcement of the CFP was mainly concerned with conservation regulations such as quota management and implementation of technical measures. Catch levels were monitored in order to ascertain quotas availability. Catch composition was also inspected to determine whether rules regarding quantities of targeted species and non-targeted species where obliged. These checks were carried out at sea and at ports. Some Member States have resorted to aerial inspection to cross check vessels location with data contained in logbooks. If they do not match, skippers are suspected of misreporting. These inspection activities are still carried out. However, in order to strengthen the CFP and reduce fishing effort, further reinforcement and extension of enforcement regulation had to be carried out (EC, 1995-2002).

Prior to 1993, there were great differences in level of enforcement across the Community, which stemmed from the differences between Member States in most aspects of control activities. Great variations were found among national enforcement services, inspection priorities, prosecution proceedings and penalty rates. The 1993 regulation encouraged Member States to engage in common or coordinated inspection programmes. Improvements have been made, but the Commission's report shows that there is still vast room for improvement (EC, 1995-2002).

1.1.2 The European level and the Common Fisheries Policy

Common Fisheries Policy

Fisheries management systems of these eleven countries work within the context of the Common Fisheries Policy, although this policy differs for the Mediterranean fishery. Common market policy and structural policy apply to all Member States. Management and conservation of resources (TACs and quotas) does not apply to the four EU Mediterranean countries. This is also the case regarding the technical measures, although there a first step towards homogenisation in the Mediterranean has been taken in the EC Reg. 1626/94.

The European Union

The European Union is the supra governmental level. The Union consists of four institutions: The Council, the Commission, the European Parliament and the Court of Justice.[1] The Council has the power to adopt legislation, and can delegate this power to the Commission. The Member States' Ministers (for fisheries topics, Ministers with fisheries in portfolio) are representatives in the Council. The commissioners of the European Commission (EC) are appointed by the Member States for four years. The Common Fisheries Policy (CFP) is defined for 20 years, till 2002. The CFP consists of policies for Structures, Markets, External relations, Conservation and technical measures. Each year the European Commission determines Total Allowable Catches (TACs) per species and area in the European Atlantic and North Sea, on the basis of biological advice of the International Council of the Exploration of the Sea (ICES) and political negotiations. The EC allocates national quotas for different species to the Member States (not to the Mediterranean countries). CFP also establishes maximum fleet capacities within Member States through Multi-annual guidance programmes (MAGP) and sets marketing standards, a minimum price for selected species and a common trade regime with non-EU countries.

Role of science

Scientific advice to the Council is given by the Advisory Committee on Fisheries Management (ACFM) of ICES and by the Scientific, Technical and Economic Committee for Fisheries (STECF). Outside the EU the International Council for the Conservation of Atlantic Tuna (ICCAT) and the General Council of Mediterranean Fisheries (GCMF) of the FAO are important institutes (see Chapter 1 for more details).

In-between organisations

The EC consults the Advisory Committee on Fisheries which consists of representatives from all sectors of the fishing industry plus consumers. The European Association of Fish Producers' Organisations and Europêche, which represents fishing fleet owners, have also representatives in the Advisory Committee. The Committee consists of three sub-

[1] Here only the Council and Commission are considered.

committees, dealing with resources, markets, and structures. Relations between EC and the sub-committee on resources are strained for the reason that the sub-committee is frequently not consulted on proposals (concerning TACs) until after they have been adopted by the Commission. This is partly due to lack of time (Holden, 1994).

Provisionally established within the Advisory Committee is a 'Mediterranean Ad Hoc Group' in 1992 (Galle, 1993). This Group meets at least every two months, and consists of fishermen/vessel owners, representatives from cooperatives, one scientist and one regional administrator, from Mediterranean Member States. Its aim is to define in what manner the industry may participate in a future Mediterranean fishing policy and to make joint propositions.

1.1.3 Atlantic Institutions

The institutions under consideration are Atlantic/North Sea fisheries management institutions in Belgium, Denmark, Atlantic France, Germany, Ireland, the Netherlands, Portugal, Atlantic Spain and the United Kingdom.

Organisations

Governmental institutions
The central governmental institution dealing with fisheries management is in most countries a Directorate or Service within a Ministry concerned with Fisheries. These Directorates are responsible for the establishment of fisheries management schemes within the context of the CFP and national schemes. The Ministers have to discuss and give account on fishery matters in Parliament and have a seat in the EU Council. Furthermore within or on behalf of the Member States' Ministry, monitoring of fisheries regulations is undertaken by Inspection Services. Some examples: the Netherlands has the General Inspection Service which is monitoring fishing activities and has legal powers to lead violators to court. In the UK enforcement is undertaken by the Royal Navy and by the Scottish Fisheries Protection Agency. In Denmark these tasks are performed by Danish fisheries Control, a separate body dependent on the Ministry's Fisheries Directorate.

In-between institutions
In many Atlantic countries an organisational layer between government and industry has been created for consultation. For the Dutch fishing industry this institution is the Fish Commodity Board (FCB). For the Fisheries Directorate this FCB is the partner in discussions of proposed management schemes. The Danish law on fisheries management specifies that the Ministry must hold an Advisory Committee on management, in which the industry is strongly represented. In France the National Maritime Fish and Aquaculture Committee fulfils the role of a consultative body. The ministry needs to consult this organisation which is composed of representatives of fishermen's organisations' and local and regional committees (Galle, 1993). The Portuguese department for fisheries has an Advisory Committee made up of the professional organisations representatives (POs, associations and unions) in which members are invited to give their opinion. In the United Kingdom there are Management Committees on national and Fisheries Department level,

including industry representation. In Galician Spain there is a formal consultative body, the Consejo Gallego de Pesca, in which the FOs and regional administration are jointly involved. Informal consultations take place between central government and the national committees of the industry's representative organisations (CEMARE/University of Hull, 1996).

No 'in-between' organisation became apparent from literature in Belgium, Germany and Ireland.

User group organisations

The fishing industry itself created a variety of organisations and associations on local, regional, national and (sub)sectoral basis. In some cases the origins of these organisations go far back in history. Relatively new are Producer Organisations (POs) which were set up according to EC rules. POs originally mainly played a role in the implementation of the common organisation of the market for fishery products.[1] As mentioned earlier these POs are also represented at the EU level.

Influence of user-groups

Influence of user-groups on quota management

Output measures under consideration are TACs, quotas and other catch limits. User-groups are not influential in the establishment of the yearly TAC levels for the European Union as a whole. TACs are divided in national quotas. The degree in influence of user-groups on the management of national quotas varies, although influence possibilities have been harmonised recently. The Marketing Regulation of the CFP has been expanded by allowing POs to manage quotas on behalf of their members and, at the discretion of Member States, the national quotas.[1] 'This extension of power placed POs firmly to the fore in EU fisheries resource management decision-making. (Young, 1996). In the case of the UK quota-management responsibilities had earlier been entrusted to POs. But their degree of active involvement varies. Non PO-members are subject to the government's own management arrangements as administered by management committees including industry (Europêche, 1995). In the case of the Netherlands quota management has been entrusted to 'Groups' of fishermen within POs. While fishermen exploit their ITQ, the Group Management Board is responsible for up-take of the pooled quotas. Almost all vessels participate in the management groups (Hoefnagel and Smit, 1995). In France an attempt in 1990 to introduce a system of quota-allocations to POs was abandoned after three years, largely because of disagreement over the basis for allocation. Furthermore POs were unable to implement catch restrictions for quota management purposes. Now government allocates quotas to the coastal regions, where they are subdivided by 'competent administrative authorities'. The roles of POs remain centred on the management of the market and their membership is primarily determined with reference to marketing requirements (CEMARE, 1996). However, marketing rules of French POs may sometimes work as output restrictions, for example limits on landed tonnage. In Belgium, the PO 'Redercentrale' is responsible for the administration and organisation of meetings between

[1] CFP Marketing Regulation Articles 5-8.

government and Quota Commission. The Quota Commission, established in 1994, consists of representatives from the different Belgian fleet segments. The meetings discuss all of the quota regulations for the next three months (Europêche, 1995). In Denmark an Advisory Committee meets every month and advises the Ministry on the allocation of quotas at national level. This Committee is made up of representatives from the Fishermen's Association, POs, Fish processing industry and trade, the fish oil and fish meal industry, the fish canning industry, and the Workers' Union (Europêche, 1995). In Germany: 'Governmental regulations stipulate quota allocation per fishing zone, per vessel type and per species. Eligible fishermen must be member of the Deutsche Fischerei Verband. Certain quotas are available to anyone entitled to fish on a 'first come, first serve' basis. (...) Other quotas, cod for instance, are distributed to POs which allocate them to their members. For saithe in the North Sea, quotas are distributed to the individual cutter fishing companies' (Europêche, 1995). In Ireland quota management is entirely the responsibility of the Ministry of Fisheries. In Ireland there is an ad hoc Industry Committee which has no legal standing, but gives advice on some aspects of quota-management. In Portugal the Department of Fisheries of the Ministry for Agriculture is responsible for distributing quotas and maximum catches. The Department has an Advisory Committee consisting of representatives of professional organisations (POs, associations and unions), (Europêche, 1995). In Atlantic Spain Cofradías, have quota-management functions through the design of fishing plans. These fishing plans need to be approved by the appropriate authorities. 'The regional government sees potential in the Cofradías for improving management, and is working for them to be formally recognised as producers organisations (...)' (Jentoft and McCay, 1995).

Degree of influence on structural measures

Structural measures under consideration are capacity and activity limitations (licensing respectively days-at-sea). All Member States are subject to MAGP (see Chapter 3). Influence of professional organisations on structural measures is on the whole quite limited. It is exerted mostly through in-between institutions. Given the limits, user-groups sometimes try to establish collective rules in order to, for instance, restrict fishing time and spread catches over the season/year.

There is no indication that Belgian fishermen's organisations had influence on the prevailing maximum HP and GT regulations, on the licensing scheme, on the decommissioning measures or in the past on the abandoned restrictions on days-at-sea (Europêche, OECD 1995).

The UK fishing fleet is subject to a licensing scheme in which government consulted (probably) the industry. POs may purchase licences held by members, in order to hold them separately from individual vessel catch records. A government proposal to introduce a system of individual days-at-sea allocations has been successfully challenged by FOs and POs.

In Denmark a subcommittee of the above-mentioned Advisory Committee on fisheries management advises the Ministry representatives on the national structural policy. Structural measures include decommissioning schemes and modernisation of the fleet

[1] Council Regulation 3759/92, as amended by Council Regulations 697/93 and 1891/93.

(Europêche, 1995). Following working group meetings between the fishermen's association, scientists and the Ministry, days-at-sea restrictions were adopted on an experimental basis in the Kattegat. This effort regulation is considered to be co-management (Nielsen and Vedsmand, 1995). In the Netherlands the industry is consulted by the Ministry through the Fish Commodity Board. The FCB discusses and tries to influence proposed structural management schemes measures as decommissioning, days-at-sea regulation and licensing. The new-formed Groups manage fishing effort by approving well tuned fishing plans per vessel and the possible allocation of extra days-at-sea during the year.

In France, POs may take management measures for their members such as fishing plans aimed at regulating fishing effort on certain sub-quotas depending on prevailing market conditions or given their up-take. Fishing effort is regulated through limits on the number of days per fishing trips and restrictions on unloaded tonnage (Europêche, 1995). French fleet capacity is regulated through the Permis the Mise en Exploitation (PME) (CEMARE). This is administered by the national management committee.

In Germany there is no days-at-sea regulation. Since 1 February 1995 fishing is only allowed with a valid licence on board (EC Regulation No. 3690/93). Licences are issued by the Federal Office (Europêche, 1995).

The Irish Ministry of Fisheries (Department of Marine) is entirely responsible for the management of the fishing effort. Some fisheries are licensed by the State. Regional Fisheries Boards determine the maximum number of licences for salmon fished at sea.

All Portuguese fishing vessels require a fishing licence that authorises the type of fisheries and fishing area. These licences are issued by the Ministry for Agriculture, Fisheries and Food (Europêche, 1995).

Responsibilities for the managing of fishing effort in Spain are divided over the Ministry, the Autonomous Communities and professional associations. Vessels operating in Union waters are governed by a fishing plan that is drawn up by fleet associations and approved by the authorities concerned. Apart from quotas, these plans consist of the period in which fishing activities are requested, the vessels concerned, the species targeted, the fishing gear used. The General Secretariat for maritime fisheries consults the sector (coastal or ocean fisheries) to try to find the best possible compromise between fishermen's demands and the actual circumstances, also on structural measures like temporary limits and closed seasons.

Degree of influence on technical measures

As with structural measures, influence of user-groups on technical measures is limited in the CFP framework.

Minimum sizes and temporary closure of the sole fisheries in January 1995 have been stipulated by Belgian government, in correspondence with CFP (Europêche, 1995; OECD, 1995). In the UK different national technical measures are applied, like gear regulations, minimum landing sizes of specified species and the closure of certain areas to specified types of fishing for specified periods. Influence of user-groups is not clear from the Europêche 1995 report. In the Baltic sea, Danish fishermen have to stop (by mandate) fishing during the period June, July and August, they receive a tying-up compensation (Europêche, 1995). The Dutch Fisheries Directorate consults the FCB in proposed

management schemes like technical measures as gear restrictions, however, many measures have been designed by EU regulation. Current French technical measures have been established by EU regulation (Europêche, 1995). In Germany there are no closed fishing periods. (Other technical measures follow probably CFP rules.) In Ireland the State regulates the prohibition of certain methods of fishing and minimum fish-sizes (Europêche, 1995). The Portuguese Ministry issues gear permits and regulates gear restrictions like mesh sizes, and minimum fish sizes. Sometimes zones are closed periodically by decree for biological reasons. In Spain, government consults the sector in technical matters, like minimum fish sizes.

1.2 Assessment of the inefficiencies of the present CFP

The Common Fisheries Policy (CFP) is based on four principles: conservation of stocks, structural policy, commercialisation of fish and fishery products and relations with third countries. Though the system based on TACs and quotas underpinned by scientific evidence, is widely accepted, it is also regarded as inefficient. The CFP has not achieved the intended results, namely the conservation of fish stocks. The crisis of fish stocks is not limited to the Community but can be observed at a worldwide level. In fact, in other parts of the world actual stock collapses have taken place whereas these have mercifully been avoided in the European waters.

Many of the inefficiencies of the present CFP have been highlighted in the Green Paper on the Revision of the CFP. We shall discuss these issues here.

1.2.1 Ineffectiveness of CFP: stock decline

The fish stocks have steadily deteriorated in spite of 25 years of CFP; fortunately no stocks have actually collapsed, contrary to what happened in other parts of the world. Nevertheless, in 2002, cod appears to be in serious decline and, according to ICES, continued fishing at current levels will lead to collapse of the stock. David Griffith, General Secretary of ICES, made the following statement in October 2002:

> 'We have had to resort to recommending complete closure of these fisheries as the only way of giving these depleted stocks a period of time to recover, and, hopefully, to return to their former productive state. Cod stocks in the North Sea, Skagerrak, Irish Sea and waters west of Scotland have been in decline for a number of years, and are now at, or near, their lowest recorded levels.'

State of stocks[1]

North Sea
As mentioned above, cod is in serious decline. The state of other stocks in the North Sea is very variable.

[1] The following information on stocks is taken from the ICES ACFM advice of October 2002.

There is reduction in the number of age groups. Recruitment for most stocks is, however, very variable. For a number of species (cod, whiting, plaice) recruitment in most years has been lower than in previous decades. At the same time it is observed that a number of species (cod, haddock, whiting, sole, plaice) simultaneously show a reduction of growth. On the contrary, other (southern) species like sea bass and red mullet have increased and in some times attracted a fishery.

The stock of whiting has shown a continued decline over time but appears to be increasing again. However, it is considered likely that the whiting stock is still outside safe biological limits. Plaice and sole are outside safe biological limits. The North Sea component of the North-East Atlantic mackerel stock collapsed in the early 1970s and shows no signs of recovery.

The saithe stock is now considered to be within safe biological limits. The stock of haddock profits from a good year class, but the spawning stock is expected to decrease rapidly due to the very low recruitments, which followed the strong 1999 year class.

Norway pout and sand eel are short-lived species and their biomasses show large fluctuations in accordance with large variability of recruitment. These stocks are both considered within safe biological limits.

The herring stock in the North Sea collapsed in the mid-1970s due to heavy exploitation, but has recovered after a closure of the fisheries between 1977 and 1981. The stock has been outside safe biological limits for a number of years, but has recovered to above Bpa and is expected to increase further.

The sprat stock fluctuates considerably between years. The actual state of the sprat stock is not precisely known, but the biomass is thought to be high at present.

West Coast of Scotland

The assessments of demersal and herring stocks continued to be hampered by the poor quality of catch data, although this has become less of a problem for round-fish species in recent years. It is likely that the stocks of haddock, saithe, anglerfish, and megrim are closely related to those of the same species in the North Sea. All round-fish stocks in this area are outside safe biological limits and ICES advice points to the need of reducing fishing mortality.

Irish Sea

The stock of cod is outside safe biological limits. The stocks of Nephrops in the Irish Sea are considered to be fully exploited. A notable phenomenon in the Irish Sea, and also in the Celtic Sea, during the 1990s has been a growth in the stocks of haddock. The stock of plaice is within safe biological limits as well as the sole stock.

Environmental changes affect fish stocks

The decline of the stocks cannot be totally blamed on fishing. The impact of environmental factors on the fish stocks should not be underestimated even though it has not been quantified yet. The European waters are polluted by industrial and human activities; the effect of these on the quantity of fish and on the success of their reproduction is not well

known. Moreover, changes in sea water temperature and salinity are being observed; their effect on fish behaviour, fish migration and reproduction have been poorly assessed.

1.2.2 Inefficiencies within the CFP

The inefficiencies of the CFP are due to two types of causes: firstly, the CFP doesn't actually function as intended; some rules are breached and some principles have never been implemented. We shall discuss these implementation problems first. In the next section, we shall discuss the deeper causes of the malfunctions within the CFP, namely systematic flaws in the concepts of the CFP.

Fisheries Council sets TACs above scientific advice

Annual catch limits, called Total Allowable Catches (TACs) are set yearly during political negotiations in the Fisheries Council, which is the meeting of Fisheries Ministers of the Member States. The TACs are very often set at a higher level than that recommended by the Commission on the basis of scientific advice from ICES ACFM. The reasons for not following the advice are numerous and complicated. During the political negotiations, each Minister might wish to obtain the best possible deal for his national fleet and therefore try to obtain higher TACs than proposed. Another reason might be that in the present state of scientific knowledge, scientific stock advice cannot claim to be totally accurate and definite; therefore, counterclaims by fishermen that the stocks are much higher may seem credible. It may therefore seem acceptable to set higher TACs than recommended by scientists.

Discards high

In general, the catches appear to be higher than what the stocks can support. In the simple equation of

catches = landings + discards

This means that either the landings (being the TAC) or the discards, or both, are too high. The CFP is a system based on management of the landings only namely by setting TACs and quotas per species. The CFP does not control discards at all; European fisheries are characterised by high discards.

We can distinguish two types of discards, depending on their reason. Firstly, European fishermen may discard perfectly good fish, for which species the vessel has no quotas at the time of catching. Especially in multi-species fisheries where fishermen find it difficult to limit their catch to a particular species, catches and quotas are very difficult to match. A large volume of fish may be discarded as 'above-quota fish'. Secondly, fishermen discard fish which is below the legal landing size, or which is of low value. The latter is called high grading.

The only way by which the CFP attempts to address discards is by introducing technical measures that allow undersized fish to escape. However, these rules are often

difficult to understand, to apply and to enforce. As a consequence, technical measures are seldom successful.

Not only does the present EU quota system fail to control discarding, but it even presents incentives for high grading. This is the case as long as the loss suffered by dumping low value fish is less than the profit obtained from continued fishing and landing high value fish.

Catches higher than TACs

On the one hand, the yearly TACs are often higher than recommended by ICES and by the Commission; on the other hand the actual catches themselves are higher than the TACs. This is due to high discards - as discussed above - but also to illegal landings above the quotas, so-called black fish.

The equation 'catches = landings + discards' mentioned above is more accurately described as:

catches = landed part of TACs + illegal landings + discards

It is not possible to quantify the extent of these illegal landings, neither is it possible to determine in which areas these landings reach the highest levels; suffice it to say that the existence of illegal landings is denied by few. These above-quota landings are facilitated by fish buyers or processors; they are a symptom of insufficient enforcement by the proper authorities.

Technical measures under-used

The CFP allows for the introduction of technical conservation measures and a variety of temporary or local measures: square mesh panels, seasonal or area closures, various twine thickness, various mesh sizes etc. Minimum landing sizes of fish could also be increased. Some of these measures let juvenile fish survive, either by letting them escape from the nets or by not letting them being caught in the first place. Scientists are often sceptical about the effectiveness of technical measures. Unfortunately, these measures have rarely been used; there might have been opportunities for more technical measures.

National Subsidies cause Inequality

Some Member States are giving subsidies to modernise the fleet or to reduce exploitation costs. This causes inequality between the fleets of the Member States, as the subsidised fleets are in a better financial position than those of countries where there haven't been subsidies for many years. This causes resentment between fishermen of different Member States. Moreover, if ITQs were to be introduced, these fleets will be in a better financial position to buy up quotas than their more cash-strapped counterparts.

National Monitoring ineffective

Because monitoring and enforcement are responsibilities of the Member States, rules may be applied differently in different countries. Fishermen have the impression that their foreign colleagues can violate the rules and therefore gain a competitive advantage. Diversity in enforcement causes a perception of inequality among the European fishermen. The organisation of monitoring and control in the CFP is fragmented. Better co-ordination of inspection resources is needed. There is no satisfactory follow-up of infringements.

Fleet over-capacity

The EU fleet has a higher capacity than necessary to harvest the available fish in a profitable manner. Clearly, if there are too many boats to catch the available fish, there will be two inescapable consequences. Firstly, the boats will not manage to be profitable; fishermen and their communities will therefore experience financial hardship. Secondly, fishermen will be under great pressure to land more fish than legally allowed by the TAC level.

Fleet decommissioning has not taken place at the same pace as the reduction of TACs. The Multi-Annual Guidance Programmes (MAGPs) which were the instrument to reduce fleet capacity, were not ambitious enough, were not enforced properly and were difficult to administer.

Moreover, as in all industrial sectors, technological progress has increased the catching capacity of fishing vessels, thereby reducing the effects of decommissioning.

Finally, subsidies for construction and modernisation of vessels in some Member States interfered with the fleet reduction programmes.

Social and economic decline of the fisheries sector

The profitability of the fleet is declining. In some fleet segments, it has become very difficult to find crewmembers willing to work on fishing vessels. In other fleet segments, vessel owners are trying to maintain profit margins by reducing operating costs. This if often done by reducing crewing levels which now are below safety levels, as crews work increasingly long hours in increasingly intensive conditions.

Employment in the fish catching sector is declining steadily, at a rate of 2% per annum. Over the period 1990-1998, there has been a loss of 66,000 jobs in the fish catching sector, or an overall decrease of 22%.

This affects not only the social and economic fabric of fishery dependent regions; it also has important safety repercussions.

Processing industry

The European processing industry has structural problems. Employment in the sector has dropped by 14% in the period 1990-1998. The small enterprises which make out the largest part of this sector, have difficulties in coping with irregular and dwindling supplies,

growing hygiene regulations, competition from outside the EU and economic pressure from the large retailers. The sector has been grant aided by the Community.

1.2.3 Principles of CFP have systematic flaws

The previous section discusses the problems encountered due to imperfect functioning of the principles of the CFP. There are however also a number of systematic, conceptual problems in the CFP. We shall now discuss these.

Scientific knowledge insufficient

To manage fisheries by means of TACs, one needs exact scientific information on fish populations and on interactions between fish stocks. This type of information does not exist. The marine eco-system is extremely complex; it cannot be reproduced in laboratory conditions, neither can scientists go and count all the fish in the sea. The functioning of marine ecosystems and the side effects of fishing are not well known. The severity of the impact of fishing is not known. More importantly, the time required to reverse the effects of fishing are not known. Interactions between species in the marine ecosystem are often still poorly understood.

Stakeholders dissatisfied with CFP

Fishermen are not pleased with the CFP. One of the reasons for this dissatisfaction is the complexity of EU decision-making, which is too far removed from stakeholders. The Fisheries Council might postpone necessary decisions for reasons that are not inherent to fisheries; political compromises are sometimes made against scientific advice. Some Member States might be unwilling to be seen to give up national sovereignty. Finally, the fisheries sector has a low political priority due to its small share in the GDPs of the Member States.

There is generalised distrust between the stakeholders. Biologists distrust fishermen. Some will blame fishermen for the present crisis, calling them irresponsible and intend on catching as much as they can before all the fish has gone. Fishermen on the other hand complain that the reality they see does not match the advice formulated by biologists and that scientists dismiss fishermen's intimate knowledge of the marine environment. Fishermen involved in multi-species fishery also complain bitterly about the compulsory discard of species for which they have reached their quota; it is a waste of a good resource.

Mixed fishery difficult to manage with TACs

Many of the fleets in the North Sea do not fish single species but catch a mixture of cod, haddock, and whiting, or a mixture of sole, plaice, and cod. Stocks of different species do not evolve in synchrony. Therefore, the advice provided independently of the linkages between species may result TACs that cannot be obtained simultaneously in mixed fisheries. This raises concerns for stocks in need of special conservation. For instance, to reduce catches of cod in the North Sea, scientists have recommended a cut in the catches of

all the other species caught simultaneously with cod even though these might not actually require protection. TACs are being adjusted downward for some of the species in the mix.

An alternative would be to adjust effort. This can be done in many different ways, for example by days-at-sea regulations, fleet reduction, area closures and/or seasonal closures.

Focus on key species and Lack of eco-system approach

The CFP focuses on a few historically important species such as cod, haddock, sole and herring. The management of species which are less well known from a biological perspective is probably neglected, as is the case for monkfish (anglerfish - lotte). There is no eco-system approach.

Lack of Multi-annual Planning

At present, the TACs are set for one year; the resulting annual leaps and bounds of quotas make business planning difficult for vessel owners. It is uncertain whether biologists would be able to predict more than one year ahead. Some species fluctuate a lot from year to year, other species are more stable. Long term TACs are not suitable for fluctuating stocks. On the other hand, long-lived stocks require a long-term perspective. There seems to be a contradiction between the need for stability to manage business and the need for flexibility to manage fluctuating stocks.

Biology & Output Management rather than input control

The CFP focuses on managing stocks rather than managing the industry. However, at present fisheries science is not - and does not claim to be - an exact science. It is difficult to assess individual stocks and it is nearly impossible to attempt ecosystem management comprising all species and their interaction. Unfortunately, a management system based on rather uncertain biological evidence does not provide a basis for structural long-term stock management. Biological advice is at present the foundation of the CFP building; if the foundation starts shaking, the whole building collapses. To further complicate matters, biological stock assessment does not equal the TACs, as these are set after political negotiation.

Although the CFP focuses on output management - i.e. quota setting - there have been attempts to manage inputs via MAGP. MAGP are set for each Member State, while quotas are set by stock and sea area - not by country. The attempts to control fishing effort have proven unsuccessful. The EU fleet shows over capacity and profitability is poor in many fleet segments. The incentives to re-structure the industry are insufficient and too weak.

Economic information not integrated

The CFP doesn't have a proper mechanism to integrate economic and socio-economic information in its management procedures.

Principles of good governance not integrated

The CFP was designed several decades ago and was gradually amended without major reviews. At the time of its conception, the principles of good governance were not integrated in the CFP. Nowadays, these principles cannot be ignored. Openness, participation, accountability, effectiveness and coherence will have to be fully implemented to reach a consensus among stakeholders.

Mediterranean Sea

The present management system is very different in the Atlantic and the Mediterranean; the latter does not fall under the CFP. This fishery is multi-species: some fleet segments target a variety of different species and take part in different fisheries at different times of the year. Too many species and too many landing places make monitoring difficult. Moreover, each fleet fishes mostly in its own local waters.

The Mediterranean fishery has not managed to implement technical measures satisfactorily; data on the sector are lacking and there has been slow progress in international co-operation.

Quota Hopping versus Relative Stability

Within the present CFP there is ample space for Member States to develop their own quota management system (cf. UK and Netherlands), which on the one hand has allowed for the development of systems adapted to local social, economical and political circumstances. On the other hand it results in each Member State having a slightly different management system. An added difficulty is that the underlying legal systems are very different.

De facto, all quota systems seem to evolve into transferable quota systems. Quotas presently change hands between Member States, under the form of quota hopping and quota swaps. These systems are neither well monitored nor transparent - but they are legal. It is a largely unregulated practice and would benefit from a more open and free approach instead. Member States take measures to limit quota hopping. With increased possibilities of free transfer of commodities, people and capital throughout the EU, international quota trade is just a matter of time. Relative stability is an exception to principles of free movement of capital and labour. Although ITQs exist in some Member States without catastrophic results, some fishermen attach great importance to Relative Stability because they are worried that ITQs will allow a brutal take-over of fishing rights by foreign fishermen.

Aquaculture industry

The aquaculture industry is playing a growing role in the fisheries sector, by providing steady supplies to processors and by creating employment in fishery dependent areas. The main challenge at present for the aquaculture sector is to successfully address environmental and health protection concerns.

International dimension of CFP

EU fleets used to fish in third countries. These fishing opportunities are gradually disappearing in a context of legitimate aspirations of these states to develop their own fishing industry. The consequence is that some EU fleet segments have lost their traditional fishing grounds outside Europe and now need to either find fishing opportunities in Europe or decommission.

1.2.4 New objectives for CFP

In its Green Paper, the Commission stated that many of the CFPs problems are caused by its lack of clear objectives. In its roadmap for the review of the CFP, the Commission has proposed a set of new objectives, which are briefly repeated here:

1. responsible and sustainable fisheries and aquaculture activities that contribute to healthy marine ecosystems;
2. an economically viable and competitive fisheries and aquaculture industry which will benefit the consumer;
3. a fair standard of living for those who depend on fishing activities.

The principles of good governance also have to be embodied in the new CFP:

1. openness and transparency, in particular by improving the quality and transparency of the scientific advice and data on the basis of which policy decisions are taken;
2. participation, through greater and broader stakeholder involvement from conception to implementation of policy, including at local and regional level;
3. accountability, through a clearer definition of responsibilities at European, national and local level;
4. effectiveness, through decision-making processes whose results are properly evaluated, controlled and complied with; and
5. coherence with other Community policies, in particular environment and development policies, through a cross-sectoral approach.

The Green Paper also stressed the need for the CFP to address a few other points:

1. to integrate health requirements;
2. to bring fleet capacity into line with resources;
3. to ensure effective enforcement;
4. to address the structural adjustments that will result from the changes;
5. to promote responsible exploitation in international waters;
6. to improve data to support decision-making.

1.3 Analysis of the common fisheries policy

The common fisheries policy grew from a market policy to a structural policy, and then a conservation policy in 1983. This development has been marked by the prospect of entrance of new member states entering the EU. In terms of effectiveness, the CFP has had

problems (the enforcement of quotas and catch capacity regulations as well as technical measures). In terms of coherence, the above described developments turned out to produce inconsistent results. There were subsidies for increasing fleet capacity, whereas there was not yet a conservation policy fully instituted.

The formal structure consists of (a) the council of ministers, (b) the commission, (c) the European parliament and (d) international scientific bodies. The commission makes propositions, and the council and the parliament arrive at separate decisions, however, the council has the final say in the decision process. The main actors involved in the decision making processes are, (a) member states (voiced through the ministerial level), (b) the fishing industry (both national and European), (c) lobbying groups representing environmental groups, fishermen and regions. The fishermen are formally represented in the social and economic committee and regional authorities are formally represented in the regional council.

Following upon the CFP review process, recently partnerships have been introduced providing platform for more direct involvement of fishermen in commenting on ICES stock assessments. Driving force for change is that the legitimacy of the TAC has been rather problematic and especially local authorities tried to involve fishermen.

Failure of the conservation policy (enforcement difficulties, structural overcapacity of the fleet.) Enlargement of European Union with new Members States.

Issues that are currently under review are:

- increased focus on environmental policy and development policy;
- increased involvement of fishermen in management decision making;
- more flexibility in the TAC system: multi-annual TACs;
- POs are supposed to assume role in quota management;
- more important role for non-legal instruments (code of conduct, eco labelling, ...);
- creation of regional committees;
- development of European framework for trans-boundary integrated coastal zone management.

Driving forces for these changes have been the lack of long-term view on fisheries conservation, and the reaction time to respond immediately to new developments (for example in the stocks).

Entering international agreements on fisheries and environmental issues (Rio-precautionary principle introduction in EU policies at large, Paris Convention on Protection of Marine environment of north-east Atlantic, 1992 Convention biological diversity, 1995 Code of conduct for responsible fisheries).

An obstacle for introducing multi-annual TACs is change in power balance between Council and Commission (Council is not involved anymore in yearly setting of TACs).

ICZM has become an issue because there is indirect influence of CFP on coastal and inshore fisheries. An obstacle for ICZM is that national jurisdiction in 12 miles zones have been reinforced.

Possibly there will be a more direct connection between POs and Commission in the future (multi-annual TACs).

2. Norway

2.1 From closed shop to transparent decision-making? On the history, structure and process of Norwegian fisheries management

2.1.1 Introduction

In Norwegian fisheries, management proper dates back to the collapse of the Atlanto-Scandinavian herring stock in the late 1960s. Although specific fisheries were 'managed' long before that (Jentoft and Kristoffersen 1989, Jentoft and Mikalsen 1994), the passing of the so-called 'Limited Entry Act' in 1972 marked the inception of a management regime whose subsequent development has been characterised by a complex interplay between science, economics and politics. The end result, thus far, has been a regime pointedly characterised as a system of 'centralised consultation' (Hoel et al., 1996). The ultimate authority to manage is vested in the hands of central government, albeit with an element of power sharing through corporatist arrangements facilitating the participation of a select group of interest organisations - mainly within the industry itself.

This structure, to be described in more detail later, has been criticised for fostering a process that is too exclusive and 'benign' to the economic interests of the fishing industry. Transparency and stakeholder involvement are currently being hailed as core values of the 'ideal' management process - accompanied by demands that the influence of industry be countered by including other groups and interests in decision-making, thus broadening the scope of representation beyond those directly affected by management decisions. As we shall see, certain moves in that direction have already been made - largely in response to demands for a more open and transparent process. However, proposals for change in current structures, be they for decentralisation, delegation or more power to scientists, are rarely anchored in a thorough analysis of the present regime; its principles, problems and possible effects. The question of what reforms that are needed and should be adopted, cannot be adequately addressed unless we examine, more systematically, the background, rationale and functioning of existing institutions in general, and the problems of user-group participation and centralised decision-making in particular.

In this paper we shall address some of the questions and issues that pertain directly to the current quest for institutional reform in Norwegian fisheries management: What are the roots of the Norwegian fisheries management regime? How is it organised and how does it work? Who are the key actors and what are their roles and relative influence? What are the major challenges being faced by established institutions, and what are the pros and cons of a more transparent and democratic process?

2.1.2 Managing Norwegian fisheries: a historical sketch

While the history of fisheries management as we know it today is relatively short, government intervention is nothing new in the Norwegian fishery. Historically, three basic forms of management-like intervention stand out: The first are the formal rules set to solve problems of crowding on the fishing grounds. Preserving order and avoiding conflicts among fishermen using different types of gear was a major concern here. These 'operational rules' were regional in scope and established through so-called 'Regional Fisheries Acts', of which the single most important was the Lofoten Act of 1897. The second type is measures aimed at regulating raw fish sales. Here, the Raw Fish Act, introduced in 1938, allowed the cooperative sales organisations of fishermen to interfere in the fishery in order to avoid over-supply, and hence a low price, at the dockside. The third type of instrument is aimed at limiting entry into particular fisheries through the issuing of licenses. These were, of course, also anchored in formal legislation. Examples are the 'Salt Water Fishing Act' of 1955, the 'Trawler Act' of 1951 and the 'Limited Entry Act' of 1972. While a detailed analysis of the purpose, character and enforcement of these acts is beyond the scope of this essay, a few points deserve to be elaborated as they pertain to the subsequent development of management institutions and practices.

Driven by technology?

To begin with, it should be noted that the early attempts at managing the fisheries - through 'operational rules' as well as comprehensive legislation, were largely a response to problems and conflicts generated by the introduction of new harvesting technology. The acts that were passed and enforced were, initially, geared to the protection of fishermen using traditional gear such as handline, nets and longline, against the intrusion of modern technology such as seines and trawl.

Second, legislation was then, as now, discretionary - leaving their interpretation and enforcement mainly in the hands of government officials. The power thus given to officials was, however, balanced by an element of 'democratic' consultation as the legal framework allowed - even required - user groups to participate in applying the rules and enforcing regulations. This applied, in particular, to the Lofoten cod fisheries, where fishermen were - and still is - directly involved in regulatory decision-making through local 'management committees' (Jentoft and Kristoffersen 1989).

The system of regionally enacted rules was complex, and the need for both simplification and extension led to the passing of the 'Salt Water Fishing Act' in 1955, bringing together - in a single 'document' - most of the rules pertaining to 'management' that were in force at that time. The act was discretionary legislation at its most typical in that it gave the Ministry of Fisheries a general authority to enforce measures well beyond the scope of 'operational rules'. These measures ranged from restrictions on the size and design of gear to the setting of total allowable catches (TACs) for particular stocks. Although this legislation was wide in scope, the rules and regulations eventually enforced did not restrict entry into the fisheries; neither did they put limitations on catches.

Of somewhat greater interest, from our point of view, are the 'Trawler Act' and 'The Ownership Act' - both passed in 1951 - that were introduced shortly before the

aforementioned 'Salt Water Fishing Act'. They were not a response to management problems as such, but intended to protect bona-fide fishermen from competition from outside investors. Legislation such as this was initiated in response to the growing number of large trawlers. These were financed and controlled by processors, and led to demands from the Norwegian Fishermen's Association that something be done to prevent the big players in processing from taking control over the fishing fleet. Vertical integration would weaken the position of bona-fide fishermen, it was argued, and government responded by legislation intended at restricting entry and investments in harvesting. However, as conservation was not a major concern at the time, restrictions on investment and ownership came under increasing pressure. The outcome was a gradual - and controversial - slackening of these restrictions in an attempt at adjusting formal rules to the requirements of new technologies (Mikalsen and Sagdahl 1982). In this sense, there is - in the history of Norwegian fisheries management - a close connection between technological change and 'management' policy.

Limited entry and resource conservation

Fisheries management proper dates back to the late 1960s when the depletion of the Atlanto-Scandinavian herring stock led to a ban on the introduction of new vessels into this fishery. This was a highly controversial issue at the time. The Cabinet split on the issue, and there was resistance in parliament to legislation that would limit the 'professional freedom and discretion' of existing or would-be boat owners. The controversy was somewhat surprising, given the dismal state of the herring stock, but it illustrates that the ban on new vessels in the fishery was conceived as a qualitatively new type of government intervention. Although the effects of this particular measure were limited, it was significant in that it signalled a new era, characterised by the introduction and continuous increase in restrictions on harvesting across a wide range of stocks and fisheries.

The idea of limited entry was first (officially) floated in 1967 - by a top fisheries bureaucrat in an address to the annual meeting of the Norwegian Fishermen's Association. The response was by and large favourable, and by the end of that year a proposal had been drafted for what would eventually become the 'Limited Entry Act'. The gist of this proposal was that the government, i.e. the Ministry of Fisheries, be authorised to limit participation in specific fisheries through licensing and/or catch quotas. The Fishermen's Association came out in favour of stricter measures to protect the stocks - with the caveat that the industry would be consulted on the content and scope of future regulations. In 1972, Parliament passed the 'Limited Entry Act' - authorising the Ministry of Fisheries to enforce whatever measures deemed necessary to prevent the overexploitation of fish stocks. Limited entry regulations were eventually enforced in the herring, capelin and shrimp fisheries, and quotas enforced in parts of the cod fisheries (for trawlers). Besides, severe restrictions - in force until 1985 - on the building of new offshore vessels (trawlers and purse seiners) were introduced.

The inshore fisheries - and smaller vessels - largely escaped such measures until 1983 when the ministry decided to intervene by setting an overall quota for the inshore cod fishery. This, however, turned out to be a somewhat symbolic step as the inshore fleet was allowed to exceed its quota until 1989. That said, this fishery did not entirely escape the

long arm of management as non-fishing periods and weekend stoppages were enforced throughout the 1980s. The turning point, however, came in 1989, when - acting on recommendations from ICES - the ministry decided to enforce a drastic reduction of the TAC for cod. The so-called 'cod crisis' was a fact, generating social and political turmoil along the coast as inshore fishermen were driven into a fierce competition for 'their' share of the dwindling overall quota (Jentoft, 1993). The crisis - and the measures that followed - marked a watershed in Norwegian fisheries management as it saw the extension of management by individual quotas to virtually all fisheries and vessels. These quotas are not - in theory at least - transferable. In practice, however, there are not many - if any - obstacles to them being the objects of market transactions.

From this brief and incomplete account one is tempted to conclude that the history of Norwegian fisheries management is one of ad-hoc adjustments and incremental change rather than long-term planning and grand designs. The Ministry of Fisheries has been - and still is - more of a fire department than a Soviet planning bureau. Fisheries management has by and large been synonymous with crisis management where conflict and controversy - not surprisingly, given the stakes involved - have been the order of the day. That said, no management policy would be viable without ways of creating a minimum of consensus and legitimacy. This is largely a question of 'due' process and formal organisation - of creating decision-making arrangements that allow for representation from stakeholders. Before turning to the details of management decision-making, we need to take a brief look at the political context and administrative structure of Norwegian fisheries management.

2.1.3 Political context and administrative structure

The process - and organisation - of management decision-making should be seen against three characteristics of Norwegian fisheries. First, there is the multitude of conflicts and cleavages: *regional* as between north and south, *technological* as between off-shore and in-shore, and *economic* as between processing and harvesting. These cleavages are sometimes mutually reinforcing, they tend to permeate public policy-making from inception to implementation, and are easily traced in the multitude of contradictory demands concerning the content and timing of regulatory measures. If politics is basically about the resolution of conflict, then fisheries are more 'political' than most other sectors of the Norwegian economy, making fisheries management a time-consuming process of consultation and bargaining. Genuine consensus is hard, if not impossible, to achieve, and few policies and decisions are conceived as authoritative and final among all groups involved.

Second, there is the centralised, or top-down, structure of management decision-making - vesting the power to make and implement policies in the hands of central government, notably the Ministry of Fisheries and the Directorate of Fisheries. The latter is essentially a 'professional' or staff agency whose main role is to provide advice and expertise to the Ministry. It is one of the oldest institutions within the fisheries bureaucracy - established as early as 1900 - and it is generally considered to be more influential than its advisory role suggests. However, the continuous growth and increasing complexity of regulatory measures, and of tasks pertaining to allocation and enforcement, have been

stretching the administrative capacity of central institutions to a point where the concept of 'overloaded government' catches the essence of contemporary fisheries management.

Third, there is the major role played by organised interest groups in public policy making - in virtually all sectors of the Norwegian economy. Corporatism is a long-standing and pervasive feature of Norwegian politics, providing a multitude of links between the state and civil society (Rokkan, 1966; Kvavik, 1976). In the fisheries, interest groups are either directly represented in government through a formalised structure of boards and committees, or delegated public authority within specific issue areas (Hallenstvedt, 1982; Smith, 1979). Power, to some extent, is being shared in order to secure the legitimacy of decisions and the compliance of industry. A system that provides for industry input through corporatist structures while retaining ministerial control and responsibility is probably best characterised as one of 'centralised consultation' (Hoel et al., 1996). How, then, is it organised and how does it work?

2.1.4 Formal procedures and the politics of consultation

The first step or stage in the management process involves the setting of the total allowable catch (TAC) for a wide range of stocks and species. The TACs are set on the basis of recommendations from the International Council for the Exploration of the Sea (ICES) - or, rather, from its scientific and advisory committee (ACFM) - and after bilateral negotiations between Russia and Norway in the so-called 'Mixed Norwegian-Russian Fisheries Commission' (for shared stocks in the Barents Sea) and between Norway and the EU (for North Sea stocks). On the Norwegian side the strategies for these negotiations are worked out in a special committee ('Sjøgrenseutvalget'), counting representatives from government (several ministries are involved) as well as from industry and science. In this sense, the consultative aspect is present from 'day one' as it were.

What should be noted, however, is the limited scope of these consultations as well as the secrecy of subsequent negotiations. There is no participation from outside the industry, and both the elaboration of Norwegian strategies and the deliberations within the Norwegian-Russian Fisheries Commission are conducted in considerable secrecy. Preparatory documents are not publicly available, nor are the minutes (Aasjord 2001, 205-207). Worth noticing is also the fact that parliament is conspicuously absent from the policy-making process. While the bilateral negotiations between Norway and Russia have been going on since 1976, it was not until 1995 that parliament asked to be briefed on this process. However, these briefings seem to be a mere formality as they generate little, or no, debate among representatives (Aasjord 2001, 213-215).

The TAC agreed on through these bilateral negotiations, which may or may not be in accordance with ICES' recommendations, serve as the starting point for the consultative process at the national level. At the core of the domestic process is the 'Management Council' ('Reguleringsrådet'), an advisory committee to the Ministry of Fisheries chaired

by the Director of Fisheries and counting representatives from both harvesting and processing.[1] The council usually meets twice a year - in June and December. The chair, and his staff at the Directorate of Fisheries, prepare the agenda and also work out a fairly detailed proposal for the management of different stocks and fisheries. Within a few weeks the council meets to discuss the Director's proposals, and although the council has no decision-making power, its word carries considerable weight - provided it speaks with one voice as it were. There is, thus, a certain pressure to reach a consensus, but a vote is always cast when there is disagreement. We shall return to this part of the process, and the work of the council, later. Following the deliberations, the Director - as chair - informs the ministry about the council's recommendations. Although the ministry is free to disregard these, the advice of the council is usually the backbone of next year's management plan.

Preparing the agenda: the role of the Directorate of Fisheries

The council's agenda is, as already noted, prepared by the Directorate - with its economics department and legal division as key players. There are no formal procedures for how to go about this work. It usually starts with an 'in-house' meeting where upcoming issues are identified, problems anticipated and a preliminary agenda for the next council meeting is set. There are, during this preparatory stage, informal contacts with the fishermen's associations, and officials spend considerable time attending annual meetings up and down the coast as part of a 'sounding out' process. In this way they get first hand knowledge of what 'fishermen like or do not like' as one official put it. Agenda setting and advice aside, another important task of the Directorate - as seen by its current head - is to ensure that the TAC is not exceeded. In this sense, this particular institution plays an important role in enforcement and control - a point to which we shall return. The directorate tries not to get involved in problems of allocation, leaving the issue of quota shares to the Fishermen's Association and the ministry.[2] However, on certain occasions, interference in issues of allocation cannot be entirely avoided. In the words of one official:

> 'We leave the sharing as far as we can to the fishermen themselves, but we do know that some of these decisions are taken at three o'clock in the morning. We know there are groups that are not present at the table, so we have to make sure that these are treated fairly'. (Apostle et al., 1998, 141)

The Directorate, then, does not necessarily refrain from interfering in issues of allocation, although this - strictly speaking - is 'politics'.

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[1] The following organisations and institutions are represented on the council: The Norwegian Fishermen's Association (5), the Norwegian Federation of Fish and Aquaculture (processors) (2), the Norwegian Seamen's Association (1), the Norwegian Union of Plant Workers (1), the Directorate of Fisheries (1), the Saami Parliament (1). Representatives of the Directorate for the Management of Natural Resources and Friends of the Earth, Norway - among others - meet as observers, i.e. they can take the floor, but are not allowed to vote or table proposals.

[2] Since 1989 the respective shares (of the TAC) of off-shore and in-shore vessels have been set according to a predetermined scheme (the so-called 'quota ladder'), where the percentage of the TAC for each group - r 'sector' - is susceptible to variations in the size of the TAC. Although this scheme has been challenged on several occasions, it is generally considered as the 'best' there is - given the circumstances.

The consultative process: the Management Council

The council, set up in 1983, is part of a long-standing tradition of consultation in Norwegian fisheries management. It was established through an amendment to the aforementioned Salt Water Fishing Act and replaced two other 'management' committees set up during the early 1970s. As such, the council represents a continuation of a policy of consultation initiated by the appointment of industry representatives to the so-called 'Trawler Council' in 1951. Its members were supposed to be consulted before trawler licenses or permits were issued. The basic idea behind these and similar 'institutions' has been to provide arenas for the exchange of information and advice - and for the clarification of problems and positions. From the government's point of view, committees and councils of this ('corporatist') type strengthen the legitimacy of management decisions; for the industry, participation represent an opportunity to keep abreast of developments and to wield influence over decisions ranging from 'technical' measures pertaining to gear, fishing periods and areas to the allocation of quotas among groups and vessels.

As for the council's work, it has already been noted that it meets twice a year - in June and December. The most salient issues such as the detailed allocation of quotas among the various fisheries and categories of fishing vessels, are usually dealt with at the December meeting when the recommendations from ICES, and the proposal for next year's management plan, are available. Most issues - 'technical' as well as 'political' - are dealt with on a stock-by-stock basis. The June meeting is usually devoted to debates on the managing of stocks such as mackerel where decisions do not have to be taken as early as December. There are in-between meetings devoted to particular stocks from time to time, but no special sessions to analyse and discuss either long-term priorities or the current state of affairs.

As for the composition of the council (see footnote 1), two aspects are worth noticing: First, there is the comparatively strong representation of the Fishermen's Association. If we include processing, the industry as such holds 9 out 11 seats on the council. This may not be of any great political consequence as the fishing industry - due to internal conflicts and cleavages - seldom operates as a unified coalition. Second, there is the inclusion - albeit only as observers - of environmental organisations and institutions. Whatever the effects of this inclusive approach on management policy, it has a certain symbolic significance in that it reflects a growing awareness of environmental (and public interest) implications of fisheries management. Worth noticing is also the fact that the ministry does not have a seat; its officials only meet as observers. The reasoning behind this is that it would not be appropriate for ministry officials to sit as full members of a body whose main task is to advice the ministry (or rather, the Minister) on matters of management. Ministry officials are, of course, allowed to take the floor, and they are frequently called upon to do so -usually to clarify facts and questions of policy. This lack of (direct) ministerial representation may have to do with the official definition of the council as a 'professional', non-political body rather than a policy-making arena.

However, a closer look at council membership should suffice to convince any observer that this is not a body of neutral, disinterested experts - which it was probably never intended to be. Rather, it comes across as a mixture of the purely professional and the overtly political; a body of knowledgeable people with (economic) interests at stake.

According to council members interviewed for another project (Apostle et al., 1998), this is also reflected in deliberations. There is - in meetings - relatively little controversy on the scientific data presented. Although stock estimates are sometimes challenged, recommendations from the scientific community are generally accepted. In this sense there is, at the core of the advice offered, a pool of knowledge or information considered as fairly accurate and objective.

On the other hand, the weak representation of science as compared to that of industry suggests a certain ambiguity as to the exact role and (professional) significance of the council. It is, in most circumstances and on most issues, difficult to draw a straight line between science and politics, between professional advice and political preferences -in particular when the livelihood of larger groups is at stake. The fact that even scientists, when arguing their case in the council, normally seek to strike a balance between what is biologically defensible and what is politically feasible, testifies to this. Also, the fact that the representatives of the Fishermen's Association in particular, are directly instructed and closely supervised by its national executive, is an indication of the overtly political nature of the council's work. On the whole, the representatives of the association tend to have little leeway for compromise on specific issues. They usually meet with a 'fixed' mandate in that they are bound by instructions from the national executive. This, of course, is due to the fact that the association is a fragile coalition of groups with strongly conflicting interests where policies and demands are carefully worked out compromises that seldom give much room for manoeuvre (Hallenstvedt, 1982; Jentoft and Mikalsen, 1987). This spills over into the council where, in order to reach a decision on what advice to give, a vote often has to be taken. According to those involved, voting is a major form of decision-making; compromise and consensus tend to be the exception rather than the rule. This, of course, goes somewhat against the 'logic' of corporatism and policy consultation. The council is part of a system or chain of decision-making where participants are supposed to be moved - at least from time to time - by the sheer force of the argument, and thus engage in compromises that may not meet the ultimate demands of their own group. There is a dilemma here for any group or organisation seeking political influence by way of participation in government: should representatives be instructed to toe the organisational line, or should they be able to exercise personal discretion in order to break a stalemate and reach viable compromises?

What should be noted, however, is that the work of the council is but one - although crucial - part of a more comprehensive process where the annual meetings of the local and regional branches of the Fishermen's Association are the starting point. At these meetings management issues always loom large - with debates usually concluded with a wide array of demands for changes in, or additions to, the management 'menu'. Although most of these are shelved by central office, some may end up on the table of the association's executive board for further consideration. The board, we should hasten to add, is an important actor in the management process - for several reasons: its deliberations are decisive for the association's position on key issues, some of its members also sit on the Management Council, and there is a regular exchange of information between the association and the Directorate of Fisheries prior to council meetings. In addition, the leadership of the association takes an active part in preparing for the annual negotiations with Russia and the EU. There is, in fact, a continuous exchange of information between the association and

the ministry during the days and weeks prior to the annual meeting of the 'Joint Norwegian-Russian Fisheries Commission'.[1]

The Management Council: powerful but irresponsible?

As already pointed out, the council deliberates and offers advice. The ultimate decision on any issue lies with the ministry. The overall impression, from interviews and documents, is that the ministry - in most cases - follows the advice of the council. In cases where the council is split, the ministry tends to side with the majority. This suggests that the council, or even a tiny majority of its members, may wield more influence than its advisory status suggests. In that case, we may be dealing with a management system where one of the key players is an 'institution' with considerable power but no responsibility. The ministry's - or rather the Minister's - position is unambiguous: he or she is accountable to parliament - and eventually to the public. Not so with the council, even though its (public) position has become somewhat tenuous as management problems have mounted. Although the ministry has taken most of the beating, the council has been criticised for failing to give sound advice, and its industry members for being too concerned about their economic interests. Industry representation, it is argued, is tantamount to letting the fox into the henhouse - or putting the goat in charge of the oatmeal sack - as there is a strong temptation to capture immediate benefits (i.e. larger quotas) at the expense of long-term conservation of the stocks. On several occasions, the TAC for stocks over which Norway has exclusive control - herring and saithe in particular - has exceeded the recommendations by ICES. In 1990 for example, ICES recommended a ban on the herring fishery. The Management Council, on its part, proposed a quota of 60,000 tons which the Minister accepted - probably with a view to protecting market shares. The same year, the council also endorsed a saithe quota that exceeded ICES' recommendations by as much as 70,000 tons (Hoel et al., 1996).

We do not contend that these and other 'excesses' are the sole cause of recurring crises in the fisheries. Rather, the point is that decisions of the kind referred to above have tended to undermine the authority of the council, and the legitimacy of management policy among the public. Issues of fisheries management are increasingly catching the public eye, and the present system of 'centralised consultation' is being criticised for favouring the economic interests of the fishing industry - at the expense of conservation. The lack of any formal responsibility for policy may thus be compensated by an increasing public awareness of the council's work and decisions. An interesting question then - and one to which we shall return shortly - is whether 'corporatist' arrangements have become politically unacceptable and 'obsolete', and should be replaced by more transparent and democratic institutions.

[1] The commission was established as part of an agreement between Norway and the Soviet Union in 1975. The commission - where the Norwegian Fisherman's Association is also represented - meets once a year to set TAC for shared stocks - cod, capelin and haddock - and to decide the allocation of the TAC between Norway and Russia, and the shares of 'third parties', notably the EU.

Enforcement and monitoring

The growth in both the number and complexity of regulatory measures has made enforcement and monitoring crucial aspects of the fisheries management regime. While the formal responsibility for enforcement lies with the Ministry of Fisheries, the Directorate is - for all practical purposes - the key player through its division of control and surveillance. At the core are nine regional offices (soon to be merged into five) whose main task is quota control through dockside monitoring. Spot checks are important here as are inspections at sea within the 4-mile zone. While major violations are usually a matter for the police - and eventually the courts - directorate officials are authorised to confiscate the catch that exceeds the quota.

The Norwegian Coast Guard - a part of the Ministry of Defence - is the second major player within enforcement. It is responsible for a wide range of tasks within the Norwegian 200-mile zone - from the control of catches to the enforcement of gear restrictions. Its monitoring authority also includes foreign vessels. The scale of its fisheries related operations is illustrated by the fact that in 1999 it carried out close to 2,000 inspections on Norwegian and foreign vessels.

The mandated cooperative sales organisations of raw fish, six in all, also play an important role in enforcement - mainly by collecting and checking sales slips and through dockside monitoring. The ultimate purpose of this is to check catches against individual vessel quotas. The data thus collected - ranging from information on species landed and the size of the catch to data on catching area and gear types. This information is shared with the directorate as it comes in.

A note on local-level management

While fisheries management is largely about setting national priorities and policies, a not insubstantial number of rules and regulations pertain to geographically defined areas such as particular fjords and inlets. These rules and regulations constitute an intricate network of restrictions on the use of 'active' gear such as trawl and seine - often implemented in response to demands from local fishermen, and on the basis of advice from a management committee at the county level. This is not the place for a detailed account of these 'local' arrangements, but a couple of points should be noted.

First, local regulations have a long history in that they were based on so-called 'Regional Fisheries Acts' originating in the late 19th century. With the introduction of new harvesting technology such as trawl and purse seine shortly before and after World War II, there was a steady stream of demands from local fishermen for restrictions on trawling and purse seining in the fjords. Although the Ministry of Fisheries was less than enthusiastic, procedures were eventually set up for handling cases of local 'competition' between users of different gear - the most significant being standing advisory committees on local regulations (Jentoft and Mikalsen, 1994).

Second, the policy of these advisory committees - whose membership includes representatives of most gear groups - has been rather restrictive in that most demands for closures of fjords and inlets have been rejected. The tenor of the debate on local regulations has been that one should be careful in setting up restrictions for the simple

reason that once in place, they will be impossible to ease or abolish. There is currently a consensus between the ministry and the Norwegian Fishermen's Association to this effect. However, demands for the strengthening of the present system - with stronger representation from local government - have been gaining in credibility as marine scientists have demonstrated the existence of local cod stocks in several fjords along the coast of northern Norway. The issue, which remains unsolved, is whether these stocks should be managed locally - and not as a part of the management system established for the Barents Sea stock.

2.1.5 Reforming fisheries management: from user-groups to stakeholders?

Corporatism, even in its more 'benign' versions, implies privileged participation and less than transparent decision-making. As demonstrated above, Norwegian fisheries management has largely been a question of close collaboration between central government and representatives of industry - notably from harvesting. User-group participation has been facilitated by the creation of the Management Council - itself a part of a long-standing tradition of functional representation in Norwegian politics (Kvavik, 1976; Nordby, 1994) - often at the expense of other 'interested parties'.

Management has been the domain of a relatively coherent policy community of government officials and industry representatives, its legitimacy sustained by history and tradition - and by the fact that it has produced viable compromises. The challenge to this particular type of co-management - and an impetus for reform - is the claims currently being made by other groups for a stake in fisheries management.

Why reform?

While there is a lot to be said for involving users in fisheries management, current arrangements do put representatives of industry in a privileged position compared to other stakeholders. Due to perennial problems of resource depletion and mismanagement - and with fisheries management increasingly conceived of as environmental politics - these privileges are increasingly being questioned.

Consumers seem to take a more active interest in the availability and quality of fish products. Regional and local authorities - particularly in North Norway - have come to take a keen interest in the effects of management policy on the viability and welfare of local communities. The so-called 'cod crisis' of the early 1990s had elected officials stop and think about the significance of a viable fishery for local economies (Jentoft, 1993), and there has since been much talk about the prospects of sharing management responsibilities. Environmental groups have increasingly turned their attention to fisheries (mis-)management - targeting the conservation of fish stocks and the protection of vulnerable ecosystems. Finally, representatives of ethnic groups, notably the Saami, argue that management institutions and practices should acknowledge historical rights and cultural diversity -and recognise the need for more decentralisation. Although environmentalists and Saami representatives have been recognised as legitimate participants as observers in the Management Council, they can hardly be considered core members of the management policy community.

Co-management that involves only fishermen and fish processors can hardly be justified when there are such broader interests at stake. From a democratic point of view, then, there is much to be said for more inclusive and transparent institutions - given that the group of legitimate stakeholders is far wider than that of resource users, and the fact that there is a genuine public interest involved; that of, say, consumers, citizens, local communities and future generations. The challenge raised by the demands for more transparency and broader stakeholder involvement raises the question of who should be considered legitimate stakeholders and how these should be involved. Or to paraphrase Robert A. Dahl (1989): how do we define the constituency - or 'demos' - of fisheries management, and how can we make sure that all constituents are 'heard'? Direct participation - although a democratic ideal - is hardly feasible given the sheer number of interests involved. Provided that some form of representation is indispensable, the crucial issue becomes one of institutional design: how can all legitimate stakeholders be represented without undermining the need for efficient decision-making?

Towards more inclusive institutions?

The debate on Norwegian fisheries management has always, it seems, been more about policy than institutions. The question of who should have a say seems to have been less pertinent than the issue of how 'shares' or quotas should be allocated among groups and individuals. In this sense key stakeholders - once they were given a seat at the table - became preoccupied by management practices rather than how these practices were decided upon. Understandable, perhaps, as government frequently invites stakeholders to have a say on management instruments, and only rarely seeks to elicit their views on decision-making arrangements. In current debates on management reform, the question of how to adjust regulatory instruments takes precedence over issues pertaining to institutional change.

That said, the downturn of key stocks - and controversy over the choice of regulatory instruments - have turned the attention of stakeholders towards decision-making arrangements. In an industry characterised by a multitude of groups and 'segments', conflicts are rife and outcomes often the result of logrolling and successful coalition building. This raises the question of whose (economic) interests are being served by present arrangements. The Norwegian Fishermen's Association has long enjoyed privileged access to government while, say, processors and plant workers have had less political 'clout' in management issues. This is reflected in the composition of the Management Council as well as in participation on more informal arenas.

However, the fact that the fishing industry - and fishermen in particular - take part in management policy-making does not necessarily imply that all fisheries groups and interests are given a fair and proper hearing. The Fishermen's Association, for example, is a fragile coalition of big players in offshore and small-scale operators in inshore fisheries, of boat owners, crewmembers and independent operators - groups whose economic resources, administrative capacity and political 'clout' differ considerably (Jentoft and Mikalsen 1987). Consensus has proven hard to reach, and internal opposition to management decisions and policies is frequent, particularly among the smaller inshore operators who claim that their interests are sometimes ill served by present arrangements.

The most dramatic outcome of this has been the formation of a breakaway organisation - the Norwegian Association of Inshore Fishermen. A key question here is how to make institutions more inclusive and representative of the various voices within the industry itself. If compliance with management rules and regulations depends - in part - on representation, one need to look for reforms that can open up the management policy community to all stakeholders in the industry.

The fact that fisheries management has become part of the environmental agenda also raises the question of how to accommodate a wider set of stakeholders - for example environmental groups and agencies - in management decision-making. There is a growing sense that both the activities of environmentalists and the obligations that follow from international agreements and conventions, are bound to have an impact on how decisions are made; on who should participate, why and how. So, although the debate on institutional reform in Norwegian fisheries is still fairly muted, it is increasingly being nurtured by perceptions that fisheries management is basically about protecting vulnerable ecosystems - and thus an integral part of the wider field of environmental politics.

One question - raised by the close collaboration between government and industry, and debated for quite some time - is whether corporatism and co-management favour the economic interests of fishermen at the expense of those of other stakeholders. Although it is a central tenet in democratic theory that those directly affected by government decisions should have a say (confer Dahl 1989), co-management - as hitherto defined and practised in the Norwegian fishery - tend to facilitate user-group influence at the expense of government control. Giving industry the opportunity to (co-)manage the fisheries may be tantamount to letting the goat guard the oatmeal sack - providing a powerful incentive to capture immediate benefits (for example larger quotas) while disregarding the long-term effects on the stocks. The general conception, perhaps a little unfair, has been one of an industry easily tempted and a government only too willing to oblige. The key issue here is not just how to strengthen the steering capacity of government, but also whether the power to manage should be transferred to agencies with fewer ties to the fishing industry such as the Ministry of the Environment.

The current system of centralised consultation, then, reflects a 'trade-off' between special interests and public concerns that is not to everyone's taste. Corporate arrangements imply selective representation, and an 'institutionalised disregard' for the fact that wider groups may have a stake in management decisions. A commendable policy, in this context, is one to which those directly involved can agree - or one that is favoured by a winning coalition. In the context of management reform, the key question here is whether corporate arrangements like the Management Council should be replaced by a system of broader consultations that will include all relevant stakeholders. The problem, of course, is how to broaden participation without undermining the need for efficient decision-making. Inclusive institutions may well facilitate 'rational discourse' and democratic deliberation, but prove unwieldy tools for solving pressing management problems.

2.1.6 Conclusion

While management reform in Norwegian fisheries has been more about adjusting instruments than changing institutions there are pressures - domestically and

internationally - for broadening participation in management decision-making. The Ministry of Fisheries has not been unwilling to listen to such demands. From 2002 representatives of regional authorities are allowed to join in on the deliberations prior to, and the negotiations in the Joint Norwegian-Russian Fisheries Commission. Whatever the merits of corporatism, the problem of democracy and transparency remains: why should user groups enjoy a privileged position when management decisions may eventually affect us all? This question is particularly pertinent in a country such as Norway, where fisheries play an important role in the national economy and constitute the economic backbone of numerous coastal communities.

Participation, of course, is often restricted for reasons of efficiency; broadening participation will - almost inevitably - delay the process of decision-making. In this sense, selective consultation - as in the Norwegian system - is a strategy for streamlining organisational choice while preserving an element of 'popular' involvement. As such, involving user-groups in policy-making has been the standard response to problems of legitimacy and compliance. Centralised consultation - as practised in Norwegian fisheries management - has made it possible to combine the 'functional' needs of managers (for information and advise) with the democratic aspirations of politicians and user groups (for support and representation respectively).

However, groups and voices with no ties to central government or to the fisheries are challenging this conception of democratic participation as well as the definition of what fisheries management is really about. Given that fisheries management is environmental politics, who is entitled to participate? To borrow a phrase from Martin Harrop (1992, 270) there is a trend towards a 'crowding of the policy environment' as new groups are challenging customary practices and the autonomy of the fisheries policy community. The increase in public attention directed at fisheries issues may, of course, prove temporary, generated and sustained by the dismal state of most management regimes. It may, on the other hand, also reflect genuine and lasting concerns, and a growing perception that fisheries are too important to be left to industry and government. This is a point argued by environmentalists in particular, but one that is gaining support in wider circles, and not only in Norway. The key issue, given that there are limits to participation, is what institutional arrangements that are appropriate in settings where the concept of 'stakeholder' rather than 'user-group' is increasingly being used to define the legitimate members of the management policy community. The current system of centralised consultation - based on a direct economic stake in the fishery, as by far the most important criterion for representation - may be inadequate once we acknowledge the public interest nature of fisheries management. If the legitimacy of management decisions has come to depend on whether they can be argued and justified in public, there is much to be said for institutions that facilitate transparency and public scrutiny without necessarily undermining the need for efficiency in management decision-making.

2.2 Local Participation in the Management of Marine Resources in Norway

2.2.1 Introduction

The issue of user participation in the management of marine resources has been a much-debated topic in fisheries management for the past 20 years. In the wake of this discussion, several concepts have been introduced that are claimed to conceptualise the many different ways that users may be involved in the management process, i.e. fisheries co-management, co-governance, and so on. In this paper, some of the different ways that users may be involved in the management of marine resources are discussed using the involvement of fishers in the management of marine resources in Norway as a case. A central case is the so-called Lofoten case, which received international attention after the publication of Jentoft and Kristoffersen's: Fisheries Co-management: The Case of the Lofoten Fishery (...). Using this and some other cases, the paper focuses on the issue of participation, and how participation may be institutionalised.

First, some of the different concepts that are being used is the discussion concerning user involvement in fisheries management, are discussed especially dissecting the idea of fisheries co-management. After this, I elaborate some of the most important cases of user involvement in Norwegian fisheries, emphasising the Lofoten case. Thirdly, some of the most significant findings from the Norwegian cases are compared to the concepts discussed.

2.2.2 Blame it on the little guy: User-involvement in the management of marine resources

At a general level, there are several reasons for involving users in the management of natural resources. At a higher level, user involvement may be regarded as a fulfilment of the basic functions of a democracy as the primary users of a resource should have voice in its management. In this fashion, those affected by changes in the management structure of any given industry are also consulted during the creation and implementation of changes and changes to the management structure can hence incorporate the specifics of the stakeholder groups. While there are many ways that fishermen may be involved in any given fishery, one may differentiate between at least two different types of management institutions. Firstly, there are a variety of institutional arrangements that are intentionally made in order to manage a given resource. In this case, institution is made with intention of representing stakeholders, for example the public or fishermen, in the management of a given resource. In this case, one may call the institution resource management institutions. Secondly, there are a variety of institutions that are part of a fishery, but which are not with the intention of managing a given resource. Examples include sales organisations and the different welfare institutions of fishermen. In general, one may call institutions such as these supportive institutions. While such institutions are not made in order to manage a resource, they may however have an effect on the management. For example, sales organisations have definite influence on the establishment of prices for catches, and prices may have a direct effect on the manner of which fishermen harvest. In the next turn, the manner in which the fishermen harvest, for example by using overly efficient gear, will

affect the instruments used for managing the fishery. From an analytical point of view, this is an important difference because the institutional landscape in which a fishery is embedded, including all the institutions which may have an effect on the management of fishery, is crucial for understanding the economic and legal behaviour of fishermen.

In the fisheries management literature there appears to be general agreement that fishermen should become involved in the management of the fisheries in which they participate. The agreement ends here, as there are many different options open for the entrance of this user in the management process. The analytical argument made above may help differentiate between two types of current involvement in fisheries management. In some cases, fishermen are active participants in management institutions and are part in the process as members of management boards or as having extended tasks relating to the enforcement of regulations. In some cases, a fishery is 'self-managed', that is, the fishermen have assumed total control of the fishery and are given the authority to manage it according to their own will. However, it is a fact that most fisheries are managed by the state. In these cases, the state has assumed total control over a fishery, however, user groups such as fishermen may be involved in a consultative role. This is the case in Norway, as fishermen are represented during the establishment of regulations through attendance at bi-annual meeting where quotas are distributed among user-groups.

A rather large portion of the literature argues that different institutions exists that may assume management authority of they granted this particular legal role. Thus, it is argued that supportive institutions can be transformed into management institutions. If it is the case that supportive institutions may assume the role as resource management institutions, one may firstly differentiate between two principally different legal roles. Firstly, such institutions may become involved in the management process as an advisory institution. In this case, the knowledge and skills that is part of the cultural capital of the institutions is put into use in the management process. Needless to say, this may be a form of involvement that everybody will benefit from because it will increase the precision and size of the knowledge basis on which the management is based. Secondly, such institutions may become the sole manager of a fishery. In such cases, the supportive institution assumes a role that is quite different from its origin, and special functions may be established in order to make it a fully functional management institution. For example, the legal requirements of a management institution need to meet and the assumption of regulatory authority may also require the expansion of the knowledge base onto which the institution is to create sound management. However, from a both a theoretical and practical point of view one may observe some problems with both these types of involvement of supportive institutions in the management of a fishery. Some of these problems may be listed as follows:

- the instruments by which the supportive institution is accomplishing its goals may be negative for management purposes;
- the supportive institution may be established on an ideological and normative foundation which may come in conflict with the legal requirements of a management system;
- the knowledge basis for the supportive institution may not be relevant for management purposes;

- the specific form of representation in the supportive institution may not be valid for management purposes;
- the supportive institution, while valid as such, may not be considered legitimate - generally and specifically - as a management institution.

The instruments by which supportive institutions is accomplishing its goals are usually intrinsically tied to the tasks that it is designed to take care of.

2.2.3 Local participation in Fisheries Management in Norway

In general, marine resources in Norway are governed by the state through a consultative system. *Laws* are established on the political arena with the Norwegian parliament having the judiciary power needed in order to pass new laws for legislation. However, behind the processes in where a new is established, a long political process is carried out. In this process, the organisations of fishermen in Norway, notably the Association of Norwegian Fishermen, play an important role.

Also, most Norwegian political parties have fisheries committees that have input in the political processes that lie behind the parliamentary processes. It is also the case that the different regional subdivisions of the political parties that are located in fisheries dependent regions also participate in this process. Finally, new laws must go through a final phase of public hearings, and the different user - and regional groups that are affected by the new law is generally one of the hearing instances. The *regulatory* process is formed as a process where fishermen, with their main organisation The Association of Norwegian Fishermen, participate in the formation of new regulations. This is carried out through biannual meetings between the different user groups that the state considers having a stake in Norwegian fisheries. In this case, the participation of fishermen in the regulatory process is purely consultative. While one may argue that there is an element of authority nested in this role, it remains very limited as all final decisions are reached at the discretion of the Ministry of Fisheries.

In spite of having a relatively centralised management structure, a few institutions exists in where fishermen participate in both the formation and establishment of regulations and the execution of the regulations. These institutions are founded on the Salt Water Fisheries Act paragraph 33 and 36, and updated in regulations J-54-1994 and J-2-1995 from the Director of Fisheries of the Norwegian Directorate of Fisheries. In this regulation, a system of control committees is established. These committees exist in a total of five counties and include 14 municipalities.[1] Within the municipalities and areas defined in the regulation, the Directorate of Fisheries defines a fishing district in which the control committee have jurisdiction over all commercial harvest. In each district, the fishermen elects control officers within their own tool group, that is, those using gillnets choose their officers, those using hand line their officers, and so on. The amount of officers within each

[1] In Finnmark county the included municipalities are Vardø and the area of Breivikfjorden, in Troms the municipalities of Tromsø, Lenvik, Berg and Torsken and the area of Svensgrunnen, in Nordland county the municipalities of Andøy, Øksnes, Bø, Træna and the Lofoten fishing area, in Nord-Trøndelag county the municipalities of Vikna, Fosnes, Namsos and Namdalseid and finally in Sør-Trøndelag county the municipalities of Åfjord, Roan, Osen, Bjugn and Frøya.

tool group amounts to one per tenth vessel, and the total group of officers elect two representatives who meet in a control committee. This committee elects one chair of the control committee. The chair has the right to divide his own district into several smaller districts, each with their own control committees. Elections are held as soon as the current control committee decides that a sufficient amount of fishermen are present, and the old committee is replaced with the new one as soon as elections are carried out. Fishermen cannot choose to not serve on this committee, unless they have served for a total of two years previously. There is no pay for serving as a control officer.

These committees are established in order to make sure that the fishery is run in an orderly fashion. The reason is that all these fisheries include different user group including those using long lines, nets and jigs. The committee has the legal mandate to temporarily exclude certain user group from the fishery, however, such decision must be confirmed from the Ministry of Fisheries who arrives at a final decision. The mandate of the control committee mostly concerns area regulations. In most cases, user groups are temporarily excluded from certain areas in order to avoid gear conflicts. In such cases, the regulation must be made published by public notices, and enters into force after 48 hours. In addition, the control committees must adapt to the different particularities that may occur in their district, and the institutional traditions that have developed for the different control committees may differ. The most well-known of the control committees is probably the Lofoten committee, which also has been the object of a debate concerning the use of supportive institutions in the management of a fishery. It is therefore of interest to examine this case more closely.

2.2.4 The Case of the Lofoten Control Committee

The Lofoten area consists of a several island located in a string going southwest from the mainland of Nordland county in Norway. The area is a significant tourist attraction, mainly due to the fantastic scenery. However, the area is most known for its abundance of cod during the winter season. During the winter season, Norwegian Arctic cod migrates from the Barents Sea towards the Norwegian mainland in order to spawn. Numerous spawning grounds are located throughout the coastline, however, the spawning grounds located in proximity to the Lofoten islands are the far most abundant ones. Due to the fact that this phenomenon has been well known for over 300 years, a longstanding tradition exists in Norwegian fisheries in which fishermen from all corners of the country travel to Lofoten in January to be a part in the hectic but very lucrative fishery of the area. Fishing grounds tends to be crowded, and fishing gears often become entangled.

In 2000, catches amounted to 18,939 tonnes gutted weight. This represented a slight reduction compared to 1999, when the gutted weight amounted to 19,918 tonnes. These catches are low as compared to 1997, when the gutted weight amounted to 37,728 tonnes. However, in 1952 the same weight was 115,964 tonnes. Catches have also been lower than currently, in 1988 only 11,533 tonnes was landed. Catches may vary considerably, often dependent on when the cod arrives and where it arrives. Normally, the cod arrives sometimes in the period from mid-January to mid-February, however, some years it has arrived in April. In cases of such late arrivals, most fishermen will be gone from the area and landings will consequently be reduced. The number of fishermen participating in the

fishery has decreased steadily during the past and current century. In the beginning of the 1950s, over 20,000 fishermen participated in the fishery. The majority of these fishermen come from Nordland county (2,280 fishermen in 2000), while the counties of Sogn og Fjordane, Møre og Romsdal and Troms where represented by approximately 200 fishermen each. During the 1980s less than 5,000 fishermen found their way to Lofoten, and since the introduction of the vessel-quota system in 1990, the yearly participation ranges between 3,500-4,000 fishermen. The catch per unit effort (CPUE) measured as the number of kilos landed per fisherman has ranged between 5,689 (2000) and 11,219 (1994).

It is in this setting that the Lofoten Control Committee is carrying out its tasks. The committee is appointed for two years at a time, but is chaired by a local officer from the Directorate of Fisheries. As is the general procedure with the control committees, each of the user groups gillnets, jigs, long line and Danish seine selects two representatives that meet in the control committee. However, the fishermen arriving to Lofoten do not appoint these. Instead, the Nordland division of The Association of Norwegian Fishermen appoints them. The Lofoten area is subdivided into four areas, each with its own control committee. Those appointed select one chair, which acts under the supervision of the officer from the Norwegian Directorate of Fisheries. The committees arrive at regulations for their own districts. These regulations only consist of tool specifications for the different user groups, and the amount of fishermen allowed into each area. They also regulate when the different tools may be set in the sea, and when it needs to be pulled. Thus, each control committee divides its own district into several smaller parcels, and regulates the tools and fishermen allowed into each parcel. Over the whole period of the Lofoten fishery, all user groups and user will be allowed into the best fishing parcels, but the committee is in change of regulating the access in an orderly fashion. In order to carry out its tasks, each of the committees has their own inspection vessels. In 2000, the control committees utilised five different vessels for control purposes. These vessels are used for moving the officers between the different parcels in its own district, where they control that the fishermen follow the area regulations. In 2000, a total of 33 violations were recorded, of which five resulted in charges. In short, the Lofoten control committee is a formal body that regulates access to the many different fishing grounds located in the Lofoten archipelago. The next question is whether this can be considered a fisheries management institution or a supportive institution.

2.2.5 Much Ado About Nothing: Is this Fisheries Management?

In 1989, Jentoft and Kristoffersen published and article called 'Fishermen's Co-Management: The Case of the Lofoten Fishery', in which they argue that the Lofoten system represents an example of how an institution which is developed within the private sphere of the resource users may be used for resource management purposes. While they do not argue that the Lofoten system consisting of control committees is a resource management system, they argue that it may considered used for this purpose due to the fact that it has proved its value as a regulatory system.

Regulatory forms that seem good in theory often prove ineffective in practice because fishermen find ways to bypass them (...). In Lofoten it is noteworthy that violations are few in comparison to the number of fishermen. It may be that competition is

fierce at sea, but so is cooperation in making and following the rules. Contrary to the standard assumption in the Common Property theory, the Lofoten fishermen have been able to settle their differences. Indeed, no quota regulations have been enforced in the Lofoten fishery. However, conflicts over space can be quite as intense as conflicts over fish quotas. (...) In conclusion, we propose that fisheries co-management in general and as it has been demonstrated in the case of Lofoten, is superior to other management forms in the fishery in some respects. Regulations which the fishermen themselves consider illegitimate will be ineffective because they will tend to be resisted and bypassed by other fishermen. We argue that legitimacy is not just a result of the management decision itself, for instance its distributive effects, but also how it is reached. It also matters whether or not the decision making process is considered to be just and fair (Jentoft and Kristoffersen 1989, 363-364).

The point made by Jentoft and Kristoffersen is that the Lofoten case shows that the participation of fishermen in the making of regulations will contribute to solve the control problem that most fisheries management systems must struggle. Because fishermen are allowed to impact the decision making processes behind new regulation, regulations become more legitimate, and the fishermen are more apt to comply with regulations. They also argue that the Lofoten case shows that while fishermen may compete at sea, they are also able to settle their differences when realising the mutual benefit of a collective agreement. In this respect, Jentoft and Kristoffersen conclude that fisheries co-management systems are superior to many other forms of fisheries management systems because it founded on a social basis that is consistent with the fishermen's concept of fairness and justice. This line of argumentation has been disputed among other Norwegian scientists interested in fisheries management systems. In an article from 2000, Holm, Hersoug and Rånes argue that the Lofoten system cannot be meaningfully labelled a fisheries management system.

> 'We think that the co-management concept should be reserved for institutional arrangements that entail quite intensive user participation. Further, we believe that it is important to specify exactly what is managed within a co-management arrangement. In this way, co-management models specifically designed for the management and conservation of fishery resources should be explicitly labelled fishery *resource* co-management.' (Holm, Hersoug and Rånes 2000, 362)

The point made by Holm, Hersoug and Rånes is that the Lofoten system of control committees is not a resource management system, but a management system. Therefore, they argue, it was incorrect by Jentoft and Kristoffersen to infer that the system could be considered a direct alternative to conventional state based management systems. It can be questioned whether the interpretation put forward by Holm et al. is correct, because the article by Jentoft does not claim that the Lofoten control system is in fact a resource management system. As shown above, they argue that an important feature of the system, its democratic mechanisms, provides a solution to some of the problems of legitimacy that many fisheries management systems combat. Whether this is the case is an empirical question, and the number of violations of regulations that Jentoft and Kristoffersen utilise to give this argument weight does not appear valid. Records only show recorded violations,

but nobody knows how many violations that actually escape the attention of the controllers. Thus, the use of recorded violations does not prove anything vis-à-vis the rate of compliance to regulations in the fishery.

Holm, Hersoug and Rånes make the argument that the concept of fisheries co-management is too all inclusive, as it does not contain the necessary conceptual room to pinpoint the subclass of management institutions that are actually designed with the intention to manage resources, that is resource management systems. Indeed, this appears as a valid argument because not all the institutions present in a fishery are constructed with the intention of managing a resource. Whether this critique represents a valid argument the article of Jentoft and Kristoffersen is another issue, but it does represent a valid argument against the liberal use of the concept co-management. In order to illustrate some of the difficulties of the use of the concept of co-management, a further analysis of the Lofoten control committees may be in order because none of the articles cited above do analyse what the ultimate intention with the control system is.

It remains clear in both articles that the system as such is designed in order to prevent and regulate crowding in the fishing spots. Because fishermen with different gear are allowed into different spots, and to some extent are allowed to rotate among these spots, one can manage gear conflicts in a predictable and efficient manner. However, the management of gear conflicts is not the goal of the institution. The decrease of gear conflicts it is a means for increased efficiency and profitability for the fishermen. Needless to say, the prospect of increased profitability is a tremendous incentive for the fishermen to participate in the regulatory system, not to say that it is the only viable option for the fishermen as a collective. If no system was in place, the outcome would be entangled gear, decreased catches and ultimately reduced or no profit. It is also the case that most users, once a system like this is in place, have few incentives to break the rules of the system. There are considerable risks involved in mixing gears, and the likely outcome for the fisherman violating the regulations would be loss of fishing gear. In sum, the optimal collective solution is apparently also the optimal individual solution. In addition to this issue, one may also ask why it is the case that one establishes a system based on private arrangements in a country where there is a tradition for centralised management. Part of the explanation is that the private incentive, both on the collective and individual level, to participate in both the creation and carrying out of the system is of such strength that it is rational for the state to leave the management to the users. In that fashion, the state saves the costs of establishing their own system, at the same time as the revenues of the state from the fishermen increases because the profit of the fishermen increases. Thus, the system of control committees constitutes a network of supportive institutions, not resource management institutions.

The issue of class struggle between Danish seiners and the rest: a fictious problem that has never existed in this fishery.

2.2.6 Conclusion

The debate concerning the relevance of the Lofoten case for the debate concerning fisheries management systems may be carried out at several levels, and it is important to keep these levels apart when relating this empirical case to a theoretical debate. Seemingly,

the article by Jentoft and Kristoffersen is relevant for the documentation of how private institutions may play an important role as supportive institutions in a fishery. The control committees can also represent a seed that can grow into a resource management institution, however, there are obstacles to such a transfer of authority. The system of incentives of an institution which is designed to take care of the interest of a third object, the resource, needs to have some distance to the interests of the users. While it is not necessarily the case that all resource users will become involved in behaviour of the type that will generate a tragedy of the commons process, the possibility that some resource users will put their own short term interest before the interests of the resource suffices to install some precautionary principles in the resource management scheme. This means that the resource management institution must be sufficiently solid to put regulations in effect that may be devastating to users. This scenario is different from the basis of the Lofoten control committees, which never put regulations that have such devastating consequences in effect. In case such decisions need to be made, they must be made by the ministry. Jentoft and Kristoffersen do not go into this issue, which is crucial for grasping the complexity of transfer of authority from one of the many supportive institutions of a fishery the resource management institutions of the same fishery. However, this does not mean that it is irrelevant to discuss the Lofoten case in this regard, because it shows how a functional and efficient institutional arrangement between users and the state may be organised.

In this regard, the critique presented by Holm, Hersoug and Rånes seem to be based on a misinterpretation of Jentoft and Kristoffersen. On the other hand, it is easy to agree with them that the concept of fisheries co-management is imprecise because it fails to differentiate between what has been called supportive institutions and resource management institutions. While they hold that the intensity of user involvement is the crucial variable for the labelling of the system, it appears more relevant to focus on the structure of incentives and intentions behind the evolvement of private institutions in fisheries. The Lofoten case shows intense user involvement, but none of the fishermen participate with the intention of preserving the resource. In fact, the opposite is the case, because this institutional arrangement does increase catches as compared to a laissez faire situation.

3. Spain

3.1 Introduction

The first part of this report is divided into two parts:
a. concepts and terminology related to decentralisation and participation;
b. the general political and administrative structure of fisheries management.

The aim of both parts is to set out the general framework which underpins the model of the decentralised State, as constituted in Spain from 1978, and from which the current political and administrative form of managing fisheries derives.

Concepts on decentralisation relevant to Spanish legislation found in the list drawn up by D. Rommel are analysed and accompanied by examples that can be found in Spanish casuistry. Furthermore, other terms are included which, while not having any direct legal or political correspondence within the Spanish framework, do have some equivalence with concepts that are gaining relevance in political literature, and which imply ways of advancement or progress in the fields of representation or participation.

In section 2, together with a description of the fisheries management political and administrative system, the mechanisms and institutions with decentralising functions are analysed and appraised, as are the relationships between them, and procedures for dialogue and co-ordination, as it is in this area that the main problems occur that the decentralising structures have to face within a unitary State.

Abbreviations

AA.CC.:	Comunidades Autónomas: Autonomous Communities
AI:	Aguas Interiores: Inland Waters
CICEM:	Centro de Investigación y Cultivos de Especies Marinas: Centre for Marine Species Research and Farming
DAP:	Empresa Pública de Desarrollo Agrario y Pesquero: Public Sector Company for Agricultural and Fisheries Development
DGP:	Dirección General de Pesca y Acuicultura: General Directorate for Fisheries and Aquaculture
EEZ:	Exclusive Economic Zone
EPPA:	Empresa Pública de Puertos de Andalucía: Public Ports Authority
EU:	European Union
FEABP:	Federación Española de Armadores de Buques de Pesca: Spanish Fishing-Vessel Owners' Association
FIFG:	Financial Instrument for Fisheries Guidance
FNCP:	Federación Nacional de Cofradías de Pescadores: National Federation of Fishermen's Guilds

FROM:	Fondo de Regulación y Organización del Mercado de los Productos de la Pesca y Cultivos Marinos: Fund for the Regulation and Organisation of the Fisheries and Fish-Farming Products Market
IAM:	Instituto Andaluz de la Mujer: Andalusian Institute for the Advancement of Women
IEO:	Instituto Español de Oceanografía: Spanish Oceanography Institute
IFA:	Instituto de Fomento de Andalucía: Institute for Andalusian Economic Development
ISM:	Instituto Social de la Marina: Marine Welfare Institute
JACUMAR:	Junta Nacional Asesora de Cultivos Marinos: National Advisory Committee on Marine Cultures
TS:	Territorial Sea
UGT:	Unión General de Trabajadores: General Workers Trades Union

3.2 Concepts and terminology related to decentralisation and participation

3.2.1 Political and administrative framework

The Spanish Constitution of 1978 is founded on the recognition of the right to autonomy of the nationalities and regions which comprise the nation and the solidarity among all of them.

The consequence of the right to exercise this right to political autonomy is that, territorially speaking, Spain is organised into seventeen Autonomous Communities, ten of which are coastal, with two of these being insular. Thus, a decentralised model was constituted that was radically different to that which had been in existence prior to 1978, which was based on a unitary and heavily centralised State.

The 'State of the Autonomies', as it is known, originally devised to satisfy the demands for autonomy of a few regions and 'historical' nationalities, has gradually grown. The regime spread to other regions whose citizens likewise wished to have their own administrative authorities, better placed to deal with their problems. Nevertheless, the building of the 'State of the Autonomies' has been a source of tensions and imbalances, with the proposals for institutional reform failing to gain the required consensus, as a result of which this process has not as yet been completed.

The Constitution forbids Autonomous States to create federations, although it does allow them to enter into agreements with one another, with the proviso that said agreements have been authorised by the central government.

Whereas the autonomous State responds to a process of decentralisation, the Federal State takes as its starting-point the prior existence of independent states.

In other respects, the structure of the Spanish State is defined by a combination of two types of legislation, the Constitution and the Statutes of Autonomy, and it is this, above all, that differentiates our State from the Federal State.

The Autonomous Community is a decentralised political unit of the State. The link that exists between the Constitution and the Statutes of Autonomy means it is impossible to

have knowledge of quite important aspects of the workings of the State without studying the Autonomous Communities as authorities of the former's political decentralisation.

The political units of the Federal State have a high degree of self-government.[1] In effect, the constitution of a Federal State either completely disregards the form the constitutions of member-states take, or confines itself to the establishment of some very generalised principle in order to guarantee uniformity between federal political organisation and the territorial units of which it is comprised. But that is as far as a federal constitution goes. It neither states what the procedure for approving the constitution is to be, nor how a member-state should be organised.

The distribution of competencies follows the same model. The federal constitution concerns itself with defining which issues are to come within the powers of the Federation, with all those issues that are left unmentioned becoming the responsibility of the member-states, who shall exercise their competencies in these fields in whichever way they see fit through their own constitutions.

In short, the federal constitution concerns itself with the Federation and not the member-states. There is no link at all between the federal constitution and the constitutions of member-states.

Conversely, this is not possible with the Spanish Constitution, which not only includes very precise rules on the creation of Autonomous Communities and the drafting of Statutes of Autonomy, but also contains relatively detailed laws regarding the internal political organisation of the Autonomous Communities and the issues over which they can assume competencies.

The Autonomous Communities, as State units of political decentralisation, are defined within the Constitution. All the essential elements for the definition of the Autonomous Community as a State territorial entity are defined within the Constitution, and not within the Statutes of Autonomy, which complement the Constitution.

It could be stated that the distribution of competencies is the very core of any politically decentralised State's judicial system. Although the Spanish Constitution leaves the demarcation of competencies between the State and the Autonomous Communities to the Statutes of Autonomy, it does give indications as to the basis on which this distribution of responsibilities should be structured (article 148-149). Which issues are in all cases the total, non-compatible and exclusive[2] responsibility of the State must therefore be determined, as must those for which the Autonomous Communities can assume competency.

A case-in-point would be the way competencies for fisheries affairs are divided between the State and the Autonomous Communities: the competency for fisheries is structured in a centralised way (with the State having sole competency) and yet there is a process of decentralisation in fisheries management, as the competency for fisheries in inland waters corresponds to the Autonomous Communities.[3]

One of the explanations for current fisheries structures in Spain is the way the State is politically and territorially organised into Autonomous Communities.

The Autonomous Communities do not have territorial competencies for the TS nor

[1] In *Conceptos Fundamentales de Ciencia Política*, pub. Alianza Editorial, Madrid, 1988.
[2] Through interpretation of Art. 149 of the Spanish Constitution.
[3] Vid.: section 2.2.

the EEZ, and are only qualified to exercise certain specific responsibilities with respect to the marine environment.[1] This therefore imposes an administrative limitation on the decentralisation of fisheries management.

Another limitation for Autonomous Communities in fisheries affairs is their inability to conduct foreign relations, as this is the sole capacity of the State.[2]

Nevertheless, there are some means by which the Autonomous Communities may participate in the European Community in a consultative role, whether this be as delegated agents sent by the State Authorities to attend sectoral meetings on fisheries affairs, through the Offices for Regional Representation that can be found in Brussels, or as members of the Bodies for Regional and Municipal Representation that have been established in Europe.

3.2.2 Concepts within the Spanish legislative framework relevant to decentralisation[3]

Democracy

> 'A form of government in which people govern themselves or elect representatives to be governed by (quote Rommel, D.).
>
> Democracy is a political regime whose workings are governed by the relationships that exist between society, the political system and the State, in a given social formation and at a specific moment in history' (Touraine, 1995).

Said types of relationship constitute the structural background within which specific means of expressing this kind of representation are developed.

'Direct Democracy

> Refers to government of the people by the people. It is when citizens act in public life or in the formulae of representative democracy without intermediaries, when a number of players intervene in the name of all their compatriots' (Encinar, J.J., 1986: 47).

Over the last twenty years there has been an evident trend towards demanding the participation of individuals in public affairs through the debate about participatory democracy or direct democracy. The latest currents in social sciences highlight the importance of participation in social movements and in voluntary action networks as one of the elements that develop the capacity of individuals to assume self-government.[4]

Spanish democracy is not direct, it is representative (through political parties, outside of which participation is almost impossible), and is formalised as such within the Spanish

[1] Vid.: section 2.2.
[2] Vid.: section 2.2.
[3] According to the scheme devised by Dominique Rommel.
[4] Self-government means the freedom to govern through the absence of control Vid.: self-government.

Constitution, although both the referendum and popular initiative are accepted for the representation of Parliamentary Bills.

An example of direct democracy in Spain might be the Works Committees (favoured by Trades Unions[1] during the nineteen-seventies) which have strong links with workplaces and whose main role is to watch over the production process.

Autonomy or self-government

> *Self-government, independence, freedom through absence of control* (Encinar, J.J., 1986: 9).

As far as Spain is concerned, the 1978 Constitution recognises the right of those adjoining provinces with common historical, cultural and economic features, of island territories, and of provinces with historical regional entity, to accede to autonomy. To exercise this right requires their being constituted as Autonomous Communities (also referred to as 'Autonomies').

In this way, an important decentralisation process has been carried through in which an attempt has been made to enable the coexistence of regional variety and the indissoluble unity of the Spanish nation.

The way the Autonomies are organised, and the competencies they have, are defined by the Constitution and their respective Statutes of Autonomy.[2] Autonomous Community institutions are structured in the following way: a legislative Assembly, elected by universal suffrage, with a governmental Council and a Higher Court of Justice. The competencies that the Autonomies may assume in accordance with the Constitution and their Statutes of Autonomy can be either exclusive or shared with the State, and may consist of nothing more than enforcement within the regulations of basic State legislation, or even in legislation governing affairs that are within the bounds of their sole competency.

With regard to fisheries affairs, the Autonomous Communities (Andalusia included) hold sole competency as far as inland waters are concerned.[3]

'Subsidiarity

> Within the context of the European Union this means that central institutions (in this case, the European Union) should intervene only when the aims of intended actions cannot be sufficiently achieved by member States and, consequently, can be effectively achieved at Community level'. (Barrio, García, Gonzalo, A., 1998:117)

On the one hand, the principle of subsidiarity signifies the primacy of member-states as a rule or general supposition (as far as the exercising of concurrent competencies is

[1] Direct democracy, through popular participation, has been advocated by socialist doctrines as part of the democratisation process, with the ensuing control of power by the grass-roots.

[2] The Statute of Autonomy is the basic institutional set of rules and regulations of each Autonomous Community within Spanish legislation.

[3] Vid.: Section 2.2.

concerned) and, on the other, a legitimate right for Community intervention, insofar as the suppositions that prescribe the above precept concur.

In other respects, this principle is generally aimed at guaranteeing a degree of independence to a lesser authority vis-à-vis a higher one, or to a local power with regard to a central one. It deals, therefore, with the way competencies are divided up between different levels of power, and is the principle upon which Federal State institutions are based.

When applied within the framework of the European Community, the principle of subsidiarity involves member States maintaining those competencies they, themselves, are able to most effectively manage, whilst the Community assumes those competencies that they cannot exercise in a satisfactory way.

Paragraph 2 of Article 5 of the EC. Treaty states that three conditions have to be fulfilled for the Community to take action in accordance with the principle of subsidiarity:

- it cannot be applied to a sphere of competence that is exclusive to the Community;
- the aims of the action in question cannot be sufficiently achieved by member-states;
- as a consequence, the actions, due either to their magnitude or their effects, can be better implemented at a Community level.

The principle of subsidiarity obtains for all Community bodies. This rule takes on special importance with respect to the Council, the European Parliament and the Commission.

The application of the principle of subsidiarity involves a certain degree of difficulty due to the ambivalence and opaqueness of the term, and fisheries policy are not unaffected by this. This is due to the fact that the majority of the competencies are defined as exclusive, either by the European Community, or to the benefit of the member States; as a result, the implementation of this principle in fisheries affairs is complicated.

Nevertheless, there are certain sole responsibilities in fisheries affairs where an attempt is being made to apply subsidiarity, even though there are a great number of doubts about its use on account of the diverse interpretations that can be found in judicial practice.

An example of this controversial application of the principle of subsidiarity is the power over checks and controls. It is the Community that exclusively bears this power, but this does not stop member States exercising certain functions.

As far as Spain is concerned, these functions are limited to the sphere of meting out fines where, due to the close proximity of state sovereignty and the problem in question, both the legislation and its application remain in the hands of the Spanish State, although it might be understood that this proximity could lead to discrimination and inequalities in dealings due to national interests. The inability for this principle to operate could be rooted in the lack of material means and staff found in the Spanish State's check and control systems.

Decentralisation

> *A process in which certain parts or sectors of governmental power, as well as the responsibility for its workings, are transferred from the central, national level, to municipal and/or state[1]/provincial levels* (Baca Olamendi, L. et al., 2000: 180).

Traditionally-speaking, decentralisation is identified with the local community, but it is really a form of organisation that can be employed at all levels of government.

In the Anglo-Saxon world, the word decentralisation indicates a process of change or transformation that can take on connotations that may be political *(devolution[2])* or administrative *(deconcentration[3])* in nature, depending on the way the process evolves.

Decentralisation refers to the transfer of services, powers and responsibilities and resources, from the national level to the level of communities and regions, and involves the permanent assignation of duties to a variety of judicial bodies. The Fisheries Departments of the Spanish autonomies[4] are a good example of decentralisation, inasmuch as they have had powers that stem from the central authorities permanently conferred upon them.

A similar example of decentralisation can be found at the European Union level regarding the FIFGs which finance Common Fisheries Policy ancillary measures and which are applicable in Spain.

A large degree of decentralisation in the management of Structural Funds can be inferred for the new 2000-2006 period from the rules and regulations governing these funds. This signifies a greater number of responsibilities for local and regional authorities and likewise involves a number of clear and standardised management regulations. Member-states no longer receive annual payments in advance for which they have to produce receipts several years later, but instead receive a first advance payment for each programme that is dependent on the Structural Funds. This is followed by part-financing after proof has been presented of specific applications for payment.

It is the Autonomous Communities' [5] obligation to implement and manage the Single Multi-region Programme which comes under the framework of the Structural Funds.

Deconcentration

> *A process of transfer in which the national government is present in local and regional units through its own administrative bodies* (Baca Olamendi, L. et al., 2000: 180).

This term is similar to the concept of delegation, but involves tighter control by the higher authority. An example of deconcentration in Spain can be found in the so-called Coastal Demarcations, which are public bodies dependent on the central Authorities, in this case, to be specific, on the Ministry of the Environment.

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[1] In Federal States.
[2] Vid.: Devolution.
[3] Vid.: Deconcentration.
[4] Vid.: Autonomy.
[5] Vid.: Autonomy.

Delegation

> *The temporary assignation of duties to a body that is lower in the hierarchy within the same legal entity* (Encinar, J.J., 1989: 42).

Delegation consists of transferring authority or limited responsibility for decision-taking in a given matter. For the term 'delegation' to be defined, a distinction must firstly be made with regard to the concept of decentralisation. In delegation, the transfer of authority is made temporarily, whereas in decentralisation this transfer is permanent.

In the case of Spain, an obvious example of delegation in fisheries affairs would be Fishermen's Guilds,[1] where, amongst other things, they have been delegated the management of fishing within their corresponding spheres of action.

Centralisation

> *The assumption by public power of faculties attributed to local bodies* (Dictionary of the Spanish Language).

In the sphere of fisheries, the Common Fisheries Policy has involved a process of centralisation of fisheries management which was previously carried out by the State.

Regionalisation

The following have been the traditional fishing areas in Spain: the Bay of Biscay, the north-west, the South Atlantic, the South-Mediterranean, the East Coast, the north-east, the Balearics and the Canaries. Nevertheless, according to the Regional Socio-Economic Study on Employment and the Degree of Fisheries Dependence, the following are considered to be fishing regions in Spain: Andalusia (Atlantic coast), Andalusia (Mediterranean coast), Murcia, Valencia, Catalonia, the Balearic Islands, the Canary Islands, Extremadura, Ceuta and Melilla.

In current times, any reference to regionalisation in the sphere of Spanish fisheries involves the conferring of specific powers and obligations in fisheries affairs on the Autonomous Communities[2] (Suárez de Vivero, J.L. and M. Frieyro de Lara). As such, fisheries regions in Spain would equate to the present-day Autonomous Communities. There is a second meaning of the regionalisation concept in the wider field of fisheries which has originated from within the European Community. In this other sense, *Regionalisation* involves a transformation of the current fisheries management system, with the establishment of specific fisheries regional management systems defined outside the national limits of member States. In short, regionalisation implies a greater degree of decentralisation of functions connected with the regulation of the fisheries sector.

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[1] Fishermen's Guilds are associations, drawn up in public law, with legal entity and the capacity to work towards the fulfilment of their ends, which act as consultative and collaborative bodies alongside the Administration in promoting the fisheries sector representing professionals in the fisheries sector, both employers and employees, without prejudice to other associations and bodies that represent the sector.

[2] Vid.: Autonomy.

Emerging concepts[1]

Apart from the above-defined concepts[2], there are others that could be described as emerging and which, although still not legally recognised within the framework of Spanish legislation, do have correlation with existing political terms directed at greater participation and a degree of decentralisation, especially at a local level.

The Transfer of Powers or Decentralisation with Political Connotations (Devolution)

> *The transfer of power from a central government to a regional or local authority. This Includes the transfer of more power than is involved in decentralisation. In a State that transfers, the regional authorities are more autonomous* (Collin, P., 88).

This is a transfer of power where the powers transferred are not subject to any control by the institution which devolves the power. This term is not easily translated into Spanish. In principle, it refers to the political or administrative decentralisation of State structures, but is associated with new trends in management and administrative organisation, both in the private sector and in public bodies: deconcentration, delegation, making personnel accountable for an organisation, etc. In this regard, it is evident that it is linked with the idea of empowerment.[3]

The use of this word could only be applied with difficulty to fishing policy within the framework of the Spanish nation where there are no examples in existence due to the term only having been defined in recent times.

Involvement

> *A process of decision-taking that consists of a lesser type of participation* (Rommel, Dominique).

An example of this term applied to the sphere of fisheries management in Spain might be the participation of a number of environmental groups in fisheries committees.[4]

Contribution

Contributing to a decision means making an participatory effort which may or may not have an impact on the decision.

Empowerment

> *Empowerment is the granting of power to the people, the learning of new roles, a change in values, attitudes and types of behaviour so as to make them more*

[1] Especially those that represent advances or progress in representation or participation.
[2] Vid.: Section 1.2.
[3] Vid.: Empowerment.
[4] Vid.: Fisheries Committee.

> *appropriate for the solution of personal and group needs; as far as the Administration is concerned, this consists of eliminating rigid dependencies in such a way as to take into account and appreciate the human being, with his experience and learning, as an organisation's greatest asset. Empowerment should be implemented at all levels as it requires from each and every one of the people who make up an organisation, the will and ability to assume responsibilities through technical knowledge and personal growth* (Stein).

Empowerment is a broader term than the traditional terms of delegation, decentralisation and participative management, as it involves the establishment of tasks and the knowledge of how the development of participation fits in with the aim and the action to be undertaken.

Participation

> *This refers to the effort made by participants in decision-making processes* (Rommel, Dominique).

An example of how this term is applied to the sphere of fisheries management in Spain might be the participation of different agents, such as the scientific community, in the implementation of the Andalusian Fisheries Sector Modernisation Plan.

Sharing Responsibilities

> *Refers to an equal relationship between participants (Rommel, D.).*

Partnership

> *This alludes to a structure within which participants are equal (Rommel, D.).*

Distribution of responsibilities or the drawing of the lines of joint-responsibility

> *This type of distribution involves giving without restriction or control* (Rommel, D.).

3.2.3 Discussion

- Evolution towards a decentralised State in Spain has involved the creation of a new political model, the State of the Autonomies, and this model is not, as yet, totally accomplished. The present model demands a new way of envisaging political and administrative organisation which takes into account the pull in opposing directions exerted by territorial decentralisation on the one hand and, on the other, the building of the European supra-state. As such, the present model for fisheries management is not a finished article, but still allows room for extending the decentralising process;

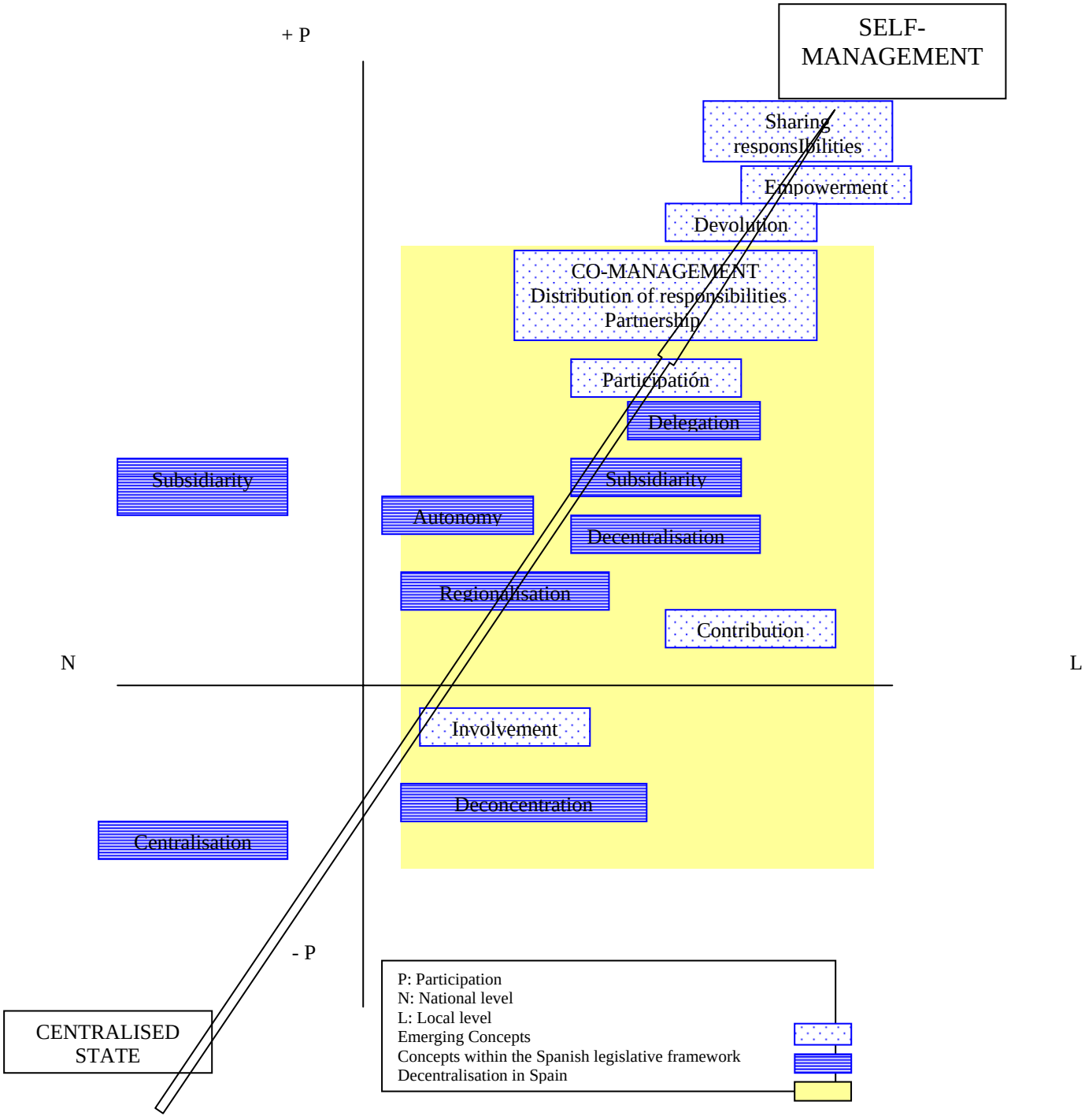


Figure 3.1 Decentralisation in Spain

- Amongst others, the following advantages that decentralised institutions offer in the sphere of fisheries in Spain should be highlighted:
  1. they are much more flexible than centralised institutions, as a result of which they are able to respond much more quickly to changing circumstances;
  2. they are more effective, given that they are in closer proximity to problems and have greater knowledge of them;
  3. they foster participation, due to the fact that a greater number of interests in the sectors involved are represented;
  4. municipalities are better catered for on a national scale than in a centralised State;
- When mention is made of extending the decentralisation process, it should be clearly stated which political and administrative level, or levels, are to be earmarked for decentralisation:
  a) decentralisation from the central authorities to the Autonomous Communities.
     This is the type of decentralisation that has resulted in the new model of State organisation. The broadening or extending of this process is limited by the absorption of areas of responsibility by the State, such as fishing outside of inland waters, relations with the EU, and international relations. As far as relations with the EU are concerned, the creation of a regional fisheries consultative committee[1] would guarantee the participation of regions (such as the Mediterranean) in debates on fisheries at a much earlier stage;
  b) decentralisation from the Autonomous Communities to local authorities.
     This aspect of decentralisation is new within the Spanish political and administrative system. Participation of the local level in fisheries management should be implemented in accordance with the kind of fishing concerned, bearing in mind that certain types of fishing involve more than just the local area. The question must also be considered whether developing local levels of management to a high degree might excessively fragment fisheries management in matters which undoubtedly are of a certain nation-wide nature;
- The decentralisation process must find the point of balance between suitable participation at a regional level and, also, at local level, in order to reinforce the cohesion that the fishing sector must show in certain cases in order to be able to compete on an international scale;
- To conclude, the fisheries management decentralisation process in Spain has a bearing on two areas, the relationship between the State and the Autonomous Communities, and the connection between the Autonomous Communities and local areas. In the first instance, decentralisation involves the continuation of a process that began with the establishment of the State of the Autonomies and the transfer of powers; in the second case, it involves the creation of a brand-new system, where local areas would take their place within the management system, making a direct contribution to affording the system greater responsibility and cohesion.

[1] In the European Commission *Green Paper on Fishing*, Vol. 1, European Community, 2001: 37-38.

3.2.4 Examples of decentralisation

These are different examples of decentralisation in Spain, among others: ISM[1] and Fishermen's Guilds.

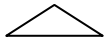
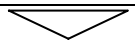
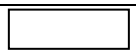
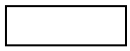
Organisations	Centralisation	Decentralisation	Structure
ISM			Apex-Base
Fishermen's Guilds			Base-Apex
OPs			Local-Supra-Local
Organisations within the sector			Local-Supra-Local

Figure 3.2 Fisheries organisations and institutions, structural organisation

ISM

The ISM is a State body with a peripheral structure, i.e.: it is decentralised, with provincial and local offices.

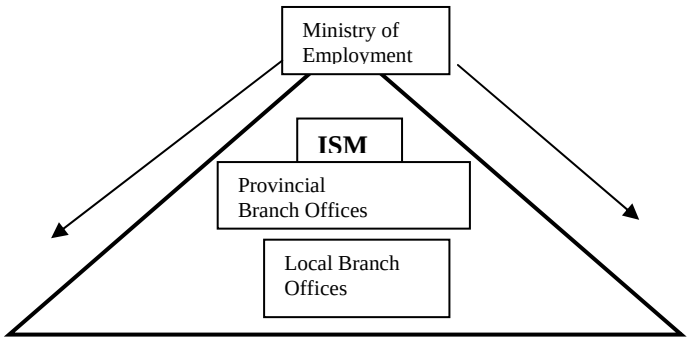


Figure 3.3 ISM administrative structure

Fishermen's Guilds

Fishermen's Guilds are associations on a local scale created under public law.

[1] Social Institute for the Navy.

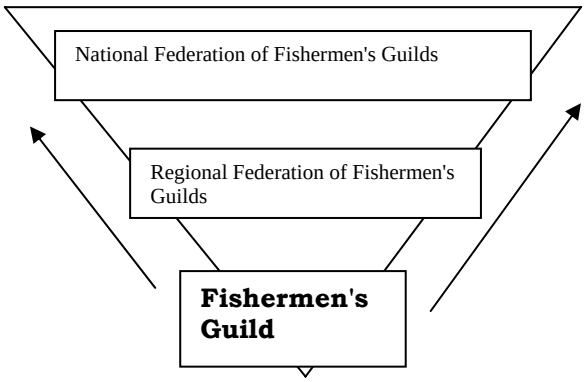


Figure 3.4 Fishermen's Guilds. National structure

3.3 General political and administrative structure of fisheries management

3.3.1 Areas of state authority

The whole administrative framework has become more and more complex as new authorities and structures have emerged with responsibilities in the sphere of fishing that differ from those of the State; to be specific, in the first instance, autonomous authorities and, secondly, Europe. To this framework must be added corporate and private organisations which carry out specific functions that have a direct impact on fishing. In reality, the fact that this involves a sharing of responsibilities which were previously totally borne by the State, implicitly entails a risk of tasks overlapping and/or administrative bodies being duplicated.

The organisation of the Spanish State into Autonomous Communities has led to a high level of self-government by these, given that they have the capacity to pass their own legislation and to implement and apply basic State legislation. As far as fisheries are concerned, Article 149.1.19 of the 1978 Spanish Constitution attributes to the State sole competency for sea fisheries affairs[1] in external waters[2] (Territorial Seas and the Exclusive Economic Zone), without prejudice to waters for which the management of the sector is attributed to the Autonomous Communities. Moreover, the State is assigned the drafting of basic legislation for the management of the fisheries sector.[3]

[1] De facto extraction, including the regulation of features and conditions.
[2] According to Fisheries Law 3/2001, concerning State Sea Fisheries, external waters are those sea waters under Spanish jurisdiction or sovereignty which are situated outside straight base lines, as envisaged by Law 20/1967, of 8th April, on maritime jurisdiction extending to twelve miles for the purpose of fisheries, and by Royal Decree 2510/1977, of 5th August, on jurisdictional waters and their delimiting straight base lines.
[3] Regarding the economic or production sector.

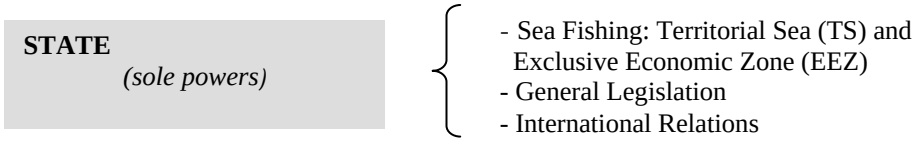


Figure 3.5 Exclusive State competencies

SEA FISHING IN EXTERNAL WATERS (TS and EEZ)
Resources: *access to resources, the regulation of fisheries activity, the regulation of the fishing effort, catch limits, fishing gear, size or weight of species, closed seasons, fisheries protection zones and activities capable of altering fishing resources;* Management of fisheries activities: *fishing permits, temporary change of fishing activity, special fishing permits, specific censuses, fishing plans, fishing logbooks, landing statements;* Recreational fishing in external waters; Monitoring and inspection; and International Relations.

MANAGEMENT OF THE FISHERIES SECTOR
Agents in the Sector: *the management of professions within the sector, the accreditation of professional training and the registration of professionals in the sector;* The fishing fleet: *The registration of fishing vessels; building, modernisation and rationalisation plans, fleet adaptation, calling a halt to sailing, mixed companies;* Ports of operation and change of home port; Landing ports and first sales of fish products; Marketing and processing; Fisheries and Oceanographic Research; and Infringements and Sanctions

Figure 3.6 State competencies

3.3.2 Areas of autonomous community authority

The coastal Autonomous Communities' Statutes of Autonomy[1] expressly embrace the sole responsibility that they assume in fisheries affairs, that is, fishing in inland waters[2], shell-fishing (*marisqueo*)[3], aquaculture[4], and river and lake fishing, in accordance with article 148 of the 1978 Spanish Constitution. The area to which the Andalusian Fisheries Law can be applied covers inland waters, territorial seas, and the Exclusive Economic Zone adjacent

[1] Eight on the mainland (Galicia, Asturias, Cantabria, the Basque Country, Catalonia, Valencia, Murcia and Andalusia) and the two archipelagos: the Balearics and the Canaries.
[2] According to Law 1/2002, of 4 April, concerning the Management, Development and Control of Sea Fishing, shell-fishing, and Marine Aquaculture (Andalusian Regional Government), sea fishing in inland waters is understood as that which is done in the waters that lie within the straight base lines as established by Royal Decree 2510/1977, of 5 August, as their outer limit, and, as their inner limit, the coast and, in the case of estuaries, the boundary that is established in accordance with the provisions of the First Extra Article.
[3] According to Law 1/2002, of 4 April, concerning the Management, Development and Control of Sea Fishing, Shell-Fishing, and Marine Aquaculture, 'shell-fishing' *(marisqueo)* is understood as the undertaking of the activity that is the exclusive extraction with specially-selected and specific fishing gear of one or several species of molluscs, crustaceans, tunicates, echinoderms and other marine invertebrates.
[4] According to Law 1/2002, of 4 April, concerning the Management, Development and Control of Sea Fishing, Shell-Fishing, and Marine Aquaculture, marine aquaculture is understood to be the group of activities directed at the controlled reproduction, pre-fattening and fattening of marine flora and fauna species in facilities with links to salt sea waters that can be exploited in a commercial or recreational way.

to the shore as far as shell-fishing and aquaculture, and the implementation and enforcement of basic State legislation on the marketing and management of the fisheries sector, are concerned. Furthermore, the clause 'without prejudice to' in article 149.1.19 of the Constitution also enables Autonomous Communities to assume responsibility for the implementation and application of basic legislation in the fisheries sector. At the same time, they have sole responsibility for internal trade, Fishermen's Guilds (within the framework of the Basic State Legislation that regulates Corporations governed by Public Law), and the regulation and administration of all ramifications of teaching and training. Finally, they have sole responsibility for research, although general co-ordination for this corresponds to the State.

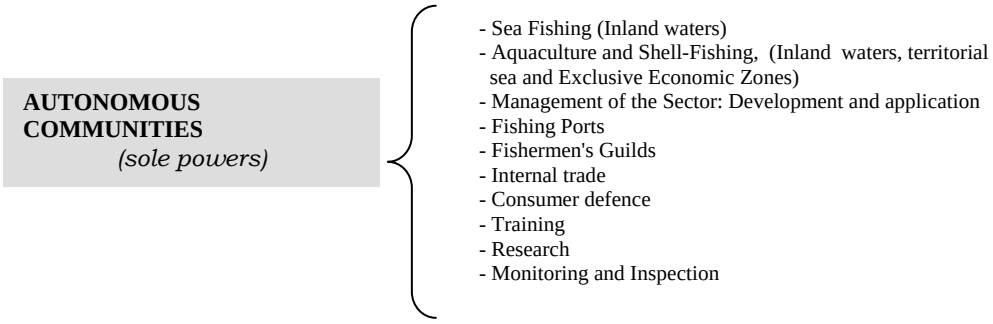


Figure 3.7 Exclusive CC.AA. competencies

Fishing in inland waters

The Autonomous Communities' authority over fishing in inland waters, which derives from the far from legal criterion of the geographical contour of the coasts, allows them to adopt their own policy as regards the management and control of the fish resources found in the marine area between straight base lines and the coast. As regards fish that may be found in the fictitious division between the inland waters and the seas, it would be for the State and the Autonomous Communities to draw up agreements to standardise the regime for the legal protection of these species, and to contribute towards a better coexistence of legislation.

Shell-fishing and aquaculture

The Autonomous Community has sole legal authority over shell-fishing and aquaculture and this is only limited when there is State concurrence, which can happen under other epigraphs, as in the case of maritime and territorial public domain. In this case, the specific powers attributed to the Andalusian Department of Agriculture and Fisheries can be seen in the following table.

Functions transferred to the Autonomous Communities include:
- authorisation to allow the undertaking of fishing activities;
- regulation of different types of fishing, as well as of nets, instruments and gear to be used;
- demarcation of fishing zones, determining of open seasons and minimum sizes;
- establishment of norms to regulate inspection and sanctionsl;
- regulation of recreational fisheries activities issued by State Authorities and other territorial bodies (respecting Autonomous Community regulations);
- *the Official Registry of activities, means and people employed in fishing.*

Figure 3.8 Fishing in inland waters

- The granting of permits to undertake marine aquaculture.
- The establishment of the technical conditions for fish-farming establishments.
- The legalisation or prohibition of species to be farmed in Andalusia and farming systems in given areas.
- The inspection of aquaculture installations.
- The regulation and authorisation of the submergence of species to be marine farmed.
- The drafting and passing of Integrated Exploitation Plans for marine aquaculture in given geographical areas.

Figure 3.9 Shell-fishing and aquaculture

Basic legislation on management of the fisheries sector

The implementation and enforcement of State Basic Legislation on the management of the fisheries sector corresponds to the Autonomous Communities. The ultimate aim of this function-sharing is the creation of a common and uniform area, which provides a certain equality amongst those Communities with a coastal shore, but which, at one and the same time, allows a certain amount of room for action.

Concurrent State-Autonomous Community powers

The very nature of sea fishing leads to a concurrence of powers between the State and the Autonomous Communities, as a result of which sole powers are not absolute but can be limited.

Fisheries statistics

With regard to fisheries statistics, the Spanish Autonomous Communities have a great degree of autonomy. On the basis of information that fisheries organisations provide them with, all coastal Communities can collate their own statistical data which they then pass on to the State[1] and which the State, in turn, passes on to the European Commission. In Andalusia, the implementation of a new computerised tool (Id@pes.web) must be taken into consideration. Devised and implemented by the Public Corporation for Agricultural and Fisheries Development (DAP), it is aimed at administering data on fish production for all the Andalusian fresh fish markets, facilitating the processes of data reception and inputting data onto a large-scale database of fisheries statistics. However this computer

[1] The State maintains the Operative Fishing Fleet Census but the data is provided by the regional authorities.

application seems to have had little effect on the fisheries sector as yet. Amongst the reasons for this might be the lack of interest in providing data shown sales data operators, given the fact that their interests and those of Brussels do not concur (which calls into question the reliability of fisheries statistics), the lack of coverage given to the tool, and/or the operators' lack of familiarity with present-day communications systems.

3.3.3 State administration

At present, sea fishing activity still lacks the necessary importance to have a whole Ministry to itself, sharing, as it does, the Ministry of Agriculture, Fisheries and Food (MAPA) with other activities and economic sectors. As such, there is still no single administrative department that covers all fisheries affairs, although there is a specific majority administrative body called the General Secretariat for Sea Fisheries, which holds the rank of Under-Secretariat.[1] As far as the name, General Secretariat for Sea Fisheries, is concerned, it might be appropriate to raise its status to that of State Secretariat, as this would help contribute to an increase in its importance within the Ministerial set-up and, consequently, lead to a greater importance afforded to the treatment of fisheries affairs. Furthermore, it would also serve to reactivate administrative action on fisheries, and likewise allow attendance at cabinet meetings and at Executive Committees of the Government, not to mention permitting the Minister to take part in sessions of the European Community Council of Fisheries Ministers and, more to the point, participate in the voting process.

There are also important functions related to fishing which are still carried out by the Ministries of Employment and Social Affairs, Science and Technology, of the Environment and Development, and the Ministry of Health and Consumer Affairs.

As far as the internal structure of State fisheries administration is concerned, the General Secretariat of Sea Fisheries undertakes the implementation of the Department's responsibilities concerning the planning and implementation of sea fishing policy, the management of the fisheries sector, aquaculture, the marketing of fish products in the area of responsibility pertaining to the General Administration of the State, as well as the drafting and application of legislation related to said issues, without prejudice to the responsibilities held by the Ministry of Health and Consumer Affairs in the area of hygiene and safety of fish products. It will, furthermore, carry out functions regarding fisheries agreements between the European Union and non- EU countries, as well as agreements deriving from Spain's membership of, or involvement in, international fishing organisations, international co-operation in fisheries affairs, and the planning of fisheries research policy, in co-ordination with the Ministry of Science and Technology. At the same time, it is also entrusted with determining the criteria for the establishment of Spain's posture vis-à-vis the European Union in the aforesaid matters.

[1] Ranking: 1st. Ministry, 2nd. State Secretariat, and 3rd. Under-Secretariat.

Executive centres dependent upon the General Secretariat for Sea Fisheries[1]

a) *The General Directorate for Fisheries Resources*[2,] whose main duties are the protection, conservation and sustainable exploitation of marine resources, the inspection and monitoring of extraction, the co-ordination of activities related to European Community fisheries policy, fisheries agreements with non-EC member countries, international fisheries and aquaculture organisations, in the area of the responsibilities that pertain to the General Administration of the State, without prejudice to the responsibilities that correspond to the General Secretariat for External Trade regarding European Community trade policy and international negotiations in the World Trade Organisation, and without prejudice to the responsibilities attributed to the Ministry for Foreign Affairs.
b) *The General Directorate for Fisheries Markets and Structures*[3], which has responsibility for the management of the fisheries sector, more specifically, for general economic planning, the management of the Financial Instrument for Fisheries Guidance (FIFG) structural funds, the planning, renewal, restructuring and modernisation of the fishing fleet, the marketing of fisheries products in the area of the responsibilities pertaining to the General Administration of the State, professional organisations in the sector, and nautical and fisheries training.

An Autonomous body, *'The Fund for the Regulation and Organisation of the Fish Product and Marine Cultures Market' (FROM)* is attached to the General Directorate for Markets and Structures, whose main functions are proposing promotional campaigns for the consumption of fish products, the drafting of planned regulations for granting national and European Community aid, and the undertaking of studies and reports on the economic plans for national fisheries production.

The Spanish Oceanographic Institute (IEO)

This autonomous body is attached to the Ministry of Science and Technology through the General Secretariat for Scientific Policy, and ranks as a Public Research Body. Sectoral and multidisciplinary in nature, it serves State scientific and technology policy in the field of oceanography and sea fishing. Amongst the IEO's functions are the drafting, co-ordination, management and reporting on, of research programs of a multidisciplinary nature and, more especially, on living marine resources which are of interest to the Spanish fisheries sector.

Social Institute for the Navy (ISM)

The *Social Institute for the Navy* is dependent on the Ministry of Employment and Social Affairs, and is attached to the State Secretariat for Social Security. As far as the responsibilities that correspond to the Social Institute for the Navy are concerned, as the

[1] Vid.: organisational chart.
[2] Vid.: organisational chart.
[3] Vid.: organisational chart.

body that manages the Special Welfare Scheme for Seafarers (REM), it is entrusted with the management, administration and recognition of the right to state benefit afforded under the REM. Apart from this, as the body responsible for social affairs in the maritime and fisheries sector, it is responsible for health care and checks (hospital ships) for seafarers at sea and their beneficiaries on national land, training, and the promotion of professionals' welfare, as well as the management of unemployment benefit and other actions related to the employment of seamen, through the Offices for Maritime Employment.

3.3.4 The Autonomous Communities' administration

The organic structure of the various Autonomous Communities is very similar to that of the State. If we take Andalusia as an example, fishing comes under the Department of Agriculture and Fisheries ('Consejería de Agricultura y Pesca')[1] (the department which equates to a Ministry, but on a regional scale) with the rank of General Directorate of Fisheries, and it assumes the powers and responsibilities in the field of fisheries that have been transferred to the Andalusian Autonomous Community. In order to carry out these responsibilities it has a number of administrative entities and executive centres at its disposal (confer: organisational chart):

a. The General Directorate for Fisheries and Agriculture[2], whose main functions are:
   - the search for and protection of Andalusian fish resources;
   - the management, development, inspection and monitoring of fishing, fish-farming and shell-fishing activity;
   - the planning and development of the Modernisation Plan for the Andalusian Fisheries Sector;
   - the keeping of a census of Andalusian vessels;
   - the regulation of fish marketing;
   - to promote fisheries associations and, more especially, producer organisations;
   - the co-ordination, evaluation, monitoring, management and implementation of programs established by the European Union related to the functions described above.

b. The General Directorate for Agricultural and Fisheries Research and Training[3] is responsible for:
   - the planning, monitoring and implementation of programs for agricultural, fisheries and fish-farming research that are conducted by the Department of Agriculture and Fisheries;
   - all training in the field of fisheries and fish-farming for which the Department is responsible;

[1] The Department of Agriculture and Fisheries is the department of the 'Junta de Andalucía' (Andalusian Autonomous Government) charged with the proposal and implementation of the Ministerial Council's general directives on agriculture, fisheries and food.

[2] To the end of carrying out its aforementioned duties, this executive centre has at its disposal three Services which deal with the Management of Fisheries Resources; the Management of Fish Markets; and Fisheries and Aquaculture Structures.

[3] This General Directorate relies on the Fisheries and Aquaculture Technology and Training Service to carry out its functions.

- the conveyance of technological advances in fisheries production processes to the sector;
- national and international co-operation in the fields of research, training and the conveyance of technology.

c. The Provincial Branch Offices of the Department of Agriculture and Fisheries, one of which can be found in each of Andalusia's coastal provinces, act as political and administrative representatives of the Department in their respective areas.

3.3.5 Co-ordination and co-operation between the State and the Autonomous Communities

Sectoral Conferences and agreements on collaboration

Spain's joining of what is now the European Union affected the structure of powers and responsibilities as laid down by the Constitution and added to its complexity. It is reasonable for the Autonomous Communities to be interested in activity undertaken by the European Union, that is, in contributing to the forming and creation of European intent, inasmuch as the interests that they administer are at stake. The channelling of this Autonomous Community participation in EU affairs is done through the *Sectoral Conferences.* These are of legal rank[1], being created by the State and made up of administrative officers from the State and the Autonomous Communities, in order to '... exchange points of view, examine together the problems the different sectors face, and the planned measures designed to deal with or solve them'.

What is certain is that, to date, these Sectoral Conferences have been unable to fulfil the Autonomous Communities' expectations, given that, as yet, one question that has still not been resolved is their inclusion in State representation on EU bodies. Neither has the role that the State is to play in the European Communities been defined. This is in part due to the non-permanent nature of the Sectoral Conferences.

Other types of participation that can be highlighted are the *Collaboration Agreements,* which can be signed by the Government of the Nation and the Autonomous Communities' Governmental departments in their respective areas of responsibility.

Co-ordinating and Consultative Bodies: The National Fisheries Council and the Fisheries Sector Consultative Committee

The way the fisheries policy has evolved and the dynamic nature of the sector, which have led to a permanent updating of both national and EU regulations, together with the importance of being aware of the opinion of the sector as a whole, have resulted in the need to create two Ministry of Agriculture, Fisheries and Food co-ordinating and consultative bodies to manage its affairs connected with its responsibilities in marine fisheries, the management of the fisheries sector, and aquaculture.

a) The National Fisheries Council, was created as a body to act as a direct link between the Ministry of Agriculture, Fisheries and Food and the Autonomous

[1] Law 30/1992, of 26th November, regarding Public Administration, Authorities and Procedures.

Communities in issues regulated by the Fisheries Law 3/2001 of 26th March, and is made up of the General Secretariat of Marine Fisheries (central authorities) and a representative from each of the Autonomous Communities responsible for the subject. The functions of the Council and the way it works will governed by a number of regulations, although no regulations have been drawn up to date (June 2002).

b) The Fisheries Sector Consultative Committee[1], is a Ministry of Agriculture, Fisheries and Food consultative, deliberative and advisory body for issues related to its responsibility in the field of marine fisheries, the management of the sector, the management of fish product marketing, and research into fisheries and aquaculture. The Committee is to be presided over by the General Secretary of Marine Fisheries (central Authorities) and it is also made up of representatives from the Ministry of Agriculture, Fisheries and Food and from the most widely-established employers' and employees' organisations and associations in the fisheries sector. Representatives from then Autonomous Communities can also take part in Committee meetings when the nature of the affairs being dealt with warrants it. Similarly, well-known and prestigious experts can be called upon to take part in meetings when required. Said body is to work in Plenary Sessions and also in specialised Works Commissions with a view to affording its workings a certain degree of agility.

- Chairman (General Secretary for Marine Fisheries).
- Four members representing the General Secretariat for Marine Fisheries.
- Four members representing national fisheries sector public law corporations.
- Four members representing the national employers' sector.
- Four members representing national fisheries sector Trades Union organisations.
- Four members representing the national processing and marketing sector.
- Two members representing the national aquaculture sector.
- Two members to be freely designated by the Chairman and chosen from among professionals with recognised prestige.
- One Secretary, who is to be the Deputy General Director for Support and Co-ordination of the General Secretariat for Marine Fisheries.

Figure 3.10 Make Up of the Consultative Committee

The National Advisory Body for Marine Cultures (JACUMAR)

Another communications body between central State and Autonomous Communities authorities is the National Advisory Body for Marine Cultures (JACUMAR), which was created by Law 23/84. The main mission of this Body is to facilitate co-ordination and co-operation between the public Administrations and the production sector in matters relating to aquaculture. The out-of-date Advisory Body for Marine Fisheries (JAPEMAR), which was created to facilitate collaborative and co-ordinating tasks between the State Authorities and the Autonomous Communities and included representatives from all the coastal Autonomous Communities, has become defunct, as have the local Fisheries Committees, and all their powers and responsibilities have now been taken over by the Fisheries Sectoral Conference.

[1] State Order of 10 June 1998 for the creation of the Fisheries Sector Consultative Committee.

Provincial and Technical Committees

These Committees are temporary and are usually made up of representatives from the Fishermen's Guilds, Ship-Owners' Associations, Producers' organisations, Trades Unions or employers' organisations, and fisheries experts. Committee members put their suggestions down in writing and these are then debated at a later date at the appropriate meetings.

3.3.6 Co-ordination between Autonomous Communities

There is no permanent co-ordinating body for the Autonomous Communities, although they meet sporadically to look at specific questions (always with the presence of the State authorities). The exception is for matters related to aquaculture (which is the sole responsibility of the Autonomous Communities) for which they have the National Advisory Body for Marine Cultures (JACUMAR) at their disposal, and which allows them to take part in the whole aid management process, and to be involved in the drafting and selection of sectoral plans, and to have control over subsidy payments.

3.3.7 Phases in decision-taking and participating actors

Phases in decision-taking

Since Spain joined the present-day European Union in 1986, Spanish sovereignty in fisheries matters has, to a great degree, come to depend on the Common Fisheries Policy, and, as such, the central[1] and autonomous[2] governments have to comply with a number of obligations concerning the adoption of legislation. Generally-speaking, the bodies which have sole authority over determined aspects of fisheries are the ones charged with taking the corresponding decisions, although they are always required to report back to the European Commission, which will then analyse their proposals and inform them of any objections they have, which the government in question is compelled to accept. In the case of fisheries sector management responsibilities shared between the State and the Autonomous Communities, the State is responsible for basic legislation and the Autonomous Communities are responsible for its implementation and enforcement (under the supervision of the central Government).[3] From this it becomes apparent that, to become effective, any decision on fishing has to wade through an administrative structure with so many levels, and that this is such a slow process, that, in the end, any measures taken are seen as something distant and alien by the actors in the Spanish fisheries sector. This could be overcome by allowing agents who represent the sector to participate in the current

[1] The central Administration, as the main axis of fisheries management, is charged with adapting EU policy to the reality of Spanish circumstances, implementing it and guaranteeing compliance with it.

[2] To date, regional authorities have not formed part of the EU decision-making process, and have only had responsibility for managing funds and the implementation of measures passed by the upper echelons of the administration.

[3] The various regional fisheries sectors are always dependent on directives laid down by the State Administration.

decision-taking process in a proper way, and through a greater rapprochement between them and the different levels of administration, in order for the necessary channels of communication to be established (despite the fact that, when a law or regulation is laid down, the authority responsible is compelled to raise an audience - organisations in the sector - although, in practical terms, the sector's opinions normally carry little weight). Political decisions are often based on recommendations made by scientists without the sector or any social, economic or political agent being involved. On top of this there is a serious lack of fisheries statistics for scientists to base themselves on.

Not only is the sector, to all intents and purposes, left out of the decision-making process, but the public Authorities are also reticent about allowing them to take part, perhaps because they feel that a greater involvement of the sector would threaten their status in the way responsibility, authority and power are distributed. The Public Administration, on both central and Autonomous Community levels, have lost political capacity in decision-making and have redirected their political potential towards the administration of measures and funds received from Brussels. We are not so much witnessing a process of real participation by fisheries organisations, as the strengthening of institutional relations between representative organisations and the Administration.

Participating Actors

The ever greater complexity of the associative fabric of the fisheries sector has led to new organisations, such as Trades Unions and producers' organisations (OPP) taking their places alongside the organisations that were part of the old structure, and which were based on professional and artisanal guilds; the fishermen's guilds and small boat-owners' associations. As a result of this, traditional organisations and new associations and forms of representation exist side-by-side to respond to trends in the sector and other factors such as the current make-up of the European Union, which is what shapes the new political frame-work which has to be complied with. In Spain, there is a distinct pre-eminence of the extractive sector and, consequently, this new form of understanding representation, which accommodates new interest groups, is considered to be contrary to their interests.

The Processing Industry

There are a high number of associations dealing with a variety of activities that are of great importance both within the sector and the Administrations. The services they offer are related to: internal and external trade, training, economic and financial services, labour relations, research into legal affairs, and documentation services. Amongst their main weaknesses, their low degree of participation in the management of the sector can be cited, as well as their weak relationship with the extractive sector.

Aquaculture

There are no nation-wide organisations that bring together aquaculture producers.[1] Their main weaknesses are: the lack of a marketing policy, the small size of aquaculture workings, and the small degree both of the use of new technologies and of product diversification.

Fisheries Organisation	Functions
Fishermen Guilds a): Public rights corporations. They are consultative bodies for the preparation, application and drafting of regulations which affect matters of general fisheries interest. They are also collaborative bodies for actions or reforms for the development and improvement of the extractive fishing industry. b)	*Functions*: - Marketing. - Welfare. - Technical, economic and legal advice. - Training. - Mediation between fisheries guild members and authorities. - Statistical information. - Sea areas.
Ship-owners' Associations c): Are associations with legal entity made up of businessmen in the sector (both individual owners and fisheries companies with a different legal basis).	*Functions*: - Marketing. - Technical and legal advice. - Statistical information. - Ports and harbour services.
Producers' Organisations (OPP d)): Officially-recognised bodies created on the initiative of producers with a view to guaranteeing the rational practice of fishing and an improvement in terms of sales of their produce.	*Functions*: - Marketing. - Distribution. - Ports and harbour services. - Technical and legal advice. - Statistical information.
Trades Unions e): Representative bodies for the purpose of voicing workers' interests in the sector, and collaborating in the taking of decisions which might affect their interests.	*Functions*: - Information on labour affairs. - Transformation of traditional fisheries structures. - Collective bargaining. - Defence and improvement of labour conditions. - Social affairs.

Figure 3.11 Extractive fisheries organisations and functions

a) There is a National Federation of Fishermen's Guilds (FNCP) which Fishermen's Guilds and their Federations can join (Fisheries Law 3/2001, of 26th March). The ability of the FNCP to act as a pressure group or to have any influence on decision taking on an EU-scale is virtually non-existent, except for whatever might be achieved through the Administration; b) From the Trades Unions' point-of-view, it is contradictory that the Guilds should jointly include both employers and employees; c) One of the main organisations within the extraction sector is the Spanish Fishing Vessel Owners' Federation (FEABP); d) These types of organisations are being promoted more and more over Fishermen's Guilds, given that their activity is not limited to resource extraction, but also aims to benefit consumers. One of the main challenges currently facing the Spanish Authorities is, without doubt, finding suitable ways of reconciling the development of OPPs with the existence of Fishermen's Guilds, which have a great tradition in the country; Despite the fact that the Trades Unions try to defend and improve seamen's work conditions, there is only a low level of affiliation.

[1] Vid.: Section 5.3.

Environmental Organisations

There are no environmental associations specifically linked to the fisheries sector. To date, environmental groups have directed their actions at fisheries activities through global associations such as Greenpeace and ADENA (an independent NGO in the public interest). Moreover, associations of this type are not traditional in Spain, and to this must be added their lack of political, institutional and economic weight, and a lack of support, bordering on rejection, from the extractive sector.

Other Organisations

- *Banks:* their activity is restricted to the processing of aid determined by the Administrations but there are no banks created strictly to deal with fisheries affairs;
- *Consumers:* there are no specific consumer associations involved in the fisheries sector. Consumers act through large associations within which matters related to fish products only receive an insignificant amount of attention;
- *Wholesalers and Retailers:* neither are there any nation-wide fisheries sector retailer[1] or wholesaler[2] associations;
- *Ancillary Industries (nets and fishing gear):* these are not organised into associations and their dependence on the fisheries sector is of an indirect nature, as they are suppliers of products which have greater links with the naval sector.

Appraisal of the strategic capacity of extractive fishing organisations

Fisheries sector organisations in Spain are characterised by their great variety and by being wide-spread, which affects their strategic capacity for influencing the design of fisheries policy both on a national and regional scale.

3.4 Conclusions

Any possible evolution towards a model that further decentralises fisheries management administrative structures and leads to a greater development of the fisheries sector structure for participating in the management of the sector must, inevitably, have as its basis the present structures and the possibilities the legal framework offers. Although not yet completed, the reform of the legal framework, which is controlled by the Constitution and the Statutes of Autonomy within a system that has already seen a certain amount of change since 1978, does offer a small margin for further development in all directions. On the other hand, however, the participatory system has stronger links with the political culture of both the administrative superstructure and the political organs (parties), and, especially,

[1] There are associations in some provinces only, but the size of these and their organisational abilities can be seen to be weak.

[2] There is 'MERCASA' (a nation-wide association which draws together all the great fresh-produce markets, or 'MERCAS') which, nevertheless, includes the food industry.

	Strengths	Weaknesses	Opportunities	Threats
FNCP	- Brings together all the professionals in semi-industrial and traditional fishing. - Represents all the organisations with long traditions and social bearing in the sector. - Is the Federation that groups together the highest number of organisations.	- Does not have many Central Government powers. - The organisation does not have a pyramid-like structure. - Represents a nume-rous group of people but has no economic power. - Low level of tech-nology.	- The Central Government relies on their opinion on subjects affecting the extractive sector. - Representatives on European manage-ment committees.	- Does not obtain trade-related aid from the EU.
FEABP	- Pressure group with the single aim of obtaining fishing licences, especially in non-EU countries' fishing grounds. - The FEABP is directly related with restructuring and modernisation measures for the Spanish fleet. - Has representation on international com-mittees.	- Does not have many resources. - Has lost a large number of vessels in the past few years. - Is not representative of areas outside the Northern Regions of Spain.	- To improve man-agement skills in small and medium-size companies. - Greater participa-tion in negotiating fisheries agreements with non-EU countries. - To achieve a larger grouping of ship-owners' associations.	- Restructuring of the fishing fleet.
OPPs	- Receive all EU aid directed at market activities.	- Have a number of functions also catered for by Guilds. - To become a 'PO' it is necessary to have achieved a minimum number of catches. - These organisations are used to obtain all the aid possible envisaged by the EU.	- To eliminate sales stocks in order to progressively take charge of the sale of members' produce.	- Do not have sufficient influence to carry out functions for which they were created.
UGT	- Plays a very important social role in those Fishermen's Guilds where workers sometimes lack protection due to the presence of ship-owners in the same organisations.	- Does not participate in the management of Fishermen's Guilds' social funds. - The existence of a share basis income to pay sea workers. - There is no unity of action and workers are unable to press for any demands.	- The UGT plays a distinct social role defending workers' interests. - In some Guilds, some committee members are UGT representatives, a situation which is helping Trades Unions to gain access to the sector.	- The level of affiliation is very low in the fisheries sector due to ship-owners having a negative attitude towards a Trades Union presence in Fishermen's Guilds. - Share payments system.

Figure 3.12 Swot analysis

FNCP: Federación Nacional de Cofradías de Pescadores: National Federation of Fishermen's Guilds.
FEABP: Federación Española de Armadores de Buques de Pesca: Spanish Fishing-Vessel Owners' Federation.
OPP: Organización de Productores Pesqueros: Fish Producers' Organisation.
UGT: Unión General de Trabajadores: General Workers Trades Union.

of civil society.[1] As such, there is a much greater margin for developing and perfecting means and systems of participation, and, in a society that is still lacking in political development, this is one of the ways of promoting what is reflected in both the public and the private spheres.

3.5 The Consortium for Fisheries Management and the marketing of the Striped-venus clam in the Gulf of Cadiz

3.5.1 Justification

This case - study revolves around the so - called 'Striped Venus Consortium', which is an example of one of the few initiatives that fosters the participation and co-responsibility of a given fishermen's collective through administrative formulae that allow for self-regulatory mechanisms. Although it is not a model system and it is still very much in its infancy, it does nevertheless allow the trends in management systems and the directions these are taking to be observed, as well as illustrating what possibilities and limitations there are, as can be seen in the following.

3.5.2 Definition

The Consortium is an officially recognised permanent consultative body made up of Fishermen's Guilds and Boat-Owners' Associations from five towns on the Gulf of Cadiz (Ayamonte, Isla Cristina, Lepe, Punta Umbría and Sanlúcar de Barrameda) for instigating self-control measures and improving the marketing of the striped-venus clam in the area. The Consortium is made up of approximately 120 vessels and 360 crewmen. The Consortium comprises the following bodies: General Committee[2], Permanent Commission, Chairman and Secretary. Each of these has been assigned specific duties.

3.5.3 Background

The dredging sector[3] is the most controversial and the one where the greatest number of problems arise on the whole fisheries scene. This can be explained in the main-part by the existence of a quota which, although a positive and necessary self-regulatory measure if the fishing grounds are to be conserved, is still a bone of contention amongst fishermen on a daily basis (both at sea and on the quay) as not everybody observes the total permitted catch amount (150 kilograms/day). The fact that hydraulic-dredging vessels and traditional

[1] Understood as the public sphere outside the direct control of the government apparatus, such as the markets or voluntary associations (Molina, I. et al., 1998: 122).
[2] With ten members, who are the chairmen of the fishing-vessel owners' associations and the major skippers in the fishermen's guilds in the Consortium (vid.: section on 'Internal Structure').
[3] *Traditional towed dredging* is understood to be a system of shell fishing that employs a semi-circular iron frame with a flat base, also called the plate, or rake, through which spikes or teeth of adjustable length are pushed. Tied to the frame is the cod or bunt, which is a bag-like net with a mesh of a certain size. A mesh size of not less than 21 mm allows shells smaller than the regulated size to pass through the net.

dredging vessels fish side-by-side, and that everyone also has to observe the same time-table for fishing, also generates problems.

Figure 3.13 Geographical localisation

There are also problems between fishermen arising out of off-market sales of the striped-venus clam; an unofficial parallel market has sprung up that is not subject to any checks or controls.[1]

The origins of the Striped-Venus Consortium[2] can be traced back to the unregulated introduction of the hydraulic dredger[3] in the port of Punta Umbría (province of Huelva). As the regional (autonomous community) authorities was aware of how badly the use of this type of fishing gear had affected the fishing sector in Italy due to its great

[1] In this respect, the Consortium insists on the need for much tighter surveillance by the autonomous authorities' fisheries patrol service in collaboration with the Nature Protection and Inspection Service (SEPRONA).

[2] Venus gallina.

[3] *Hydraulic dredging* is understood to be the system of shell fishing that employs a metal frame positioned at the bows of the vessel. The frame or dredge is pulled along by the prow at the same time that it is being pulled in the opposite direction by a winch which is hauling in a cable tied to an anchor that had been previously paid out over the stern, and which marks the fixed point for fisheries manoeuvres.

effectiveness, this led to a provisional ban being placed on the use of this type of gear in the Gulf of Cadiz.

This decision by the autonomous authorities was nevertheless appealed against by the fisheries sector, as the use of the hydraulic dredger means better-quality products are obtained and there is an increase in the cost-effectiveness of fishing vessels. When the authorities recognised that the hydraulic dredger did represent a qualitative change in fisheries trends, the only alternative left for authorising its use was to apply tight controls. But the regional authorities do not possess the necessary infrastructure to undertake the thorough monitoring required, whereby the only solution is support from the sector itself through its self-regulation and direct participation in the management of this type of fishing. From this, a joint idea emerged between the fisheries sector and the authorities for creating a body representing fishermen to work in strict collaboration with the authorities. This initiative therefore came simultaneously from the fisheries sector and the authorities, and must be seen as a convergence of interests of both parties as, on the one side, the sector wanted the hydraulic dredger to be authorised on account of the greater profits its use brings, and, on the other, the authorities, which also agree with giving the introduction of this type of fishing-gear the go-ahead, have taken advantage of the sector's predisposition, to obtain its co-operation and involvement.

Apart from this, in general terms there was a basic need to regulate the marketing of the striped-venus in order to stave off strong competition in the South Atlantic Andalusian fresh-fish markets[1] coming from, above all, Italian products.

A collateral effect of the Consortium, and one which is perhaps one of its greatest achievements in such an individualistic society as that of seamen, has been a greater cohesion between the Fishermen's Guilds and the Boat-Owners' Associations, given that representatives from the various ports who are on this consultative committee, all sit down around the same table to look at and discuss striped-venus- related issues and to make a unified proposal to the Authorities. A new framework has been opened up by the creation of the Consortium since it is a body through which all the related problems can be channelled, thus facilitating the decision-taking process and constituting a platform for carrying certain policies through. In the same way, the degree of acceptance of the regulations and the extent to which they are adhered to both increase, due to the fact that the fisheries sector has taken part in their drafting.

3.5.4 Legal framework

From a legal and administrative point-of-view, this is very basic legislation as it is dictated by the regional head of the Fisheries Department. These are not laws passed by the regional Parliament.

[1] Prices are currently improving as the offer has been reduced. There is now only minimal competition from the Italian striped-venus, which is of a much poorer quality than that found in the fishing grounds in the Gulf of Cadiz.

- Agriculture and Fisheries Department Order of 24 June 1996, concerning the provisional regulation of striped-venus fishing with hydraulic dredgers in the Gulf of Cadiz.
- The signing of an Agreement between then Fishermen's Guilds and the Boat-Owners' Associations representing the Shell-Fishing sector in the Gulf of Cadiz with the ultimate aim of bringing the creation of the Consortium about in order to encourage self-control measures and to improve the marketing of the striped-venus.
- On 3rd September the General Fisheries and Aquaculture Directorate passed the Statutes regulating the way the Consortium works, and this is conferred the name of the *Consortium for the Management and Marketing of the Striped-Venus in the Gulf of Cadiz*, with the Statutes being undersigned by all members.
- The Consortium members draw up a Plan of Action in collaboration with Agriculture and Fisheries Department staff in which self-control measures are proposed along with improved conditions for the sale of produce.
- This Plan is passed at a general meeting of the Consortium and ratified by the regional government's General Fisheries Directorate.
- Elaboración de la normativa, tomando como referencia dicho Plan, para regular dicha actividad (Orden 25 de marzo de 1999, por la que se regula la pesca de la chirla en el Golfo de Cádiz).

Figure 3.14 Administrative Procedure for the Creation of the Consortium

3.5.5 Consortium objectives and duties

- Collaborating with the Authorities in issues related to extractive shell-fishing activity (facilitating the monitoring of the fisheries system and product sorting, the monthly remittance of catch reports to the Authorities, undertaking research studies, and drafting proposals and ensuring they are complied with).
- Undertaking self-control in striped-venus fishing grounds in order to guarantee compliance with legislation in force with regard to structures, resources and marketing (minimum size, closed seasons, fishing in off-limit areas and/or reserves, days and times fishing is allowed, quotas, the landing of catches in authorised ports, registries and labelling, control of port registry documents and schedules for sales at fresh-fish markets.
- The proposal of specific norms to the Agriculture and Fisheries Department which differentiate striped-venus marketing and improve its terms of sale.
- Fostering support measures for Hydraulic Dredger Co-operatives with regard to their own marketing aims, as well as for other co-operatives that might be created amongst shell-fishing vessel owners in order to improve the marketing conditions of their produce.
- The Consortium's duties are more corrective than preventative. There is a scant forward-looking approach that diminishes its possibilities.

On the basis of interviews that have been conducted, it can be stated that the regulations are properly complied with in 80% of cases in all their facets (resource management and conservation, structures and marketing), whereas the remaining 20% are

associated with illegal vessels that observe neither quotas nor minimum sizes[1] and which, furthermore, are those that conduct sales outside the fresh-fish markets.

One of the aspects over which the Consortium has a greater decision-taking capacity is the establishing of quotas. This is a factor which, without doubt, constitutes one of the body's biggest steps forward (along with a heightening of the sector's awareness as far as protecting fishing grounds is concerned). In this regard, it must be remembered that in accordance with the Order of 25 March 1999, concerning the regulation of striped-venus fishing in the Gulf of Cadiz, an upper-limit of 300 kg per day and ship was established. On the initiative of the Consortium, this amount has been reduced to 250 kg in the first instance, and subsequently to 150 kg. This measure was deemed an appropriate measure to counteract the excess fishing effort brought about by an increase in the number of permits for this type of fishing-gear in recent years. The Consortium also usually agrees on selling times at fresh fish markets.

As far as research studies on the state of the striped-venus are concerned, these are carried out by biologists working for the authorities, and the results are conveyed to the Consortium so they can be used at a later date (as an example, the authorities have banned striped-venus fishing in some areas due to a high concentrations of toxins).

3.5.6 Internal structure

An equal number of representatives from Fishermen's Guilds and Boat-Owner Associations is duly observed in the make-up of the Consortium's bodies. Nearly all members attend meetings, and each has a vote.

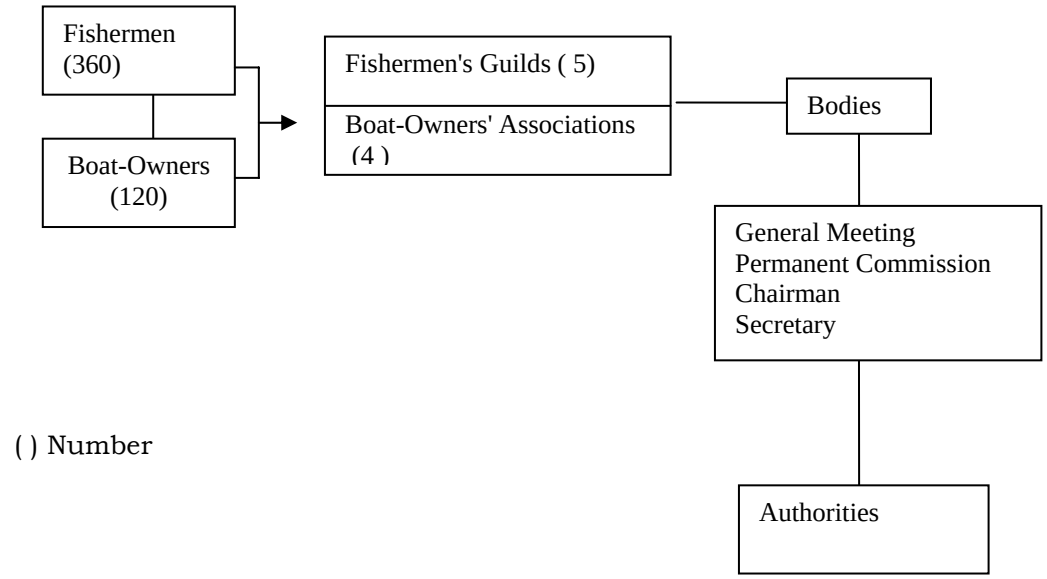


Figure 3.15 Internal structure

[1] The minimum size for striped-venuses caught in the Gulf of Cadiz has been set at 24 mm for traditional towed dredging vessels and 26 mm for hydraulic dredger vessels, when measured along the front-to-back axis, and any specimen that is undersize must be immediately thrown back after being sorted through a sieve.

In general terms, the duties allotted to each post are carried out. Posts last for two years and are unpaid.

One of the biggest disadvantages is that almost all the representatives hold their posts because they are, first and foremost, the most important skippers within the Fishermen's Guilds, or the Chairmen of the Boat-Owners' Associations, and as such they do not necessarily have anything to do with striped-venus fishing, which means their role as representatives is less effective. Neither has the striped-venus fisheries collective been given the chance to propose and/or elect the people on the Consortium (who are designated by the authorities). Although there can be seen to be a good relationship between the authorities and the Consortium representatives, the same cannot be said about the relationship between the latter and the seamen, at least as far as the port of Punta Umbría (province of Huelva) is concerned. The fishermen's collective there states that it is only consulted about something when the decision has already been taken by the Consortium General Committee and the authorities. Knowledge of the Consortium is greater amongst ground-roots seamen in the other ports, Isla Cristina (province of Huelva) and Sanlúcar de Barrameda (province of Cadiz), and they have closer relationships with their representatives and consider the Consortium to be a positive body offering good support to the striped-venus sector.

Nevertheless, it would be important for both the Consortium and the authorities to be able to have the use of a legal advisor so that all their proposals might fall within the bounds of the law.

As far as the consultative procedure and attendance at Consortium meetings are concerned, it must be stated that there is no *ad hoc* consultative body apart from the Consortium itself. The participation of shell-fishing vessel co-operatives for the marketing of their produce is allowed for, but no co-operatives of this type have as yet been created. Consequently, despite what is laid out in the regulations, the attendance of these co-operatives' chairmen at the permanent Commission meeting or the Committee meeting is an impossibility.

Consortium bodies

Decision-taking

The Consortium's articles permit its members greater autonomy for making proposals, but less when it comes to making decisions, given that the Authorities have the last word. Nevertheless, the mere fact that there is a Consortium means that initiatives can be directly and openly channelled for defects in striped-venus clam fishing to be corrected.

Depending on the port they originate from, the fishermen do have a say in this type of participation and/or involvement (although not as great a say as they should have), whereas some representatives (the chairmen and major skippers from their fisheries organisations) call meetings[1] so they can have the chance to put forward their interests and opinions on issues related to the striped-venus. Depending on the circumstances, the

[1] The representatives convene the fishermen through letters or notices placed on notice boards at fresh-fish markets.

Make-Up
10 members (5 designated by the Fishermen's Guilds and another 5 designated by the Boat-Owners' Associations)
Duties
- To establish the directives for the objectives commended to the Consortium to be achieved. - To designate the members of the Permanent Commission, the Chairman and the Deputy Chairman. - To issue any reports requested by the regional Autonomous Authorities. - To pass annual action and management programmes. - To hear and resolve any issues that the Consortium bodies might put before it. - To obtain from the Consortium bodies any information about the Consortium it might think fitting.

Figure 3.16a Consortium bodies: General Committee

Make-Up
6 members (The Chairman, the Deputy Chairman and four members designated by the General Committee from amongst its members, two designated by the Boat-Owners' Associations and another two by the Fishermen's Guilds)
Duties
- To direct and undertake the appropriate activities in order to achieve the aims of the Consortium and to ca - To propose to the General Committee annual action and management plans and to co-ordinate them.

Figure 3.16b Consortium bodies: Permanent Commission

Observations concerning the Post
- The Chairman is designated by the General Committee on an annual basis. - The Deputy Chairman is the Chairman's replacement, and is named in the same way. - When the post of Chairman falls on a member from the Boat-Owners' Associations, the post of Deputy Chairman is held by a member of the Fishermen's Guilds, and vice-versa.
Duties
- To preside over any Consortium body meetings - To convey to the Public Authorities all agreements, reports and proposals adopted by the bodies of the Consortium. - To designate the Secretary. - To supervise the Acts

Figure 3.16c Consortium bodies: Chairman

Observations concerning the Post
- The secretary is chosen by the Chairman from amongst the Secretaries of the Boat-Owners' Associations and the Fishermen's Guilds that make up the Consortium, for the period of his mandate.
Duties
- To provide the Consortium with technical advice. - To attend meetings of all the bodies and to write up the corresponding Acts and to issue certifications of any agreements reached. - To keep Consortium documents and Acts in his care. - To notify the Chairman of any requests for convening the Consortium bodies. - To give notice of the Consortium bodies' acts and agreements.

Figure 3.16d Consortium bodies: Secretary

initiative for holding a given meeting has on occasions sprung from the group of fishermen, who gather informally to give voice to their feelings about some specific problem or other. The results of these participatory sessions are passed on by the fishermen's associations' representatives to the Consortium General Committee (vid. section on 'Internal Structure').

3.5.7 The Consortium-authorities relationship

Tutelage by the authorities. Reporting back

In general terms, communication between the Consortium and the Authorities could be said to be fluent, there being both formal and informal relations between the two. The type of tutelage that the Authorities exercise over the Consortium is based on the convening of meetings at which its presence is required and/or in the monitoring of the sessions that the Consortium itself organises from time to time. It also supervises the fisheries statistics (regarding catches, species, size, etc.) that the fisheries organisations within the Consortium are required to submit to the General Fisheries and Aquaculture Directorate on a monthly basis. There is no doubt that the authorities are regularly informed of all the issues that are touched on in the General Meetings, but it cannot be said that the sector reports to the authorities in the strict sense of the word as it is autonomous. Moreover, it does not receive any money from the authorities' exchequer, it has no executive power, and neither can it impose sanctions. What is more, the fisheries associations within the Consortium go as far as to point to the lack of funding from the authorities as one of the reasons why said consultative body does not work as well as it might, as whether it works at all depends on the good intentions of the people who represent it.[1] Although it is a fact that the Consortium is not funded by the authorities, one answer to the problem could be the fishermen's associations which are in it, putting aside for it a certain percentage of the money that they receive from the authorities for carrying out said consultative body's duties. The management of its own financial resources could contribute to an increase in the levels of responsibility and commitment to striped-venus regulations in the fisheries sector.

If the Consortium were financed by the authorities, its representatives' interests might grow, but there is no doubt that there would be a change in the Consortium's philosophy, inasmuch as the authorities would then play a more active role in supervision and budgetary control.

Subjects for consultation

The subjects that consultations are made about are diverse, but they are nearly all related to resources (quotas, sailing times, etc.) and/or fisheries structures (applications to replace traditional dredgers with hydraulic ones, for example).

The only proposals related to marketing that the Consortium has put forward thus far are connected with an improvement in the infrastructure at the fresh-fish markets,

[1] These demands are part and parcel of the fishing sector's ways as its prime motive seems to be the gaining of subsidies.

specifically with the installing of a sieve and packing machine for sorting clams (this would facilitate the checking of minimum sizes and standardise labelling and packing, which would provide added value).[1]

Check mechanisms and sanctions

There are check and sanction mechanisms but these are under the sole control of the Autonomous Authority bodies that have responsibility in the matter. All the Consortium's demands to have the capacity to impose sanctions have been turned down by the authorities thus far. In practice, self-surveillance by the Consortium would not work due to all the family ties involved.

3.5.8 Appraisal

It is the Consortium members' opinion that their proposals are taken into account and this can be seen in the way the authorities proceed. It has to be said that some of the proposals are rejected by the authorities because, objectively-speaking, they are unfeasible, either because they could have a negative effect on other types of fishing, or because they are incoherent. From the authorities' point-of-view, the Consortium is an important support body but it has still not reached expected levels of effectiveness (this opinion is also shared by Consortium representatives). For example, the Consortium has not put forward any proposals aimed at an improvement in marketing. Neither has a Producers' Organisation officially been set up, and it is not expected that this will happen in the near future. This can be explained by the fact that most fisheries' associations in the Consortium are only licensed dealers on the fresh-fish markets, and as such receive a fixed percentage for the sale of their produce. The setting up of a Producers' Organisation would mean the loss of this income. It can therefore be seen that Consortium representatives' personal interests usually take precedence over the fishermen's well-being. In spite of the fact that the extraction sector is aware that its involvement in the marketing of the product would bring it in greater profits, in practice this is rather complicated, as there is the person of the middleman or buyer (an agent with no connections with fisheries activity), who has a monopoly on the market, to take into account. The buyer even goes so far as to become a moneylender to the fishermen, whereby there is a strong inter-dependency between them that aborts any possible solution to this question. On top of this, it has to be said that the extraction sector has little or no business acumen, and neither does the Consortium itself, as it is made up of the chairmen of the boat-owners' associations and the major skippers from the fishermen's guilds. One piece of unfinished business as far as the Consortium is concerned is, without doubt, an improvement in marketing.

Even though there are lots of gaps, and there is still a long road to go down before a high degree of effectiveness can be achieved, the fact that a Consortium has been created specifically to improve striped-venus fishing and marketing in itself represents a qualitative change in trends for this type of fishing. Although the Consortium is more ambitious in theory than in practice, it is a wager on greater cohesion and participation of the fisheries sector in the decision-taking process regarding the striped-venus clam. What

[1] The introduction of new machinery of this type has been granted by the regional Autonomous Government.

is even more important is the fact that the authorities value the sector and show consideration for its opinions.

In conclusion, when compared with management models and terms that are being coined in scientific fisheries literature, the Consortium is a hybrid. It responds to the *consultative* type of management because there are mechanisms for consultation in place between the authorities and the fishermen, with the sector's more or less implied involvement, even though final decisions are taken by the authorities. At the same time, a kind of *advisory* type of management could also be alluded to, as the Consortium advises the authorities on decisions it should take or endorse. In this respect, the fisheries sector makes an effort to participate in decision-taking, whether or not it has an impact on that decision (Contribution). Nevertheless, it is common knowledge that the Consortium has a role to play in decisions on the striped-venus, and so the professional seaman's experience is appreciated and shown due consideration, a circumstance which to a certain extent brings him nearer to 'Empowerment'.

In short, the Consortium marks a watershed, and represents a glimpse of greater local participation in the decision-taking process. And even though delegation of power can still not be talked about, nor decentralisation in its strict sense, nevertheless the Consortium is, to a certain extent, responsible for compliance with the self-regulatory measures that have been established, and for the duties it has been assigned being worked towards (Sharing Responsibilities). It has been proved that proximity to the sector's problems contributes to an increase in managerial efficiency.

3.5.9 Swot Analysis

Strengths	Weaknesses	Opportunities	Threats
- Co-operation with the - Sector directly represented - Product quality	- Lack of funding - Lack of executivepower - No power to impose sanctions a) - Defence of each port's private interests - Marketing	- Ability to conserve fishing grounds - Marketing	- Over-exploitation of fishing grounds/ /illegal fishing - Taking the backbone out of the sector

Figure 3.17 Swot analysis

a) Actions and omissions contrary to that which is set out in the Order will lead to the imposition of sanctions by the competent bodies of the regional autonomous government in accordance with the articles of Law 14/1998 of 1 June (Official State Gazette No.131 of 2 June 1998), concerning the establishment of a scheme for monitoring protection of fisheries resources and any other concurrent legislation.

3.5.10 Geographical and statistical data

a) Ayamonte:

- the municipality of Ayamonte is located in the western coast of Andalusia, on the Guadiana river mouth (Portugal border);
- 16,000 inhabitants;
- high fishing and transforming tradition;
- fishing fleet: 75 vessels (10 corresponds to hydraulic dredger gear);

- TRB: 1.573;
- regarding the level of dependence on fishing activity, Ayamonte occupies the fourth place in the Andalusian ranking.

b) Isla Cristina:
- the municipality of Isla Cristina is located in Andalusian western coast, in the province of Huelva, more especifically on the Carreras river;
- 18,000 inhabitants;
- fishing fleet: 195 vessels (45 corresponds to hydraulic dredger gear);
- regarding the level of dependence on fishing activity, Isla Cristina occupies the second place in the Andalusian ranking.

c) El Terrón:
- El Terrón fishing port is located in the municipality of Lepe (Huelva) on the Piedras river mouth;
- 18,000 inhabitants;
- fishing fleet: 92 vessels (15 corresponds to hydraulic dredger gear);
- the level of dependence on fishing fleet is low.

d) Punta Umbría:
- the municipality of Punta umbría is located on the Odiel river mouth;
- 11,170 inhabitants;
- fishing fleet: 113 vessels (50 corresponds to hydraulic dredger gear);
- regarding the level of dependence on fishing activity, Punta Umbría occupies the third place in the Andalusian ranking.

e) Sanlucar de Barrameda (Bonanza):
- inner fishing port, located on the left side of Guadalquivir river, next to Doñana National Park;
- 60,604 inhabitants;
- fishing fleet: 161 vessels (15 corresponds to hydraulic dredger gear);
- level of dependence on fishing activity: medium.

3.6 Barbate; Participation processes in a fishing locality in crisis

3.6.1 Introduction

Barbate is located 64 kilometres (40 miles) from Cadiz, the provincial capital. The municipality covers an area of 142 km^2 (55 mls^2), and is 10 metres (33 ft:) above sea-level. It is flanked by the municipalities of Conil de la Frontera, Vejer de la Frontera and Tarifa.

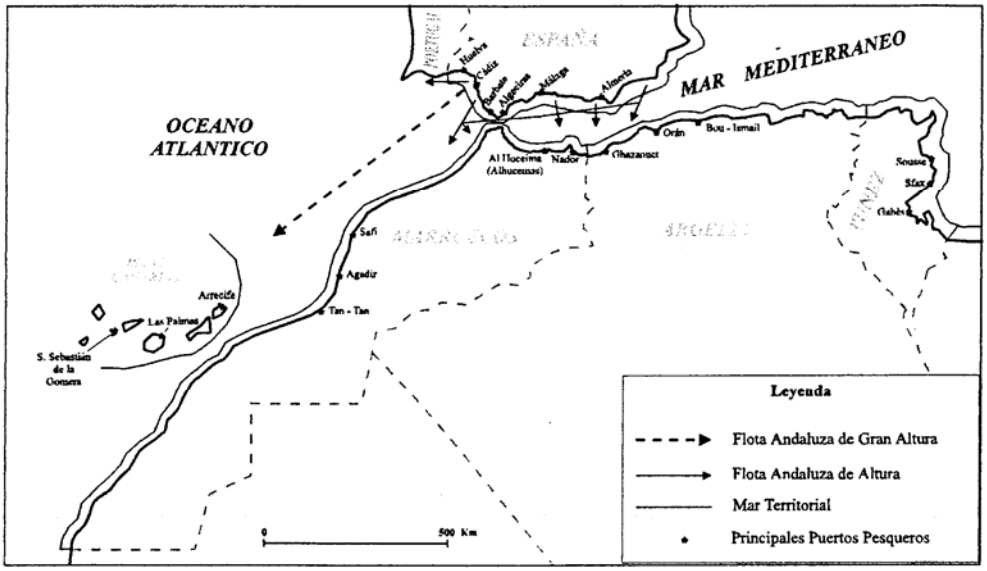


Figure 3.18 Fishing grounds of Barbate fishing fleet

The town of Barbate has been chosen to illustrate the mechanics of the Spanish fisheries decentralisation process. The fact that the Barbate fishing fleet is one of those affected by the break-down of fisheries agreements with Morocco means that the town can be included in the expansion of the fisheries management decentralisation process, and has become a laboratory for experiments into new forms of sector participation in this process. These forms of participation favour the widening of responsibilities to include the local level and the putting of local-area proposals into effect as one means of finding a solution to a critical situation.

3.6.2 Delegation-decentralisation up to the break-down of the fisheries agreement with Morocco (1980-1999)

There were two prime decentralisation development processes in fisheries management during this period:

- on the one hand, the process favoured by the authorities, which employed official participation instruments, on which all the organisations and agents in the sector are represented, to direct the fisheries management policy towards the implementation of localised fisheries plans, having realised what the consequences would be for local communities if the international law of the seas were applied. The participation of fisheries sector organisations as consultative agencies was to be included in the design process of these plans, although they were not to take part in any decision-taking. This shows that during this period decentralisation was still incomplete, as said organisations had not been included as co-participants in the implementation of the plans;
- on the other hand, the process put forward by Barbate fisheries organisations supported the greater involvement of local agents in decision-taking, i.e. a move

from the role of consultants to one where they carry out co-determination duties. This process manifested itself in the great number of proposals that sector organisations made to the authorities in almost all areas of fisheries management and resource protection and also for an improvement in fisheries structures and greater transparency in the marketing process.

Organism	*Instrument*
Central Authorities	Sectoral Fisheries Conference
	National Fisheries Committee
Regional Authorities	Morocco Agreement Work Group
	Regional Fisheries Committee
Provincial Authorities	Provincial Fisheries Committee
Local Authorities	Local Fisheries Council
Organisations in the Sector	Platform for the Fisheries Agreement with Morocco
	Local Fisheries Committee

Figure 3.19 Fisheries Management Instruments in Barbate
Source: Compiled by author from Ministry of Agriculture, Fisheries and Food and Andalusian Regional Government data, and press.

The role of the Authorities

During this period, the authorities made an effort to include local organisations in the fisheries affairs policy design process, either through their representation in established and official instruments (Figure 3.19), or through their consultation on specific aspects for planning design:

- the central authorities made use of official participation instruments and even created participation platforms, such as the National Fisheries Committee, at certain times. In this regard, mention must be made of the criticism that came from the sector, which called for the optimum qualitative and quantitative use of these platforms, given that they were not convened often enough, and that they constituted, as far as the authorities were concerned, merely an example of political instrumentalisation (the fact that different political sides held sway in different authorities distorted the ends of these instruments, turning them into knocking-shops where all sides vented their frustrations at each other);
- the Andalusian regional authorities (the autonomous regional government of the Junta de Andalucía) made use of a variety of platforms on which the sector had representation (figure 3.19) and to this the proposals put forward by the Morocco Agreement Work Group bear witness. The requirements laid down by the authorities for the organisations in the sector to take part in discussions on planning policies that

affected them were also complied with (figure 3.20). As it did with the central authorities, the sector also criticised the way the regional government acted, as none of the proposals it put forward it were accepted.

Organism	*Plan*
Regional Authorities (Junta de Andalucía)	Plan for the regulation of the Cadiz fishing grounds. Plan for the modernisation of the Andalusian fisheries sector.

Figure 3.20 Fisheries Plans in Barbate
Source: Compiled by author from Ministry of Agriculture, Fisheries and Food, Andalusian Regional Government, and Barbate town council data.

The role of organisations in the sector

The eagerness of organisations in the sector to broaden their role in the decision-taking process in recent decades has manifested itself in the great number of proposals that they have put forward to both the regional and central authorities. The context these proposals are made in swings back and forth between critical and stable periods, and, depending on the moment in time, they can either be seen to be conflict-solving strategies (during critical periods) or proposals connected with the sector's normal participation practice regarding policies that affect its activities.

In this regard, the prediction that the fisheries agreement with Morocco would break down had the effect of acting as a catalyst or a reagent for expressions within the sector, as a result of which it proposed initiatives with hindsight. Such was the case of the creation of the Platform for the Defence of the Agreement with Morocco.

3.6.3 Delegation-decentralisation after the fisheries agreement with Morocco had come to an end (2001-2002)

As a result of the ending of the fisheries agreement with Morocco on 1999, the fisheries policy decentralisation process has grown over the past year. The need to comply with a solution that the critical climate in Barbate would favour has driven this process towards greater decentralisation, as it has been recognised as one of the possible alternatives. This could be seen in the way the State tried to justify itself by seeking legitimacy at the lowest levels of political representation, ie: at a local level (after its apparent lack of effectiveness as one of the parties involved in the negotiating process) and, in the case of organisations in the sector, it has become a demand through which they can channel their attempts to broaden their role in decision-taking.

The role of the Authorities

During this short period, the automatism developed by the authorities in earlier encounters has continued by perseverance with officially established participation bodies, although critical events considerably increased the number of times they were convened. The fact

that there were concurrent Fisheries Committees at all levels of administration (national, regional, provincial and local) bears witness to this.

- with regard to the central authorities, although both the increase in aid to compensate for the Barbate fishing fleet being tied up in port[1] and the convening of the National Fisheries Committee after the break-down of the fisheries agreement were a speedy response, these facts disguised the need for the urgent inclusion of fisheries organisations in the sector in the decision-taking process. This can be seen through the current ineffectiveness of swift solutions proposed on the committee, which ranged from the search for alternative fishing grounds, to support for a stronger role for mixed-economy companies, where the sectors involved would play a more active management role (if the organisations in the sector had been co-determiners, other kinds of alternatives would have been introduced that were better adapted to the sector and which, on some occasions, would have gained time and a greater say in problem-solving);
- on the other hand, and in a greater bid for decentralisation, the central and municipal authorities have signed a joint agreement for implementing a town development plan (which includes lines of action that had previously been agreed upon with fisheries organisations in the sector in Barbate); at the same time, the central authorities have also secured the direct involvement of the extraction sector in the marketing and sales process which involves a broadening of its responsibilities;
- on the regional authorities level, an effort can be seen to move fisheries management closer to the local level, both by maintaining already existing bodies (the Morocco Agreement Work Group continued to meet even after negotiations had failed), and through the creation of others which were, in some cases, even based in the towns themselves (Offices for processing aid applications for the fisheries fleet affected by the break-down of the fisheries agreement with Morocco). This corresponds to a process of deconcentration by the authorities;
- as far as planning is concerned, the Andalusian regional government is currently appraising a Ports and Harbours Plan drafted by the organisations in the sector. This affects the extension of the decentralisation process by the management body in question.

The role of organisations in the sector

As has previously been pointed out, the Barbate fisheries organisations' demands for a greater role in management are triggered during this critical period of time. In some cases, greater participation is achieved, as proposals ranging from planning to marketing are accepted by certain authorities.

Nevertheless, the end of the road to decentralisation is far from having been reached; no heed has been paid to organisations' demands for resolving certain aspects that have a direct effect on the way they conduct their activity and, even more seriously, on resource

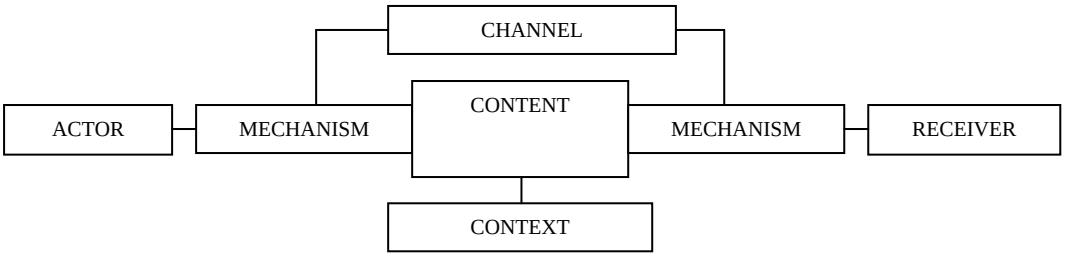
[1] The province is the administrative unit immediately superior to the municipality (which are the smallest cells of territorial division in the Spanish State). A region may include a number of provinces. In our case, the municipality of Barbate comes under the province of Cadiz which, along with seven other provinces, makes up the region, or Autonomous Community, of Andalusia.

breeding. This has been demonstrated by the authorities rejection of the control of illegal fishing and of a greater transparency in the marketing and sales process, and even by the central authorities' refusal to grant aid to ancillary firms that depend on fishing and that have also been affected by the terms of the fisheries agreement (a fact which has, nonetheless, been recognised by regional authorities).

It would be wrong to state that the Barbate fisheries organisations only start making demands during critical periods of time. On the contrary, the fact that they are more apparent during such periods is due to their being able to gain the acceptance of the authorities more swiftly by using this channel of action (as the authorities use critical periods as a crutch for their legitimacy). This fact will become more evident in the following, in which actions and initiatives, both on the part of the authorities and organisations in the sector, are set out.

3.6.4 Mobilisation by the Authorities and organisations in the sector

The degree of decentralisation experienced in fisheries management from the nineteen-eighties to the present day can be deduced from the wide array of initiatives that have sprung from all the actors involved in the Barbate fisheries sector. The study of the way these initiatives have developed from their beginning to their final achievement throws light on the mechanisms that are emerging to help in advancing the decentralisation process. The following chart can be used for clarification.



ACTOR: Barbate Fishermen's Guild Andalusian Association of Fishermen's Guilds Producer's Organisation Barbate Boat-Owners' Association Andalusian Boat-Owners' Association Local Government: Mayor Local Political Party Groups: PSOE, IU, PP, et cetera Brussels Trade Unions: CCOO, UGT Andalusian Autonomous Regional Government Barbate Regional Office of Andalusian Regional Government Barbate Branch Office of Regional Office of Andalusian Regional Government	MECHANISMS: Institutional New types of collaboration CHANNEL: Following autarkical hierarchy CONTEXT: Before agreement with Morocco After non-agreement with Morocco Reform of CFP RECEIVER: Private Companies Brussels Central Government Andalusian Local Government Local Town Council

Figure 3.21 Model for the Study of Initiatives
Source: Formulated by H. D. Lasswell and compiled by author.

Institutional Mechanisms	Bodies in political structure	Consultative Committee
		Sectoral Conferences
	Less official bodies	Fisheries Committees
		Work Groups
Non-Institutional Mechanisms	Intermediation	
	Contribution	
	Partnership	
	Co-determination	

Figure 3.22 Mechanisms for collaboration - participation between actors
Source: Compiled by author

The specification of the channels used to pursue the new initiatives, whether they be those established by law or autarkical in nature, will shed light on the recourse to the use of new formulas for participation or collaboration by all the actors involved. This will indicate the extent to which the use of new, emerging, formulas is a positive move, that is, whether they have any effect on the decentralisation process for fisheries management.

To pursue said initiatives the actors have made use of both institutional and non-institutional mechanisms (see figure 3.19), the latter on account of the lack of co-operation between the authorities and the organisations in the sector.

Initiatives pursued by the Authorities

The majority of the initiatives described correspond to the use of mechanisms that previously existed under Spanish law, i.e. mechanisms described as institutional. An example of this can be seen in the process prior to the drafting of the Plan for the Modernisation of the Andalusian Fisheries Sector (1994), where by means of the use of consultative mechanisms (works groups, fisheries committees), both the fisheries organisations involved and the scientific community were able to take part in the planning stage.

Measures for Managing Fisheries Resources	Establishment of minimum sizes
	Plan for the Future of Fishing
Infrastructure Measures	Plan for Economic Diversification (2002)
	Port and Harbour Plan (2002)
	Tourism Reclassification Plan (2002)
Fishery Structure Measures	Plan for Renewal of Fleet (1999)
	Plan for the Modernisation of the Andalusian Fishing Sector (1994)
Social and Employment Measures	Request for Aid for Ancillary Fishing Industries
	Request for Aid for the sector affected by the Failure of the Agreement with Morocco

Figure 3.23 Initiatives by the Authorities
Source: Compiled by author.

It could be said that the use of these collaboration mechanisms has constituted an advance in the decentralisation process in the direction of *contribution*, i.e.: the appearance of new types of participation where the authorities pay heed to the local actors involved.

Nevertheless, the authorities have also used non-institutional mechanisms to solve specific fisheries management problems. This occurrence was mainly due to the fact that the existing collaboration organisms did not work. In this regard, the local authorities turned to partnership (figure 3.24) when the crisis occurred in the fisheries agreement negotiation process with Morocco. A direct request was made to the Andalusian artesanal fishing fleet to accept the Moroccan offer, which was to allow one hundred vessels to fish in the Moroccan Atlantic for a period of one year with no financial considerations in return.

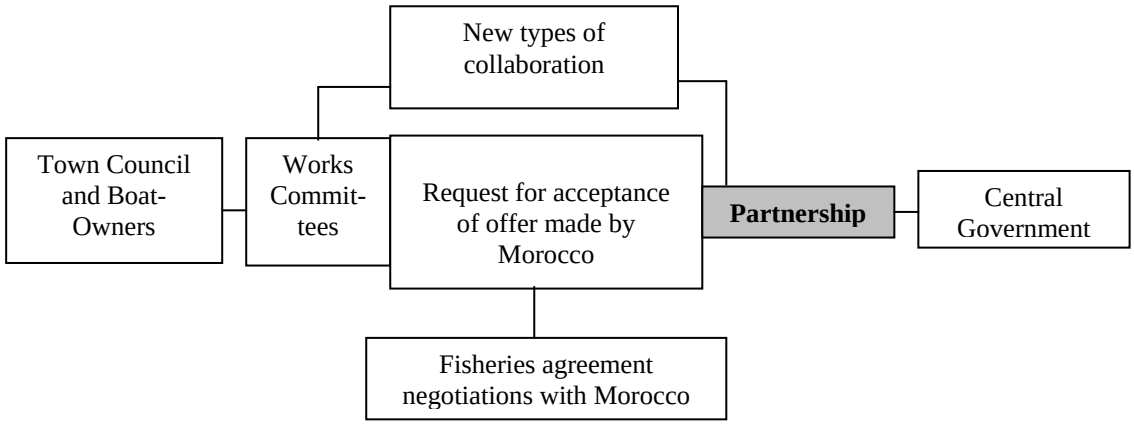


Figure 3.24 Example of partnership (co-ordination of public and private agents)

In the same way, when the market was lost due to the Barbate fisheries fleet being tied up in port during the negotiations, and the failure of existing institutional mechanisms had been established, the local authorities played a *brokerage* role (figure 3.25) in order to obtain measures for the management of fisheries markets.

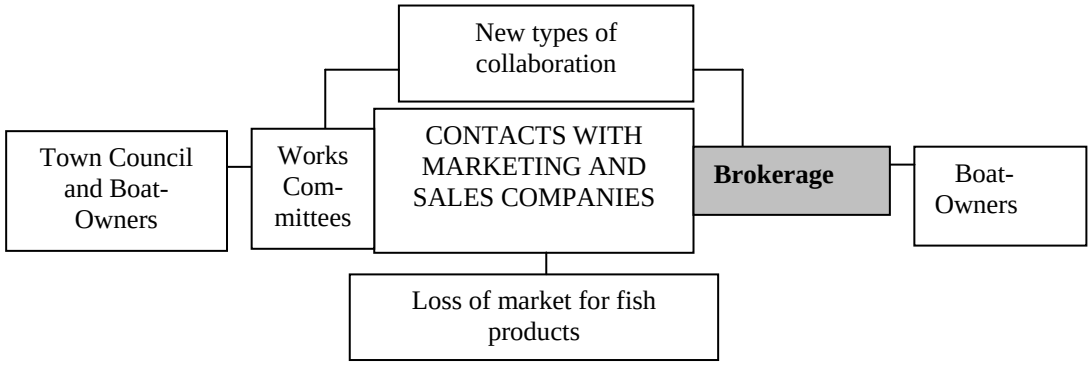


Figure 3.25 Example of intermediation

The Andalusian Regional Government has also opened an Office in Barbate to deal with applications for aid to the fishing fleet affected by the agreement with Morocco. This would seem to be a *deconcentration* process as far as the authorities are concerned, as the management of aid is being put into local hands.

In conclusion, it could be said that in Barbate the authorities are making serious efforts to include fisheries organisations in decision-making processes and, to be more precise, that the local government has actively taken this line.

The way to decentralisation has been opened up by the authorities through new types of collaboration which are defined as follows: Participation, Contribution, Brokerage and Partnership. Nonetheless, until the organisations stop being included in fisheries management on an unequal basis with the authorities, sharing responsibility is still a far way off.

Fisheries organisation initiatives in Barbate

On account of the unfavourable climate which was brought about by the various renewals of the fisheries agreement with Morocco (1983, 1988 and 1992, 1995), the Barbate fisheries organisations have been characterised by how dynamic they have been in their proposals of measures and tackling of initiatives.

Fisheries Resource Management Measures	Plan for Regulating the Cadiz Fishing Grounds (1984)
	Action Plan. Barbate: a firm commitment for the future (2002)
	Reporting of illegal fishing
	Request for Self-Regulation Measures (2001)
Infrastructure Measures	Ports and Harbours Plan (1980)
	Port and Harbour Plan (2002)
Fishery Structure Measures	Plan for Renewal of Fleet (1999)
	Plan for the Modernisation of the Andalusian Fishing Sector (1994)
Social and Employment Measures	Review of Retirement Age
	Request for Aid for the sector affected by the Failure of the Agreement with Morocco

Figure 3.26 Initiatives by fisheries organisations
Sources: Compiled by the author.

As has been previously pointed out, the opening up of the authorities to these organisations having a say in planning can be gauged as a step forward in the fisheries management decentralisation process. This can be illustrated by the way the Barbate fisheries organisations have collaborated with the authorities as consultative agents for the drafting of the following plans: Plan for the Modernisation of the Andalusian Fisheries Sector (1994), Action Plan: Barbate, a firm commitment for the future (2002) and the Barbate Ports and Harbours Plan (2002).

Despite this, whenever there have been crises as a result of the fisheries agreement with Morocco, the Barbate organisations have repeatedly called upon the authorities to lend support to the self-regulation measures that the sector has been demanding[1] (in such a fundamental field as resource policy), which would seem to point fisheries management in the direction of *co-determination*.

As such, a Ports and Harbours Plan was drafted in 1980 which included umbrella measures: market management, resource management, structures measures and even infrastructure measures. In order that it could be put into practice, the plan included the Authorities, as a result of which the Fishermen's Guild took it to the Regional Authorities. In the end, the plan was not implemented, but if it had been, a situation approaching sharing responsibility would have been the result.

At a later date, the Plan for the Regulation of the Cadiz Fishing Grounds (passed in June 1984), proposed measures for regulating resources and marketing. It was drafted by the Barbate Fishermen's Guild and, on this occasion, was supported by the majority of local fisheries organisations: boat-owners, exporters and salesmen and fisheries experts, which highlights the wishes of these organisations to exercise self-management not only in the field of resources, but in the field of markets, as well.

A process of *empowerment* for local fisheries organisations would have emerged from the achievement of the two above-mentioned initiatives, together with the numerous requests for the control of illegal fishing activities in Barbate; but a shadow has been cast over this process not only by the ineffectiveness of the authorities, but also because of the various interests that each of the local organisations harbours.

A new plan for the Port and Harbour Plan[2] has nevertheless arisen from collaboration between the central authorities and the Fishermen's Guild. A new plan for the Ports and Harbours Plan was drafted for the town in 2002 and includes measures directed at fisheries structures by the renewal of the fleet through the construction of smaller vessels that are better suited to the fishing conditions in the Gulf of Cadiz fishing grounds. The design of this plan is being disputed by a number of associations in the sector: on the one hand, the fishermen's guild and the boat-owners' association, and on the other by the CC.OO. Trade Union[3], which states that it is a copy of that which the Union itself presented to the authorities in 1988 (which confirms the conflict between local associations). In any case, the plan was put before the Andalusian Government's Department of Agriculture, Fisheries and Food and is at present under review by the regional authorities. The joint implementation of said Ports and Harbours Plan would serve as an example of *shared responsibility* (figure 3.27) in which all levels involved in fisheries management are included, from the authorities to local organisations.

[1] As was in done in November 2001 at the end of the Second Conference for Young Andalusian Fishermen organised by the Andalusian Federation of Fishermen' Guilds.

[2] This Plan is part of a larger plan driven by the local council called: 'Action Plan. Barbate, a Firm Commitment for the Future', which includes measures for economic diversification for the town.

[3] The 'Comisiones Obreras' Trade Union.

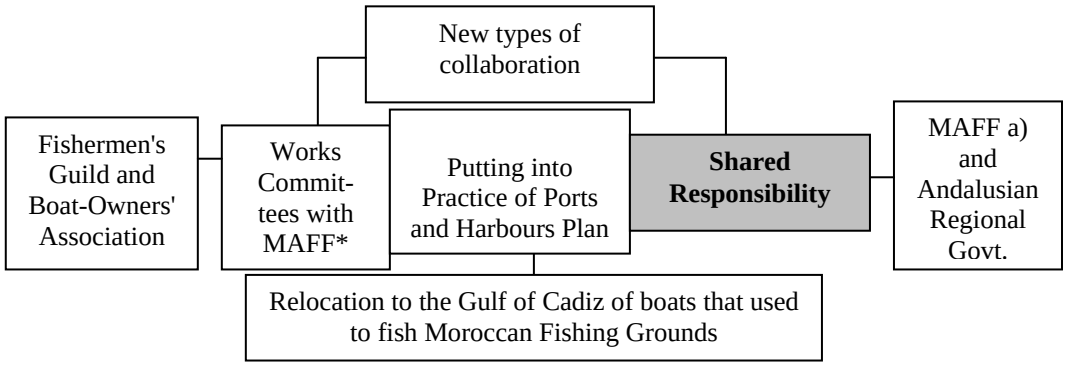


Figure 3.27 Example of shared responsibility
a) Ministry of Agriculture, Fisheries and Food.

Finally, attention must be drawn to the initiatives taken by the Fishermen's Guild regarding measures for employment, specifically the application for aid for the fishing fleet affected by the failure of the agreement with Morocco. In a letter to Brussels, a request was made for the lowering of the ages of retirement and early retirement required to qualify for aid, as well as the modification of certain unemployment protection measures which were considered to be ineffective in the context of Barbate and, as a final request, the putting into place of an investment plan for the town.

In short, it can be seen that the Barbate fisheries sector organisations firmly favour greater decentralisation in fisheries management through *self-regulation, co-determination, empowerment processes,* and *sharing responsibilities*. Of these new types of collaboration, the organisations have thus far only achieved contribution and partnership in specific aspects of planning, and are currently aiming for shared responsibility in fisheries structures measures. With these precedents the authorities are in a position to foster effective responsibility-sharing where compliance with fisheries policies would be better guaranteed for having been jointly agreed upon with agents in the sector.

3.6.5 Administrative processes associated with conversion

The aim of this section is to examine the degree of decentralisation and participation achieved by fisheries organisations and the authorities in the management of aid for the conversion of the fisheries fleet affected by the lack of an agreement with Morocco.

EU measures

Contributions made by the EU to the fisheries fleet conversion process are made through compliance with a plan passed by the EU on 27 November 2001 to the value of 32,778 million Euros. The plan includes aid for retirement and early retirement, and includes two types of subsidy or incentive to cover diversification and the abandoning of fishing.

The process of dealing with aid applications has been delegated to regional authorities. Although this process is set out in detail in the following, it can be summarised as follows: once all the applications for aid have been received the regional authorities

must pass them onto the Central Authorities, who in turn pass them onto the European Union for them to be approved.

AUTHORITY	*AID*	*FUNDING*
European Union	Aid Plan for the sector affected by the Failure of the Agreement with Morocco	32,778 million Euros (for all of Spain)
Central Authorities	Action Plan	32 million Euros for Andalusia
Regional Authorities	Plan for the Diversification of the Fisheries Sector affected by the Failure of the Agreement with Morocco	60 million Euros for Andalusia (50% each from Regional and Central Authorities)

Figure 3.28 Aid for the conversion of the affected fisheries fleet in Andalusia
Source: Compiled by author.

Measures taken by the central authorities

The measures put into place by the Central Authorities in order to offset the consequences of the lack of a fisheries agreement with Morocco for Spanish fisheries fleets were basically centred on an Action Plan which was passed by the Cabinet on 2 November 2001**.** Funding would be set aside for attending to actions related to the permanent tying up of the fleet in port, the modernisation of vessels, economic subsidies and early-retirement, as a result of which 13.6M. Euros were to be allocated to the affected Autonomous Communities.

By the time the agreement with Morocco was finalised in November 1999, an agreement had already been reached at the Sectoral Fisheries Conference the previous September for this money to be released by the State, who would transfer it to the Autonomous Communities, which is where the aid applications would be dealt with. This process is detailed in the following.

Measures taken by the regional authorities

The Andalusian Regional Government's Agriculture and Fisheries Department set up local offices to support the Andalusian fisheries sector in several municipalities, including Barbate, in order to attend to applications for EU aid from boat owners and crewmen. The existence of these offices involves the type of administrative deconcentration mentioned in section 3.1.

These offices were set up as aid management bodies for encouraging the sector to accept conversion plans and to provide them with information on other options. The cost of starting up these offices to the Andalusian Regional Governement was euro 363,427 for the year 2002 and there are plans for them to continue during the upcoming year, as a result of which the total investment involved will rise to euro 721,214.

Once the agents in the sector put forward their applications for aid in these support offices, they are sent on to the regional authorities who, in turn, send them onto the Ministry of Agriculture, Fisheries and Food, from where they are forwarded to Brussels.

Apart from this, the Andalusian Regional Government also passed a Diversification Plan for the fisheries sector that was affected by the failure to come to an agreement with Morocco. This Plan includes an allocation of 60 million euros for the sector. The Central Government contributed to the funding of the plan through the signing of an Agreement which stated that it would be jointly financed by the two Authorities, with each providing half the funds.

Aid management in Barbate

Of all the aid offered by Brussels for the affected fishing fleets special attention must be drawn to the individual incentives offered to crew-members to encourage them to give up fishing all together, for which 772 applications had been made in Barbate up to 27th August, 2002. Sixteen dossiers for non-renewable incentives for putting plans into practice and 76 for early retirement (for over fifty-fives) are also being dealt with.

As far as the fishing fleet is concerned, 7 vessels have opted to permanently abandon fishing activities (with another application is expected). Of the 37 vessels from Barbate that used to fish in Moroccan waters, 30 will continue to fish in Spanish fishing grounds.

Table 3.1 EU aid for the conversion of the Barbate fishing fleet

European union aid	Funds	Applications in Barbate
Total individual subsidies	12,020.20 €	772
Total non-renewable subsidies	60,101.20 € [1]	16
Early retirement	901.50 €	76
Modernisation	40% of investment subsidisable	-
Aquaculture		0

Source: Compiled by author.

It should be pointed out that the sector's associations in Barbate have no room for manoeuvre in financial management of the aid, being limited to the presenting of applications to receive it. The economic decentralisation of fisheries management has therefore not been achieved at the level of sector organisations, something which would result in greater autonomy for these organisations.

Despite this lack of flexibility, the fisheries organisations and the regional authorities have petitioned Brussels for the modification of some of the sections in the regulations governing aid. These requests have been rejected by Commissioner Fischler. Yet again restrictions have been placed on the enlargement of fisheries decentralisation towards the local level. Perhaps the major limitation, economic self-management, is one of the main elements in the process towards the sector's maximum autonomy.

[1] This is the maximum amount contributed by the EU for implementing conversion policies, and investment will be made in accordance with plans and projects.

3.6.6 General appraisal. The decentralisation process: limits and opportunities

The non-renewal of the agreement between the EU and Morocco has led the institutions (the regional and local authorities) and interest groups to try to broaden their areas of competency, in a bid for a greater scope of responsibility in fisheries management and in decision-taking. Nevertheless, there are judicial and administrative limits that hinder this dual process: i) The regional authorities' demand for greater autonomy from the State; ii) The demand from local bodies (institutions and interest groups) for greater autonomy from the central and regional levels, with special respect to the following aspects:

- the legislative framework limits the possibilities for broadening the regional authorities' competencies in sea-fishing affairs. The regional authorities only have competencies over inland waters. Artesanal and inland fishing in Barbate is done outside those waters, and is therefore conducted outside the areas under the regional authorities' competency for the overall management of these types of fishing, which is an obstacle to decentralisation;
- the regional authorities not only do not have any competency in foreign affairs, but cannot even take direct part in them. As far as Barbate is concerned, it might have been useful to be able to have counted on the regional authorities' participation in negotiations with Morocco. This puts another brake on decentralisation in fisheries management and the more direct participation of local and regional agents;
- the State bodies for consulting regional authorities are not created on an equal basis, i.e.: the regional authorities' opinions are not binding. This does nothing to encourage the full identification of the regional authorities with fisheries policies;
- although local authorities have very limited competency in fisheries management, nevertheless in Barbate, due to the critical circumstances, the authorities showed they were possessed of sufficient creativity to take initiatives (i.e. brokerage) and, in this way, they found solutions to specific problems that directly affected them;
- the capacity to determine economic funds for fisheries management and the ends to which they are devoted lies solely with Brussels. This makes the implementation of the CFP less effective, due to the fact that regional authorities perhaps have a more precise knowledge of what the needs of the sector are, and of just what funds are required to offset those needs. This is perhaps the most important point for extending the decentralisation process, as it would involve making the entire sector accountable, i.e.: the establishment of administrative co-determination through the principle of subsidiarity;
- the inability of the bodies for collaboration between the regional authorities and the organisations in the sector to make these accountable for management matters has been manifest. Advances have been made through contribution, partnership and participation but, nevertheless, there has not been any real involvement of the sector in the decision-making process. In order to achieve a more effective distribution of responsibilities, advances towards decentralisation in fisheries management should take the road that includes sector associations in the decision-making process.

4. United Kingdom

4.1 Participation in the pelagic fishery

4.1.1 Justification

The pelagic sector offers some interesting aspects of decision-making. By its very nature, the pelagic fishery is international because of the movements of the stock. Since pelagic fish migrate outside the European waters, an additional management level has been created in a multilateral organisation, the North East Atlantic Fisheries Commission. This is an extra level of decision-making on top of the European and the national UK level.

Because of this three tier system, one would expect to find a sector burdened by over-regulation and complicated decision-making. However, market forces have operated forcefully in the pelagic sector, resulting in a remarkable concentration with very few large vessels, which appear to be very profitable. De facto we have a system of Individually Transferable Quotas (ITQs). Stocks are in good condition. Pelagic fishermen's organisations have the financial means to organise themselves effectively, not only at a national but also at an international level. Through their own efforts, they have achieved a high degree of participation. Although most of this participation has grown informally and is not codified nor enforceable, it has reached a level from which it can probably not be removed. One question which cannot be answered, is whether the stocks are healthy because of the participation, or whether there is consensus and friendly participation because the stocks are healthy.

4.1.2 Brief description of the pelagic sector in the UK

Landings

The pelagic fishery targets species found mainly in shoals in mid-water or near the surface of the sea. These fish behave in typical manner: they swim in large single species shoals and they migrate over a wide area, spending for example part of the year in Norwegian waters, then migrating through the waters of several EU countries and finally reaching Icelandic waters. The UK pelagic fishery is a typical high volume low value sector. Pelagic landings in the UK fluctuate around 40% of landings in volume but only around 14% of the value of all UK landings. The value of pelagic landings fluctuates up as well as down from year to year.

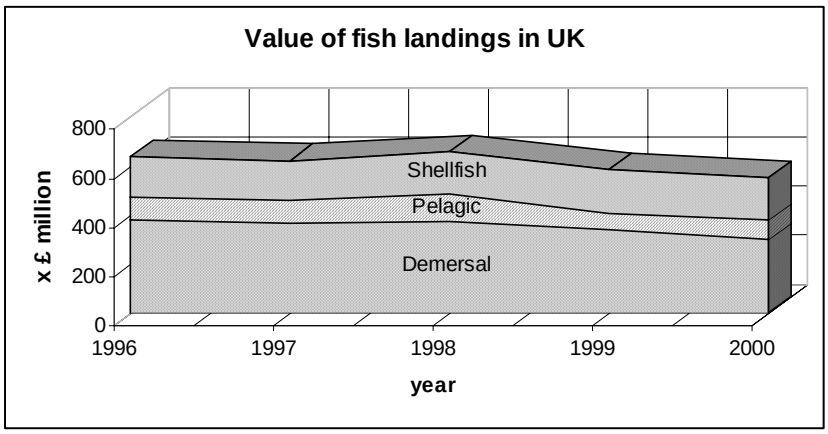


Figure 4.1 Value of fish landings in the UK by the UK fleet: 1996-2000

Herring and mackerel are the two main pelagic species landed in the UK, accounting for 89 percent of the total pelagic landings. Landings of herring have decreased since 1996. Landings of mackerel have tended to fluctuate from year to year. Other pelagic species represents only a small share of the fishery.

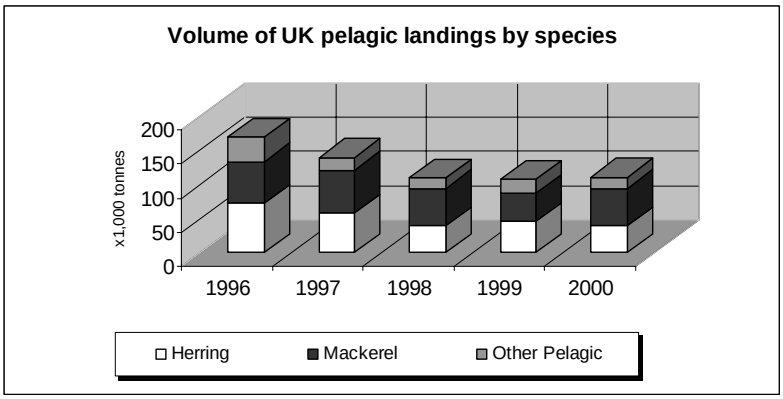


Figure 4.2 Landings of pelagic species by the UK fleet, in the UK and abroad

Pelagic Vessels and Gear

The pelagic fleet consists of a very small number (44) of large and powerful vessels which account for 1/5 of the registered tonnage of the UK fishing fleet (8,000 vessels). Different fishing methods are used to catch pelagic fish: trawling or purse-seining. A trawl is a funnel-shaped net which is towed behind a vessel. Purse seining is a method used exclusively for pelagic operations. A very large, deep net is shot around a fish shoal and is then closed (like a purse) at the bottom to trap the fish. The net is then hauled upwards to concentrate the fish near the surface and the fish are taken on board using a separate lifting net or a pump.

There are two distinct segments in the pelagic fleet: freezer vessels which process the fish aboard and 'tank' vessels. The latter keep the ungutted fish aboard in seawater cooled below 0ºC and land the fish at a pelagic factory for processing ashore.

Over the years, the number of pelagic vessels has decreased but the average size of these vessels has increased.

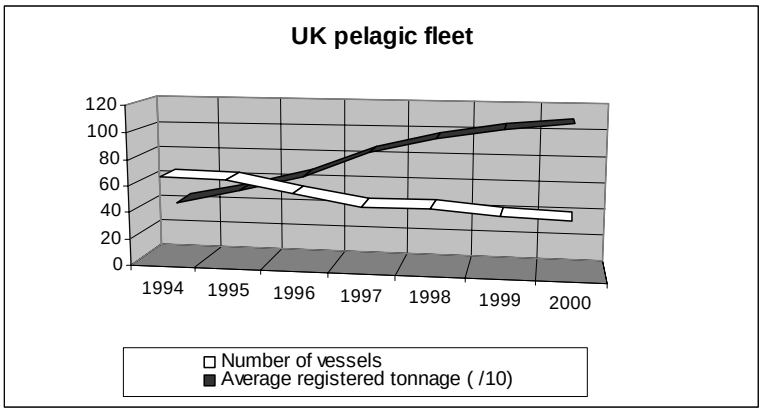


Figure 4.3 UK pelagic fleet 1994-2000

Pelagic harbours

The concentration observed in the pelagic fleet, can also be seen in the pelagic harbours. Three harbours account for nearly three quarters of all UK pelagic landings. These are all located in Scotland: Lerwick (Shetland), Peterhead and Fraserburgh (North East of Scotland). This concentration can be correlated to the location of pelagic factories and the home ports of the large pelagic pursers.

Table 4.1 Main UK pelagic ports 2000

	% of total volume of pelagic landings	Cumulative (%)
Lerwick	28	28
Peterhead	28	56
Fraserburgh	16	71
Plymouth	9	80
Other ports	20	100

4.1.3 Management of the pelagic fisheries

Graphic representation of pelagic management

The drawing represents the decision-making structures which decide on the UK pelagic fishery. Bold lines represent formal, institutionalised interactions, the dotted lines represent informal lobbying. The dashed line represents a new relationship, which is official but has not yet been institutionalised. Each participant in this process will now be discussed in more detail.

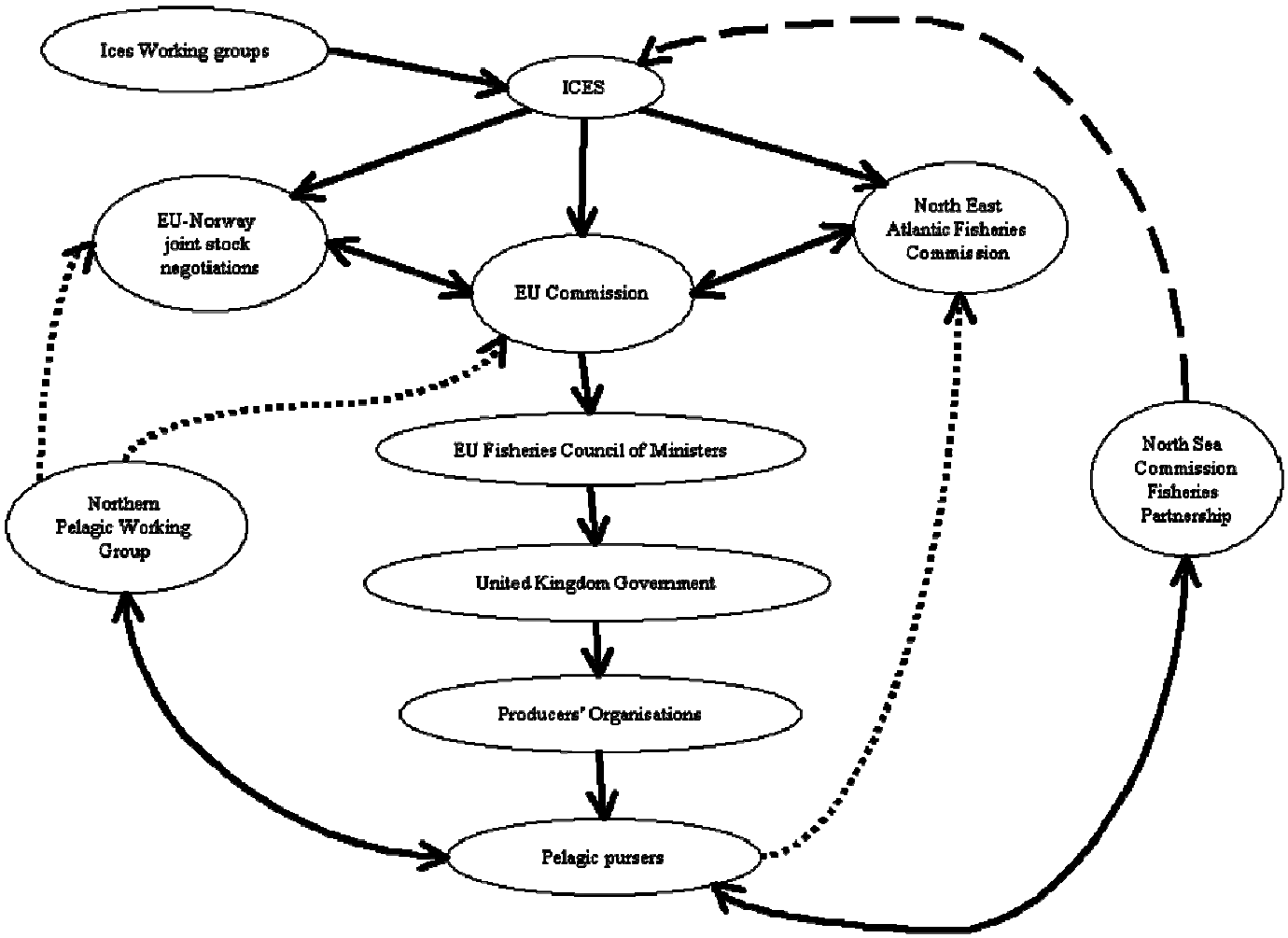


Figure 4.4 UK pelagic decision-making structures

ICES (International Council for the Exploration of the Seas)

ICES (International Council for the Exploration of the Seas) is an inter-governmental body with 19 members. Its Advisory Committee on Fishery Management (ACFM) gives advice on the status of around 100 fish and shellfish stocks. The Scientific, Technical and Economic Committee on Fisheries (STEFC) gives advice on the economic implications of the ACFM's proposals. Advice from ICES forms the basis for the management of the pelagic fishery.

The North Sea Commission Fisheries Partnership (NSCFP)

The North Sea Commission Fisheries Partnership is a group of local authorities that border the North Sea. It was established in 2000 to promote co-operation between scientists and fishermen in monitoring and managing fisheries in the North Sea. In August 2002 this has resulted in a more formal co-operation, whereby the NSCFP organised a meeting with fishermen, industry representatives and independent scientists to discuss some of the preliminary stock assessments presented by ICES scientists. The future of this partnership is viewed with much optimism by all partners involved.

North East Atlantic Fisheries Commission (NEAFC)

This International Fisheries Commission has responsibility for fishery conservation and fishery management in the North-East Atlantic outside of the EEZs.

Brief description of NEAFC

In 1963 the *North-East Atlantic Fisheries Convention* entered into force; it set up the North-East Atlantic Fisheries Commission (NEAFC) as the successor of a Permanent Commission created in 1953. NEAFC thus predates the creation of the European common fisheries policy.

The NEAFC Convention Area covers the Atlantic and Arctic Oceans from the southern tip of Greenland, to the southern tip of Spain, and west of Novya Semlya. The Baltic and Mediterranean Seas are excluded. At present, the role of the NEAFC is limited to the fisheries beyond the Exclusive Economic Zone (EEZ) of the EU and other signatories.

The activities of NEAFC have evolved over the years. In 1971 the Commission agreed to enforce a closed season for the North Sea herring fishery. In 1974 came the first quota recommendation on North Sea herring. The year after, NEAFC recommended total allowable catch and quota allocations for fifteen stocks. Allocations were initially linked to the number of men on board. In 1975 a recommendation to ban directed industrial fishery for North Sea herring was agreed.

In 1977 the North Atlantic coastal states declared 200 miles EEZs, so that most of the area regulated by NEAFC became national zones and NEAFC responsibility for stock management was greatly reduced. In recent years fishing activity in international waters has increased; NEAFC has become responsible for managing several stocks. Atlanto-scandian herring and blue whiting are relevant stocks in this context.

The NEAFC signatories are: Denmark (in respect of Greenland and Faroe), Iceland, Norway, Poland, the Russian Federation and the European Economic Community which became a signatory in 1980 when it took over the role of its member states within NEAFC. Each NEAFC signatory has two representatives. The EU delegation includes officials from the European Commission (both from the Fisheries Directorate and the Directorate for External Relations) and does in practice also include 1 or 2 representatives from the relevant EU Member States.

Decision making within NEAFC

NEAFC receives scientific advice from the International Council for the Exploration of the Sea, ICES, under a Memorandum of Understanding signed in 1999.

Each Contracting Party has one vote in NEAFC. Decisions are taken by simple majority, except for specific cases where a two third majority is required. The exception seems however to be the rule: for most important decisions - such as recommendations concerning fisheries conducted in international waters - a qualified (2/3) majority is required. Moreover, any Contracting Party may, within 50 days object to recommendations; as a result it will not be bound by the rules. For example, Iceland is not bound by the mackerel management measures for 2002 because it objected. So, in practice, a decision cannot be taken or enforced against the wishes of a signatory. NEAFC requires consensus.

Observers to the meetings of NEAFC

The NEAF convention doesn't specifically allow for participation by fishermen's organisations. However, non-governmental organisations (NGOs) which support conservation and optimum utilisation of the fishery resources in the Convention Area, may participate as an observer in the plenary meetings of the Commission. The only condition is a 100-day notification. Fishermen's organisations regularly attend annual and extraordinary meetings as observers. This does not however give them any voting right. Neither does it give them the right to attend NEAFC working groups.

Fishermen may of course informally lobby the delegation of their Member State or the EU delegation.

Assessment of NEAFC

Authors such as Holden state that NEAFC has been ineffective in its management of fisheries. The NEAFC Convention doesn't give the possibility to overrule a signatory, since all important decisions are to be taken by a 2/3 majority; even these decisions can be meaningless since the objection procedure makes it possible for signatories not to implement NEAFC decisions. Moreover, control and enforcement are left to the States. Finally, the participation of fishermen's organisations in NEAFC is not formally guaranteed.

EU-Norway negotiations

Every year negotiations are held between Norway and the European Union concerning the management of common stocks. This is highly relevant for the pelagic fishery as most stocks are shared between the EU and Norway. Total allowable catches are agreed. Where necessary, agreements made within NEAFC can be finalised and detailed during EU-Norway negotiations. These negotiations are held by officials and do not involve fishermen. However, over the years the fishermen have formalised their lobbying efforts which now take place through the Northern Pelagic Working Group (NPWG), which will

be discussed in more detail below. The NPWG is not allowed to participate in the negotiations, but it does try and meet with negotiators before and after the meetings.

Northern Pelagic Working Group (NPWG)

This group has been set up by the pelagic branches of fishermen's organisations of several Member States involved in the northern pelagic fishery. These are United Kingdom, Netherlands, Denmark, Ireland, and Germany. This group tries to agree a single position on behalf of all the pelagic organisations involved, on Total Allowable Catches and other management measures. The group lobbies the European Commission, the European Council of Ministers and NEAFC. It specifically focuses on the EU-Norway negotiations. The group is not allowed to attend the meeting, but it lobbies the negotiators.

European Commission and European Council of ministers

European conservation policies are aimed at regulating the quantities of fish caught, through a system of Total Allowable Catches (TACs) based on scientific advice. They are complemented by technical conservation measures and seasonal closures. The European Council of Fisheries Ministers sets the yearly TACs. The decisions are implemented by the European Commission which allocates the TACs as quotas to Member States in accordance with fixed keys based on historic fishing rights. The EU Commission Directorate for Fisheries (DG FISH) also implements the decisions taken during NEAFC negotiations and during EU-Norway negotiations. The final TACs for pelagic species allocated to the UK by the Commission take into account the decisions taken in these three different fora. In practice, a handful of EU officials from DG FISH are involved in all the aspects of the management of pelagic stock.

Management within the United Kingdom

From fishing vessel track record to fixed quota allocation
The UK pelagic quota has to be allocated to the UK vessels. At first, the distribution of quotas was based on the *track record* of the vessel, calculated as a rolling average of the landings of the previous three years. Since 1998, instead of using a rolling average, the entitlement of a vessel is calculated on a fixed reference period, namely the landings during the period 1994 to 1996. The resulting share in the national quotas is called a *Fixed Quota Allocation* (FQA). FQA are set for specific stocks, such as West Coast mackerel.

Producers Organisations and Pelagic quotas
Nearly all FQAs and their resulting quotas are grouped within Producers' Organisations which monitor their uptake. There are 20 PO's in total in the UK. There is however a strong concentration of pelagic quota in the hands of four POs. This concentration is correlated to the fact that there are only 44 pelagic vessels in the UK and only three main pelagic ports. For example, three POs manage 89% of the West Coast Blue Whiting stock. All these PO's are located in Scotland.

Pelagic quota is allocated for the exclusive use by a vessel as if they were individually transferable quotas (*ITQs)*. A concentration of pelagic quotas has occurred at the same time as large capital investments in vessels and modernisation of the pelagic fleet.

4.1.4 Conclusion: Assessment of the management of the UK pelagic fishery

Assessment of the Pelagic Stock

One could assess the success of a management regime by assessing the state of the stocks concerned. Overall, pelagic species are rather in better condition than demersal species. For example, it seems likely that the 2003 Herring quotas will be significantly increased.

One can of course not state with certainty that the health of the pelagic stock is due to the management regime. Several factors may have contributed to the thriving stock. The different behaviour of pelagic fish may play a role. We might nevertheless state that the management regime in place has not caused obvious deterioration of the pelagic stock. A factor not discussed in this article, but which might be relevant to the successful management, could be the fact that the UK pelagic sector has had a real system of individually transferable quotas (ITQ) for several years. We would however go as far as to state that another reason might be the high level of participation in pelagic decision-making by the fishermen.

Assessment of the participation in the UK pelagic fishery

When looking at the graphic representation of pelagic stock management, one is struck by how complicated it all seems to be and how many institutions are involved.

Nevertheless, pelagic fishermen seem to be rather more satisfied with the management regime than their demersal colleagues. Pelagic fishermen also seem to find that the level of participation - although not sufficient yet - is actually not too bad.

How have the fishermen achieved efficient participation?

1. *direct representation*: the pelagic fishery has very few participants. This means that fishermen are very close to their own organisations. As described before, only four Producer Organisations group the whole pelagic fleet of 44 boats. On average, each PO represents only 11 boats;
2. *well-organised fishermen*: the pelagic fleet has sufficient resources to be able to fund their lobbying efforts via well-managed organisations and permanent structures with capable, paid staff and representatives;
3. *small number of officials:* although pelagic management appears very complex, there are in fact very few people involved. The same officials man the various organisations;
4. *very regular meetings between key players:* informal meetings between the small group of fishermen's representatives and of officials take place very frequently, up to twice a month that a good working relationship can grow between the key players;
5. *very informal participatory structures:* fishermen do not formally participate in most of the organisations where decisions are taken. They lobby rather than participate. It is unclear whether this has a positive or a negative effect;

6. *formal participation in ICES process:* fishermen are very satisfaction about the efforts done by ICES to involve them;
7. *fishermen united internationally:* contrary to other sectors, pelagic fishermen have managed to create cross-border unity. It is undeniable that this will strengthen their position during negotiations;
8. *management by consensus in NEAFC:* maybe the fact that decisions within NEAFC require de facto consensus, ensures a more successful management.

There are however a number of important proviso's.

1. *no reason for conflict*: as the pelagic stock are in good condition, no extremely stringent measures are needed and the likelihood of a conflict between the managers and the fishermen is greatly reduced;
2. *participation not guaranteed*: because the participation evolved via very informal structures, the fishermen do not actually formally participate in the decisions. Although unlikely, it would be possible for managers to suddenly deny the fishermen's input;
3. *no appeals procedure*: again because the participation takes more the form of lobbying than actual participation, fishermen have no appeal procedure in case they are dissatisfied with the decision-making process;
4. *Dependence on individual skills of key players*: because the participation structures are so informal, much depends on the individual lobbying and networking skills of the fishermen's representatives;
5. *Single-species, targeted fishery:* because of the behaviour of pelagic fish which swim in single species shoals, vessels manage quite easily to catch a single species, without much by-catch.

4.2 Devolution to the Shetland shellfish management organisation

4.2.1 Justification

Within Scotland legal rights to manage fisheries for specific shellfish species within defined areas can be granted by the Scottish government to local organisations by Regulated Fishery Orders - commonly know as 'Regulating Orders'. Although a number of communities in Scotland have shown interest in the potential of such Orders to improve the management of shellfish fisheries only one has been granted to date - covering the waters around the Shetland Islands.

4.2.2 Brief description of the Shetland context

Shetland is a group of about 100 islands (15 inhabited) lying some 160 km north of the U.K. mainland and about 400 km west of Norway with a population of some 22,500 people. Administratively Shetland forms an island region (equivalent to a county) with its own local authority, the Shetland Islands Council, within Scotland, itself part of the United Kingdom. Shetland (with the rest of Scotland) was ruled by the U.K. Parliament in London

until 1999 when many (but not all) legislative powers were transferred to the news Scottish Parliament in Edinburgh.

Shetland lies at the heart of important northern European fishing grounds and fish catching has a long tradition in the islands. Today Shetland has a modern and diverse fishing industry which forms an important component of the islands' economy. The local fishing fleet includes some 250 fishing vessels, ranging from shellfish fishing vessels of less than five metres in length to pelagic trawlers of over 50 m, and landings are worth more than £20 million per annum (Table 1.2).

Although shellfish have been harvested in Shetland on a subsistence basis (and for bait) for thousands of years it is only within the last 50 years that significant commercial fisheries for shellfish species have developed. The development of these fisheries (primarily during the 1960s) provided new opportunities for, and helped raise the average real income of, existing local fishermen and also provided additional income for a large number of islanders on a part-time basis.

Today shellfish fishing remains an important sector of Shetland's fishing industry. Although its contribution to the industry in terms of weight or value appears small (Table 1.2), shellfish species have a relatively high value and shellfish fishing vessels account for a high proportion of the local fishing fleet. The shellfish fishery is dominated by small boats and by part-time fishermen, and is scattered throughout the islands, wherever a pier of harbour suitable for a small boat exists.

Since its inception shellfish fishing in Shetland has tended to be viewed by many as a 'standby' occupation that can be pursued when returns from other fisheries are poor or in the absence of other employment. The last few decades have, however, seen a fundamental change in the status of Shetland's shellfish fisheries. When they were new and stocks were relatively unexploited their capacity to absorb new entrants and increased effort was large. Since then a relatively large new permanent shellfish fishing fleet has grown up and stocks of the main shellfish species have probably been exploited to, if not beyond, their maximum sustainable levels. Given this, the capacity of Shetland's shellfish fisheries to absorb new entrants or increased effort must now be all but exhausted.

4.2.3 Legal Context

Regulation of Shellfish Fisheries

Within the United Kingdom shellfish fisheries have been largely unregulated, especially when compared to the demersal and pelagic sectors. In particular there are no limits on fishing effort. There are, however, minimum landings sizes for some shellfish species. Unlike most fisheries, shellfish fisheries are not managed under the Common Fisheries Policy. The only shellfish fishery that is fully managed under the CFP is that for nephrops. However, Council Regulation (EC) 850/98 laid down minimum landing sizes for certain shellfish species as a means of conserving the fishery resources concerned through the protection of juveniles. The species covered by this regulation which are fished around Shetland are whelks, edible crabs, and lobster. In addition UK legislation imposes a minimum landing size for velvet crabs and prohibits the landing of V-notched lobsters.

Shellfish fisheries have been subject to only minimal regulation. Over the last decade, however, the national authorities have carried out a series of consultations on proposals for tighter national regulation of shellfish fisheries. The most recent proposals include the introduction of a national licensing scheme for crustacean fisheries and limits on the number of traps that can be used in such fisheries. Proposals for a licensing scheme for scallop fisheries are also under development.

Table 1.2 Weight and value of shellfish (and fish) landings into Shetland by UK vessels in 2000

	Tonnes	Value (£)
Edible Crabs	431	314,000
Lobsters	10	100,000
Nephrops	103	307,000
Queen Scallops	50	32,000
King Scallops	327	412,000
Velvet Crabs	55	78,000
Whelks	427	102,000
Other Shellfish	168	514,000
Total Shellfish	1,571	1,859,000
Demersal Fish	19,956	12,185,000
Pelagic Fish	40,178	6,818,000
Total	61,705	20,862,000

Source: Scottish Sea Fisheries Statistics, 2001, SEERAD.

Regulating Orders in UK Legislation

Regulating Orders are granted under the terms of the UK's Sea Fisheries (Shellfish) Act 1967. Under the terms of this Act such orders were intended to provide for the establishment or improvement, and for the maintenance and regulation, of fisheries for oysters and mussels. An amendment in 1968 extended Orders to cockles and clams, and gave the government the power to include other mollusc species. Regulating Orders could be granted to a person or body (the grantee) and would cover fisheries for specific shellfish species within a defined area of tidal waters within six miles of the coast.

A regulating order grants the right to regulate a fishery, but does not (in general) specify the regulations that the grantee intends to implement. In theory an order provides the grantee with considerable scope to introduce a wide variety of regulations including fishing gear restrictions, minimum landing sizes, quotas, closed seasons, closed areas, etc. In practice all such regulations, as well as licence fees, are subject to the approval of the government.

There are also other limitations of the rights granted by a regulating order. For example, while a grantee may introduce a licensing scheme for a fishery, they are normally required to issue a licence to anyone that applies. The Minister reserves the right to direct the grantee on the implementation of restrictive licensing arrangements. In addition, it is a requirement that licence fees and other regulations are applied equally.

Since the Scottish Devolution of 1999, the power to grant regulating orders in Scotland lies with the First Minister of Scotland, subject to approval of the order by the Scottish Parliament. Although the legislation under which regulating orders could be granted came into force in 1967, no Regulating Orders were granted in Scotland, primarily due to the lack of significant fisheries in Scotland for the main species to which regulating orders could be applied. A small number were granted in England.

In 1996 the regulating order system was modified. Most significantly, regulating orders could be applied to fisheries for crustaceans (specifically lobsters). This was motivated by interest in the potential of enhancing lobster stocks through the release of juvenile lobsters into the sea and the desire to control the enhanced fisheries. The act was later extended to other crustacean species in response to the application for a regulating order by the Shetland Shellfish Management Organisation.

4.2.4 The Shetland shellfish management organisation

Background to the Shetland Regulating Order

As has been noted, Shetland's shellfish fisheries experienced a period of sustained growth during the 1980s and 1990s with increased levels of fishing effort and substantial increases in landings. This prompted concerns within the local fishing industry about the long-term sustainability of these fisheries. In the light of these concerns, and in the absence of any significant national regulation of shellfish fisheries, the Shetland Fishermen's Association decided that the powers to establish a local management system could only be obtained through the granting of a regulating order.

Constitution of the Shetland Shellfish Management Organisation

Recognising that the sustainable management of local shellfish fisheries was an issue of interest not just to fishermen but also to the broader local community, the Shetland Fishermen’s Association (SFA) brought together a variety of interested local parties to develop plans for a local regulating order. This grouping developed into the Shetland Shellfish Management Organisation (SSMO), a company limited by guarantee. As formally constituted the SSMO joins six local organisations which between them nominate a total of ten representatives who act as directors of the company. The main activity of the SSMO was to apply for and implement a regulating order for Shetland.

The organisations that make up the SSMO are as follows:

- Shetland Fishermen's Association (4 directors)
  The Shetland Fishermen's Association (SFA) is the representative body of Shetland's commercial fishermen. It acts as a pressure group, representing the views of its members on fisheries matters to Government bodies at all levels, including the European Commission, UK and Scottish governments and the Shetland Islands Council. The SFA nominates 4 directors to the SSMO from its Small Boat Sub-Committee, all of them shellfish fishermen;

- Shetland Islands Council (2 directors)
  The Shetland Islands Council (SIC) is the islands local government. The SIC nominates two directors, both sitting councillors;
- Shetland Fish Processors' Association (1 director)
  The Shetland Fish Processors' Association (SFPA) is the representative body of Shetland's fish processing companies. Its primary function is the cooperative marketing and promotion of Shetland Seafood. The SFPA nominates one director; currently the manager of a shellfish processing factory.
- Scottish Natural Heritage (1 director)
  Scottish Natural Heritage (SNH) is the government agency with responsibility (in Scotland) for natural heritage. SNH has various statutory functions. It provides advise to government Ministers, local authorities and the public on matters that affect the natural heritage including planning issues and the establishment of terrestrial and marine conservation areas. SNH nominates one director; currently the manager of their Orkney and Shetland area offices;
- North Atlantic Fisheries College (1 director)
  The North Atlantic Fisheries College (NAFC) is an independent college that was established by the Shetland Islands Council in 1992 to support Shetland's fisheries industries. The College provides both vocational and academic training in relevant subjects and carries out programmes of research and development in relevant fields. The NAFC nominates one director from its academic staff;
- Shetland Association of Community Councils (1 director)
  Community Councils form part of the system of local government within Scotland, representing the interests of local parishes. The Association of Shetland Community Council's (ASCC) is an umbrella organisation formed of representatives from each of the 18 community councils in Shetland. The ASCC nominates one director;
- non-voting attendees: SFA
  In addition to the directors, meetings of the SSMO are normally also attended by a number of observers. They have no voting rights at meetings of the SSMO, but are allowed to contribute fully to meetings. An executive officer of the Shetland Fishermen's Association normally attends in such a capacity, ostensibly to represent the interests of the SFA; other members of the SFA's Small-Boat Sub-Committee may attend as observers on occasions when one of their nominated directors is unable to attend;
- non-voting attendees: SIC
  The other regular observer is an official of the Shetland Islands Council's Economic Development Department. This official was closely involved in establishing the SSMO and the Regulating Order but as an SIC official is prohibited from acting as a company director.
- other non-voting attendees
  A fisheries scientist from the North Atlantic Fisheries College often attends to provide expert advice. In addition to the partner organisations an observer from the Shetland office of the Scottish Fisheries Protection Agency (SFPA) has been invited to attend meetings since July 2002 as a means of improving liaison and communications between the SSMO and SFPA.

Representation of shellfish Fishermen within SSMO

Fishermen are directly represented on the board of SSMO by the directors nominated by the Shetland Fishermen's Association. However, the SFA only represents the interests of its members. Less than half of the shellfish fishermen licensed by the SSMO are members of the SFA. Moreover, shellfish fishermen who are also members of the SFA are the full-time, professional shellfish fishermen. As a result, at least half of the shellfish fishermen licensed by the SSMO have no direct representation on the board of directors. This situation has arisen because when the SSMO was being formed the SFA was the only fishermen's representative body. Fishermen who were not members of the SFA were not organised into any other body that might have been invited to become a partner in the SSMO. At the time it was argued that the interests of fishermen who were not members of the SFA could be represented through the Shetland Islands Council or the Association of Shetland Community Councils.

With the establishment of a local shellfish-licensing scheme, there might be a case for allowing direct representation of licensed fishermen on the board of the SSMO, rather than via the SFA. There has as yet been no pressure from the non-SFA fishermen for such a change.

Decision-Making Within the SSMO

Since late 1999 the SSMO has employed a full-time executive officer, responsible for the day-to-day running of the SSMO.

Decisions on the operation of the SSMO and on the implementation of the regulating order are made by the directors who meet every one to two months. Attendance at meetings by directors is variable, and usually ranges from four or five directors up to eight or nine; full attendance is very rare. The quorum is five directors. The chairman is elected annually by the directors.

Issues to be considered by the directors come from a variety of sources. Routine issues, such as applications for licences, are raised by the Executive Officer, while some issues will be raised by the Chairman. Proposals for new regulations usually come from fishermen and may be raised by the fisherman-directors, by the SFA's observer, or sometimes more formally in writing from the SFA's Small-Boat Sub-Committee. On occasion, the chairman may take executive decisions on minor issues, sometimes in consultation with one or more other directors.

Ideally, the SSMO would wish its decision making process to be informed by scientific advise on the status of shellfish stocks and on the likely effects of proposed regulations. The SSMO has instituted a logbook scheme to collect data from shellfish fishermen and the North Atlantic Fisheries College is committed to providing scientific support to the SSMO. However, although the NAFC has instituted a programme of research and data collection on local shellfish stocks, this has not yet progressed to the stage of formal stock assessments or scientific advice to the SSMO. In the absence of such advise the SSMO's decisions are essentially precautionary, with regulations based on concerns raised by fishermen. This may be positive as it shows that SSMO is providing a means to address fishermen's concerns, and as the regulations are those which the

fishermen's representatives want, rather than those which some scientist or civil servant thinks should be implemented.

The directors of the SSMO come from a wide variety of backgrounds, from professional fishermen to elected councillors, and their experience of a formal, collective decision making process varies significantly. There is a tendency for the fisherman-directors to view meetings of the Organisation simply as a forum to debate issues of concern, rather than as an occasion when formal decisions have to be taken. This is especially apparent in the desire of the Shetland Fishermen's Association to have an observer attend meetings in addition to their directors, and for further observers to stand in for directors who cannot attend meetings. Such observers can contribute to debates but not to the formal decision making process. In general the fisherman-directors appear to be much happier talking about issues than actually making decisions, and it can be difficult to get meetings to move from general debate to formal decisions. Indeed friction can arise when debates are cut short, or if decisions go against their wishes.

Although the directors are often able to reach decisions by consensus - and this is preferred where possible - it is sometimes necessary, where there are differences of opinion, to invoke a formal decision making process such as the proposal of a motion, second, counter-motion, second, vote, et cetera. Fishermen-directors are clearly uncomfortable - perhaps unfamiliar - with a formal decision making process, while others politicians-directors clearly expect a formal process, and may become unhappy if this not the case.

Associated with the difficulty of reaching formal decisions, it has proven difficult for the SSMO to establish and adhere to consistent policies, as fishermen in particular tend to prefer to treat each case on its individual merits. For example, one of the most difficult issues that the SSMO has faced is whether or not to issue additional licences to allow new entrants to enter the shellfish fisheries. It has proved difficult to get some of the Organisation's directors to separate the issue of *whether* new licences should be issued from the issue of *who* should receive any new licences. So their views tend to be strongly influenced by the identity of the applicant. This is a particular problem in a small community where everybody tends to know everybody else. It is also noticeable that the fisherman-directors' decisions on new entrants often appear to be influenced by their knowledge of where the particular applicants are proposing to fish. If the applicant’s area of operation will overlap the director's, opposition is likely. At first sight this appears to be simple self-interest on the part of the fisherman, but in some cases at least their reasoning may be more complex. The justification often given for refusal in such cases is that the area in question is already subject to a high level of fishing effort.

Thus a fisherman-director appears to base his decisions on his knowledge of the area concerned and on what appear to be genuine convictions about the ability of the shellfish stocks in the area to withstand additional fishing effort. If the applicant is likely to be fishing in an area with which a fisherman-director is not familiar, he perhaps does not feel in a position to object because he lacks sufficient knowledge of the area concerned.

Overall, it is interesting that while all of the Directors are nominated by various organisations, once they are on the board of the SSMO they tend to make personal decisions on issues rather than seeking the views of the organisations they represent. In some cases the directors are effectively granted the power to make such decisions on

behalf of the bodies they represent. In the case of the fishermen, however, it is apparent that they often tend to take decisions on the basis of how their own interests might be affected, rather than in the interests of the broader community of fishermen, who they ostensibly represent.

History of the Shetland Regulating Order

The SSMO first formally expressed an interest in obtaining a regulating order in 1995. The organisations detailed plans and proposals were developed over the subsequent two years in consultation with civil servants. This process was considerably hindered by the fact that a regulating order had never previously been applied for in Scotland. As a result little detailed guidance was available to the SSMO on how its application should be prepared and no detailed policies or procedures were in place.

The process was extremely slow. Whenever the SSMO made a proposal, the Department had to consider what its position it would be after advice from its legal department. By 1998 the SSMO had a well-developed proposal for a regulating order. The order, officially called 'the Shetland Islands Regulated Fishery (Scotland) Order 1999 -SSI 1999/194', was finally laid before the Scottish Parliament in January 2000 and came into force that month. It is the first and to date only regulating order in Scotland.

As has been noted earlier, regulating orders do not specify the detailed management regulations; these are subject to separate government approval. The initial body of regulations which the SSMO wished to implement was soon approved. Details of the regulations implemented under the Order are given below.

4.2.5 The Government View

A Government press release of 5 January 2000 hailed the Shetland regulating order as an example of 'the determination of the Scottish Executive to work with local people in fisheries management', claiming that the order 'puts management of a shellfish fishery into the hands of local interests'. The Scottish Fisheries Minister stated that the order 'puts management of the shellfishery in the hands of the local community… [who] are best placed to take up that responsibility' and reiterated that the Executive was 'determined to involve local communities in fisheries management as much as possible'. The press concluded by claiming that the granting of the order 'illustrates Devolution in action and [was] very much in the spirit of the new Scottish Parliament'.

4.2.6 Decisions taken by the SSMO

The Shetland regulating order grants the Shellfish Management Organisation legal powers to manage the fisheries for all commercially exploited shellfish species (except nephrops) between the low water mark and the six-mile limit around Shetland; an area of about 60,000 km^2. Since the Regulating Order was granted, the Shetland Shellfish Management Organisation has implemented a series of regulations intended to improve the protection of local shellfish stocks.

Local Shellfish Licensing

The centrepiece of SSMO's body of regulations has been the establishment of a local licensing scheme for shellfish fishermen. Under this scheme persons may only fish commercially for shellfish within the area covered by the Order with a Shetland Shellfish Licence issued by the SSMO. Licences are annually renewable on payment of a licence fee set at £100, but a significant increase is being considered by the SSMO. From an early stage the SSMO was keen to avoid any trade in Shetland Shellfish Licences, and especially the escalation in licence values that has been seen in the demersal and pelagic sectors of the fishing industry. The Shetland Shellfish Licence is non-transferable and has no inherent value.

The SSMO was initially required to grant a licence to all applicants with a track record of fishing for shellfish around Shetland, but thereafter the issue of new licences was at the discretion of the SSMO. It was intended that the licensing scheme would allow the Organisation to control future expansion in the level of fishing effort by controlling access by new entrants to the shellfish fisheries. It was also intended to limit access by large vessels from outside Shetland.

Just over 160 licences were granted by the SSMO in 2000, the first year that the Regulating Order's was in force, but this fell to about 130 in 2001 and 2002. Most of the fall between 2000 and 2001 is believed to have resulted from the non-renewal of licences by non-active fishermen who had initially applied for a licence but who did not subsequently feel that it was worth their renewing it because they were not fishing, or not enough to justify the £100 fee.

Other Regulations

In addition to the local licensing scheme the SSMO has also introduced a variety of other regulations, which are summarised below. As was mentioned above, in the absence of stock assessments and scientific advice on the status of shellfish stocks, the SSMO's regulations to date have been based on fishermen's concerns.

Regulations Approved in March 2000

- no vessel may be used to fish for shellfish if it exceeds 17 metres in overall length, unless it is used solely to dredge for scallops;
- no vessel used to dredge for scallops may use more than two tow-bars each with a maximum length of 5.85 metres, or more than 14 dredges;
- the use of any form of hydraulic or suction dredge, or any similar type of fishing gear, is prohibited;
- the use of French dredges is prohibited;
- the buoys attached to static fishing gear must be clearly marked with the vessels name and registration number;
- the minimum landing size for whelks is 75 mm overall length (confer EU 45 mm).

Regulations Approved July 2001

- fishing for velvet crabs (*Necora puber*) is prohibited from 1 May to 31 August each year;
- the minimum landings size for velvet crabs is 70 mm carapace width (confer UK 65 mm);
- the minimum landings size for lobsters is 90 mm carapace length (confer EU 85 mm; 87 mm from 1st January 2002).

Regulations being processed

- no vessel used to dredge for scallops may use more than two tow-bars with a combined maximum length, or a single tow-bar with maximum length, of more than 8.80 metres, or more than 10 dredges (amendment to existing regulation);
- no vessel may fish for scallops before 0600 h or after 2100 h.

Other Activities

As well as issuing regulations, the SSMO looks at other measures that might be taken to improve local shellfish fisheries. To date these have focussed on lobsters, as the highest value local shellfish species, and one whose stocks were severely depleted in the past. The Organisation initially looked at the possibility of stock enhancement through the release of juvenile lobsters but the impossibility of obtaining sufficient numbers, the cost of those that were available, the logistical difficulties of releasing the lobsters, and uncertainties of their survival, led to this idea being shelved.

The SSMO switched its attention instead to V-notching of lobsters. This involves cutting a V-shaped notch into the tail of a lobster which is then released back into the sea. Under existing national regulations it is illegal to land a V-notched lobster, i.e. if a fisherman catches a lobster that has been notched, he has to release it. Usually egg-bearing female lobsters are notched, thus protecting the brood stock.

The SSMO received a grant from the Shetland Islands Council in 2001 to carry out a V-notching programme. This involved fishermen bringing in female lobsters which were notched by an SSMO representative. The fishermen were paid the value of the notched lobsters which they then returned to the sea. The programme proved very successful with a high level of interest, enthusiasm and participation from fishermen. Indeed the demand outstripped the availability of funds. Many fishermen continue to show a high level of interest in the fate of 'their' notched lobsters, providing information on where and when they are caught again.

In terms of involving fishermen, the lobster V-notching programme has been the most successful thing the SSMO has done, probably because of its tangible results, i.e. the fishermen can see that the notched lobsters are surviving and being caught again and again. The SSMO is keen to continue this programme but its future is tied up with the wider problem of funding, which is discussed below.

The SSMO has also considered the possibility of enhancing local scallop stocks using hatchery-reared spat, which are available in large numbers but as yet no decisions on this have been taken.

4.2.7 Evaluation of the SSMO

Successes of the Shetland shellfish management organisation

In general terms the SSMO can probably reasonably be considered as a success. Even obtaining the Order was an achievement.

Perhaps the most significant success of the SSMO is the high level of compliance with the primary management measure - the local shellfish-licensing scheme. Virtually all of the legitimate local shellfish fishermen (i.e. those with registered fishing vessels and national fishing licences), including a number from outside Shetland who fish regularly around Shetland, have signed up to the licensing scheme. Even the most recalcitrant and determined opponents of the Order have generally fallen into line.

Ensuring the sustainability of Shetland's shellfish fisheries, and potentially enhancing catches, are obviously long-term objectives and it will be some time before the success of the SSMO in these terms can be judged.

Problems of the Shetland shellfish management organisation

Although the SSMO can justifiably be regarded as a success, it has not been without its problems.

Time Delays

A significant cause of frustration for the Shetland Shellfish Management Organisation is the requirement to obtain government approval for any change to the organisation's regulations. If the Organisation seeks to amend or add a regulation then it is usually because it feels that the change is needed now, not in three or four months time. If a serious situation were to arise that required immediate action, the length of time to get changes to the regulations approved would compromise the success of the measures.

Delays in the approval of new or amended regulations also undermine the SSMO's credibility. Where fishermen, for example, have requested a change in regulations, then delays in implementing that change may be seen as the fault of the SSMO rather than the Scottish Executive. This was particularly apparent during the development of the Regulating Order when there was significant criticism from some fishermen over the length of time this process took with the blame largely being placed on the SSMO.

Financial Support

Managing a fishery involves the expenditure of money to fund the administration of the management system, to pay for the scientific work necessary to assess the status of the stocks being managed, and to pay for the policing and enforcement of fisheries regulations. In most UK fisheries, these costs are borne by the government and funded out of the nation's general taxation. In Scotland government funding for the FRS Marine Laboratory (responsible for fisheries research, stock assessment, et cetera) and for the Scottish Fisheries Protection Agency (responsible for enforcement) amounts to approximately 5% of the value of fish landed (~£200 million per annum) each.

With Regulating Orders, however, the grantee is responsible for paying all of the costs with no financial assistance from central government. The rate used nationally would suggest a cost for the SSMO of between £150,000 and £200,000 given the current value of the local shellfish fishery. The SSMO's budget to date has been nowhere near such levels, and has been derived partly from licence fees, with most of the balance coming from grants from the Shetland Islands Council and other local agencies.

No secure long-term funding strategy has yet been put in place for the organisation, but it seems unlikely that sufficient funding can be derived directly from the fishing industry (through licence fees, et cetera). A budget of £150,000 would require a licence fee in excess of £1,000 which most fishermen would probably find un acceptable. Indeed there would be a diminishing return as higher licence fees would result in fewer licences being issued; so the licence fee would have to be increased further to compensate, and so on. Indeed it might be argued that it is unreasonable to expect that the local shellfish fishermen should be expected to pay for the management of their fishery since no other fishermen in the UK are asked to do so.

Nevertheless, without significant, secure, long-term funding the SSMO will find it difficult to carry out the work required to effectively manage and enhance local shellfish fisheries.

Enforcement

The problems of enforcing the SSMO's regulations are similar to the funding problems. On a national basis enforcement of fisheries regulations is the responsibility of government-funded enforcement agencies, such as the Scottish Fisheries Protection Agency (the SFPA). Yet the SFPA will not play any role in enforcing the Shetland Regulating Order. Responsibility for enforcement lies with the SSMO, but as discussed above the Organisation requires funding to do this effectively. If this money were to come from the fishermen (through licence fees, et cetera) it would place the shellfish fishermen of Shetland in the unique situation that they are expected to pay for their own policing. Again the SSMO feels that there is a strong case for government agencies to play at least a role in enforcing Regulating Orders, or for a public contribution to Regulating Order grantees.

An additional problem with enforcement is that the legal powers granted to the SSMO under the regulating order are weak in comparison with the powers held by the SFPA. For example, an officer of the SSMO has no explicit legal right to board a vessel or to search that vessel, examine its catch, et cetera. Nor does the SSMO have any explicit right to detain a vessel or to inspect catches after they have been landed.

The difficulties of enforcement threaten the credibility of the Order as although most fishermen abide by the rules, they strongly resent the SSMO's apparent inability to take effective action against those who break the rules.

Non-Compliance

Despite the fact that virtually all legitimate local shellfish fishermen now comply with the principal management measures introduced, the SSMO is aware that a number (possibly as high as 20 to 30) of local people fish for shellfish on a commercial basis without a national fishing licence and without a registered fishing vessel, as well as without a Shetland Shellfish Licence. Most of these are fishing with creels for species such as crabs and

lobsters which are generally sold for cash; some shellfish buyers appear not to ask too many questions.

Such fishermen are of course in breach of national fisheries regulations, the enforcement of which is the responsibility of the Scottish Fisheries Protection Agency. Collecting sufficient evidence to prosecute such fishermen is a difficulty. However, the fact that such fishermen are allowed to continue with their illegal activities, and the fact the SSMO apparently does nothing about it, causes resentment amongst legitimate fishermen.

The other major non-compliance issue is occasional visitations by large fishing vessels from outside Shetland. There have been at least two high-profile occasions when large vessels from outside Shetland fished with creels for crabs within the regulating order area without a Shetland Shellfish Licence.

The problems of enforcement meant that it was not possible in either case for the SSMO to take any direct legal action against the vessels concerned, which again caused resentment amongst local fishermen. However, it is worth noting that in the first case, which occurred not long after the order came into force, the vessel withdrew after the SSMO notified its owners of the existence of the order. In the second case also, which occurred early in 2002, once the skippers and owners of the two vessels concerned were made aware of the order, those vessels withdrew.

Fair Isle

Fair Isle is the most southerly of the Shetland Islands, lying approximately halfway between Shetland the neighbouring Orkney Islands. Fair Isle has a very small indigenous lobster fishery, carried out with small, open boats. Most of the commercial shellfish fishing around Fair Isle is carried out by an Orcadian fisherman who has fished there for many years. In view of his track record the SSMO had no alternative but to grant this fisherman a Shetland Shellfish Licence which allowed him to continue fishing around Fair Isle. This caused considerable resentment amongst the Fair Isle community who felt that outsiders should be excluded to reserve the local fishery for the Fair Islanders. The Fair Isle community has ambitious plans for protected areas around Fair Isle for shellfish and fish. These are intended both to protect the marine environment, but also to allow the development of an indigenous fishing industry.

The problem facing the SSMO is that the Shetland order is intended to regulate shellfish fisheries around all of Shetland, and the Organisation does not feel that it should use its powers to create exclusive reserves for specific communities. Every community would want one.

4.2.8 Discussion

Regulating Orders have been promoted in Scotland by the government as putting the management of shellfish fisheries in the hands of local communities, and as an example of Devolution in action. Two and half years after the Shetland regulating order came into force, it is appropriate to ask whether the order has lived up to expectations. Has the Scottish government genuinely devolved power to a local organisation?

Devolution has been defined as a broad transfer of power, where the transferred powers do not appear to remain subject to control by the devolving institution (Karlsen et

al., *Sharing Responsibilities in Fisheries Management: Analytical and Methodological Issues).* As has been discussed above, however, the 'powers' 'devolved' in the case of regulating orders remain subject to very tight control by the devolving institution (the Scottish Executive). The grantee of an order has to grant licences to all applicants and is not able to implement varied licence fees (for example for different sized vessels). In addition, and perhaps more significantly, all regulations are subject to approval by the Minister. A further restraint is that it normally takes a significant length of time for approval to be granted.

Given this degree of continued control by the Scottish Executive, it has to questioned whether there has been any genuine transfer of power. The regulating order has not devolved power at all. What it has done effectively is to establish a mechanism for implementing regulations for the management of local shellfish fisheries, but without any real authority to make regulations independently. To all intents and purposes the SSMO has been granted *responsibility* but not *authority*.

The Scottish Executive effectively retains control of the fishery while the SSMO bears the responsibility of implementing and enforcing the regulations, collecting data, assessing the stocks, and dealing with discontented fishermen, all at no charge to the Scottish Executive. A cynic might suggest that the Scottish Executive has come up with a system which the Executive can control, but which costs nothing.

In terms of the definitions provided by (Karlsen et al., *Sharing Responsibilities in Fisheries Management: Analytical and Methodological Issues)* the SSMO appears to be a case of 'Delegation' rather than 'Devolution'.

5. Denmark

5.1 Devolution of responsibilities in Danish fisheries management

Who takes responsibility and for what? - New trends in the Herring and Protein fisheries in the North Sea and Skagerrak?

5.2 Introduction

In the wake of the Law of the Sea Convention a new management regime of the European fisheries have been introduced. The nation state has got extended rights and obligations in management of fish resources within their national economic zone. The sustainable management principle laid down in the convention has later been followed up in the Rio Declaration and the Convention on Biodiversity and the Precautionary Principle for management. Endangered species have been given protection. The single species and their place in the ecosystem have been given formal protection to extinction. An ecological approach to management has in principle been adopted as the very foundation for management. Sustainable management implies more than the long termed rationality of economic exploitation of a biological resource, it also brings in an ethical dimension in management. The resource has a value of its own, independent of economic exploitation.

While access to fish resources traditionally has been more or less open for people living at the coast, this situation has changed drastically during some few decades. Over-exploitation and increased competition, have led to quota regulations of most of the commercially exploited species and stricter practise of access to the fisheries. The allocation of rights to access and quotas has increased the tensions and conflicts within the industry as well as among nations sharing fish stocks. Besides, detailed regulations will to some degree imply externalities not foreseen. The impacts of regulations will not only comprise the fishermen. When regulations are working over time, they will also have impacts for fishery dependent communities and regions.

The individual actor will generally adapt to the fishing terms to maximise his interests within the given frame - or beyond. If regulations are regarded unjust or illegitimate, the motivation for abiding with the rules will be less than in regulatory situations with high legitimacy. This is a question of how regulations are perceived by the actors and whether those affected have been given the opportunity to influence on the outlining of the policy.

The outlining of regulative decisions and their implementation take place in a political context. Organised fishing interests become political actors when their vital interests are affected by state policy. The character of the contacts, influencing activities and their outcomes may differ among the affected groups, both within and among western

fishery nations. The informal and formal patterns of contact and co-operation may be organised in different ways and with variations in effects and degree of success.

The management of two very important Danish fisheries, the 'protein' fishery (for production of fish meal and fish oil) and the herring fishery (for human consumption) are at present under significant change, but for different reasons. In both cases the motivation for change should be considered 'increased responsibility' under the conservation and economic paradigm respectively.

The management of the protein fishery is under change because of growing international concern for the sustainability of the fisheries in the North Sea in general, concern for the marine and terrestrial bio-diversity dependent on the North Sea and up-coming suggestions on eco-system management as an alternative to the present resource management system by fish species. New stakeholders such as international environmentalist organisations have entered the scene and claim influence on the management decisions. The changes have over the last less than ten years materialised in new types of regulations for example TAC on all 'protein' species, closed areas, by-catch limitations and improved enforcement of regulations. It is envisaged that the management of the Danish protein fisheries will increasingly become politicised at particularly EU-level in the years to come and that Danish 'protein' fishermen will increasingly be alienated from the management debate and marginalised in decision making.

The management of the herring fishery is under change because of the introduction of ITQs. This marks a significant management change at the national level and follows upon a heated debate on access to fish resources primarily among fishermen and other professionals in the fisheries sector. The rationale behind this change is a political wish to see structural changes in the herring fishing fleet come through and secure optimal use of the fish resources. If successful, ITQs may be introduced in other Danish fisheries to facilitate structural changes and better resource utilisation.

5.3 Fisheries Management in Denmark

5.3.1 The European context

Being member of the European Union (EU) Denmark is subject to the EU Common Fisheries Policy (CFP). All-important decisions concerning fisheries management in EU waters became an EU matters in January 1983 when the CFP was adopted. All national policy-making and management actions have to fit within this policy framework.

In brief the CFP determines:

- the size of the TACs and their allocation among member states;
- the fleet capacity of the member states;
- the minimum withdrawal price scheme.

The conservation and management of fish resources in EU waters are primarily based upon catch limitation. The instruments used are fixed total allowable catches (TACs) for the most important species and technical conservation measures. The TACs are divided

into national quotas and Member States are being allocated the same percentages of the TACs every year (*the relative stability*).

User/stakeholder involvement in decision-making in relation to EU policies takes place through the Advisory Committee for Fisheries and Aquaculture, a committee which is established by the Commission as a part of its internal work on drafting proposals. The committee is composed of twenty members, representing the fishing industry, aquaculture, processing, trade unions, consumers, environmentalists and development organisations. The Advisory Committee contains four working groups dealing with 1) resources and management, 2) aquaculture, 3) markets and 4) horizontal questions for example CFP after year 2002 or R&D programmes.

5.3.2 The national management system

Within the framework of the CFP the Danish Government determines its national fisheries policy. The Fishery Law states that the Danish Ministry of Food, Agriculture and Fisheries (MFAF) has the right to:

- define access to and exclusion from fisheries through the distribution of licenses;
- set-up operational rules and management tasks (in accordance with EU rules);
- transfer/sale rights (for example quota substitution with other countries).

Denmark has a very well developed consultative process in relation to policy formulation, where organisations within the fishing industry and others participate formally in various committees and boards. The organisational percentage in the Danish fishing industry is close to 100%.

Stakeholder organisations presently admitted to the consultative fora are: Danish Fishermen's Association, Danish Fishermen's Producer Organisation, Skagen Fishermen's Producer Organisation, Denmark's Pelagic Producer Organisation, General Workers Union in Denmark, The Association of Danish Fish Processing Industries and Exporters, The Association of Fish Meal and Fish Oil Manufacturers in Denmark, The Consumers' Council in Denmark, The Danish Society for the Conservation of Nature.

Fishermen's associations and labour unions have existed in Denmark for more than a century. The labour unions became actively involved in the fisheries sector in the early 1970s. The PO system was introduced in Denmark in 1973, when the country joined the EC.

Management objectives

In the Fishery Act (Act Number 281 of 12 May 1999) it is stipulated that the regulation shall attach importance to:

'Rationale conservation and reproduction of living resources, including seasonally optimal exploitation of resources, consideration given to the relationship between available resources and the fishing capacity, as well as economic and employment issues within the fishing industry, the processing industry and other related activities, both generally and by geographical regions which may be affected.'

The Act has a very broad mandate, and there is no clear objective for fisheries management as in many other countries. Danish fisheries management appears to be dominated by the conservation paradigm, as regulations do primarily cater for the fish resources. The social/community paradigm, which is concerned with distribution and equity, seems to have gained some impact on policy decisions in recent years as equitable distribution among fishers appear to be given priority within MFAF. Policies that support initiatives directly oriented towards the development needs of local fishing communities are rare.

Collective choice rights

MFAF can determine the fisheries regulation for the commercial exploitation of the Danish quotas as follows:

- divide the Danish quota over time and on fishing waters;
- completely or partly introduce a ban on fishing for specific species or specify the condition under which the fishing might be carried out, when the catches in a particular fishery has reached a certain level of the available quotas in this fishery;
- divide the available quotas to specific fleet segments, individual vessels or according to applied gear;
- divide the available quotas in accordance with the utilisation purposes including human consumption or fish meal;
- determine the maximum fishing time, the number of landings allowed and the maximum volume per landing; and
- set aside a particular proportion of the quotas to cover bi-catches.

Quota regulation

In 2002[1], the following general principles applied to the Danish quota regulation:

- the annual quotas for each fishing area are distributed as percentages over periods of time, most often as quarterly quotas, but with longer or shorter time periods;
- rationing, in the form of maximum catch-rations on a periodic basis (ranging from one or two weeks in some fisheries or two months in other fisheries) are aimed at improving fishermen's planning possibilities. The catch rations are typically differentiated according to the size of the vessel;
- in the herring and mackerel fisheries in the North Sea and Skagerrak, 85% of the Danish quotas is allocated as individual annual vessel quotas, and 15% is allocated as periodical catch rations for vessels not regulated by annual vessel quotas. The individual vessel quota is determined as a combination of the length of the vessel and the historical catch record of the vessel each counting for 50%, when the calculation is made. Furthermore, an individual vessel license is required for participating in the herring and mackerel fisheries;

[1] Ministry of Food, Agriculture and Fisheries Order No. 996 of 7 December 2001.

- in the Baltic cod fishery, fishermen have the option either to choose an annual catch ration or to be regulated by periodic catch rations, similar to those used in other Danish fisheries.

Decision-making process

Denmark has, like the other Scandinavian countries, developed a historical tradition of participation of interest groups at a high level, as well as in more detailed policy discussions concerning the determination of development objectives for specific sectors of the economy. The present Scandinavian model of the 'negotiation economy' (Pedersen 1989) can be traced back to the cooperative movement in the beginning of the last century and to the constitution of labour market institutions in the beginning of this century. Today, the political system is characterised by integration of interest groups in the institutions of policy making. In contrast the interest groups of many other EU member states are effectively sidelined during formal policy making as they only have lobbying roles.

The property rights regime in place determines the involvement of fishermen in the decision-making process, which influences the incentives for collective action and rule compliance. To associate decision-making arrangements in the Danish fisheries with Ostrom's 'bundle of rights' (Schlager and Ostrom, 1993) it is necessary to identify the *levels* at which decisions on fisheries management tasks are made and the *actors* who participate in the decision-making process.

The political system of fisheries management ought to be approached within this political culture. Even if the resource system is quite centralised and is state property according to Danish law, cooperative institutions are established in Danish fisheries management at a consultative level (Raakjær Nielsen, 1994).

Stakeholder participation

The institutional set-up within Danish fisheries policy consists of a political component: Parliament and the Committee for Agriculture and Fisheries (Parliamentary committee), and an administrative component, MFAF.

Decision-making in Danish fisheries management is centralised. However, cooperative institutions comprising sectoral organisations and interest groups influence quota allocation and, to a lesser degree, structural measures through representation in consultative fora. In Denmark the following two arenas are particularly important for stakeholder/user participation in the policy-making process: The EU Fishery Board and the Board for Commercial Fishing. MFAF in general follows advice from these two boards:

The EU Fishery Board advises the Minister on how Denmark shall respond in the EU Council of Ministers to proposals drafted by the Commission, and on how decisions already made by the EU can be implemented in Danish legislation. The board is composed of representatives from the Fishermen (both DF and PO's), the Fish Processors, the Trade Union, the Consumers' Council and the Danish Society for the Conservation of Nature.

Besides informing the Minister of Fisheries of their views the organisations of the fishing industry in general accompany representatives from MFAF when they negotiate

important affairs in the Council of Ministers or elsewhere, for example in EU negotiations with Norway or in the Baltic Fishery Commission.

During the negotiations MFAF representatives can consult the users and get their opinion on different proposals and can take this into consideration during the negotiation.

The Board for Commercial Fishing advises the Minister in relation to national policy-making, in other words, about how the national quota should be administered. This board is composed of representatives of the fishermen, the processors, the trade union and MFAF. The Board for Commercial Fishing contains subcommittees and ad hoc working groups, dealing with particular fisheries, structural measures and experiments on alternative regulation methods, also the Capacity Board, which makes recommendations on licenses and permits is a subcommittee under this board. In addition there have been several working groups referring to the Board for Commercial Fishing.

5.4 Management of the Danish Protein Fishery

5.4.1 Historical background

The Danish fisheries targeted at fish meal and fish oil production (in this document referred to as the Danish protein fishery) dates back to the early 1950s when abundant stocks of herring, for which there was no market for human consumption, were discovered in the North Sea. A Norwegian fish meal and oil factory vessel readily available facilitated the starting up of production at a large scale in Esbjerg, the capital of the Danish protein fishery. In the following years the protein fishery expanded and a large number of factories were set up along the Danish west coast, many of them by fishers forming cooperatives (the only major sub-sector where the cooperative movement got permanent foothold in the Danish fisheries). The protein fishery soon began to target other species also; many of them species never or rarely used for human consumption for example sand eel, Norway pout and sprat. However, during the 1960s and 70s large amounts of edible fish also found their way to the Danish fish meal and oil factories, primarily as by-catch in the protein fishery. Being the only EU-country undertaking protein fishery Denmark during the 1980s and 1990s got the reputation among the other EU member states of undertaking 'destructive' fishing for proteins.

The Danish protein fishery peaked in the mid 1970s when around 1.5 million tons of fish was landed by Danish vessels for fish meal and oil production, representing 85% of the total landings of Danish fishers. Landings in the period 1996 to 2001 were in the range of 1.0-1.2 million tons, which is about 70% of the Danish total. In economic terms the protein fishery counts for about 20% of the total value of the fish landings in Denmark.

5.4.2 Target species in the protein fishery

The most important species in the Danish protein fishery are sand eel, sprat, Norway pout and blue whiting which together counts for 90% of the total landings. Sand eel is primarily caught in the Central North Sea (ICES area IVb) during the months April through July. Annual catches range from 500,000 to 900,000 tons. Sprat is mainly caught from

September through March. Annual catches range from 90,000 to 205,000 tons. Norway pout and blue whiting are mainly caught in the Northern part of the North Sea (ICES area IVa). Annual catches (July to January) of Norway pout range from 50,000 to 150,000 tons and annual catches of blue whiting range (all year round) range from 30,000 to 60,000 tons.

5.4.3 The Danish protein fishing fleet

The Danish protein fishery is mainly a trawl fishery in which about 400 vessels >15 meters take part. For the small trawlers of the size 15-24 meters, which counts for 60% by numbers the protein fishery on average only counts for about 15% of the total revenues. For the 135 medium-sized trawlers of 24-40 meters some 45 are entirely dependant on the protein fishery for their income whereas the dependency of the rest varies between 15 and 50%. For 32 big-size trawlers >40 meters some 13 are heavily dependant on the protein fishery whereas the other 19 (named the 'pelagic' trawlers) generate about 50% of their revenue from this fishery.

5.4.4 Socio-economic impact

The protein fishery provides jobs and income for about 500 people onboard the fishing vessels (calculated on full-time basis) and another 500 ashore, primarily in Esbjerg, Hanstholm and Skagen where the 3 remaining fish meal and oil processing plants in Denmark are situated.

5.4.5 Management of the protein fishery (Decision making arrangements)

Management of the Danish protein fishery is based on TACs, closed areas, mesh size regulations and by-catch restrictions. TACs are set for all targeted species and Denmark is for most species allocated the lion's share of quantities available to the EU in the North Sea. The TACs of sand eel and sprat are both set within safe biological limits (ICES 2001). In practise the catches seldom reach the TACs. The closed areas include the 95,000 km^2 Norway pout (gear restriction) box introduced in 1995 to reduce catches of juvenile haddock and whiting, the 18,000 km^2 sand eel (no fishing) box introduced in 2000 to increase food security of water birds and other animals and the sprat (no fishing) box (ICES area IVa and b) introduced in 2002 to avoid by-catches of herring.

The application of the above-mentioned management measures are all decided upon at the EU-level by the Council of Ministers on the basis of motions prepared by the EU Commission. The utilisation of the Danish national quotas is decided upon by the Ministry of Food, Agriculture and Fisheries in consultation with advisory board as explained in section 2.

At the sector level the Danish Fishermen's Association, DFA, has established a number of regional and technical committees that supervises the use of the quotas and give advice to DFA.

All Danish fishing vessels having a licence to fish can participate in the protein fishery. In practical terms only the above-mentioned 400 trawlers are active in this sub-

sector. At the local level the fishery may be informally managed/coordinated through intervention from particular the local fish meal and oil processing plans (the 2 larges are co-ops accounting for >95% of all Danish production).

5.4.6 Incentives to coordinate and cooperate

For decades the Danish protein fishery has been exposed to heavy criticism, not the least from abroad. Foreign fishers, fishermen's associations and environmentalists/ environmental organisations and public authorities have from different viewpoints pointed to the inappropriateness of this particular fishery. Initially, the criticism had a fishery focus - pointing to the by-catches of fish suitable for human consumption and the impact of by - catches on the standing stocks. Criticism of this kind, among others, paved the way for the introduction of the Norway pout box. Until the mid-1990s the criticism did not include the fishery for sand eel because of the limited by-catch of fish for human consumption in this fishery. However, since the mid 1990s the criticism of the protein fishery has increasingly been related to environmental concerns. Now the focus is on the negative impact of the protein fishery on other animals that feed on the same resources, for example water birds. This criticism comprises all of the protein fisheries including the sand eel fishery and resulted in the introduction of the sand eel box. The decline in the stocks of important species for human consumption that has been observed in the North Sea in recent years has put focus back on the by-catches, and paved the way for much stricter control of compliance with rules and regulations. The extensive by-catch of herring in the sprat fishery has led to the implementation of the sprat box on the Danish west coast. At present the Danish protein fishery has again come under heavy fire in the discussions of the new CFP.

In the management of the Danish protein fisheries different stakeholder groups pursue different objectives. The Danish fishing and fish processing industry and local fishing communities are focused on economic issues. In contrast bird conservationists like the Royal Society of Protection of the Birds (RSPB) and environmental organisation such as WWF and Greenpeace are concerned about environmental issues. In addition, and most likely because Denmark is the only EU member state with a substantial protein fishery, the protein fishery has been used as target by other member states in order to move focus from problems in their own fisheries.[1] The viewpoints confer by national governments in relation to the management of the protein fishery are often used to pursue broader interests within the CFP and advocate for national interests more than they objectively address management issues. UK stakeholders argue that declining whiting, haddock and cod catches are caused by by-catches of these species in the Norway pout fishery. However,

[1] A recent example is that the Spanish minister of fisheries in the debate on the reform of the CFP proposed by the European Commission is accusing the Danish protein fisheries of being unsustainable, all knowing that the hidden agenda is to get focus away from a huge reduction of the capacity of the Spanish fleet and for Spain to get access to the North Sea.

UK fishers have a considerable discard[1] of whiting and haddock (ICES, 2001); (Krog, 1993).

A recent study of stakeholder preferences for management of the Danish Protein fisheries (Raakjær Nielsen and Mathiesen, 2002) makes it easier to understand stakeholder incentives to coordinate and cooperate. The study focuses on twelve active stakeholders.[2]

The aggregated preference structure from the above-mentioned study clearly points towards minimising by-catches, even the Danish industry representatives' express relatively high preference for this sub-objective. Regarding the political objectives the preferences are somewhat mixed. All Danish stakeholders and WWF have low preferences for closing the protein fishery. In contrast MAFF has this as its top preference to stop the protein fishery. NFFO and the environment-oriented stakeholders except WWF also express a relatively high preference for closing the protein fishery. Nevertheless, this sub-objective has the lowest preference in the aggregated structure.

All the environmental groups express highest or second highest preference for minimising fishing down the food-web or minimising the impact of the protein fishery on birds, marine mammals etc. This is a very strong indication, that biodiversity issues are considered very important for these stakeholders.

DFA and AFMD are most concerned about profitability in the protein fishery at its present level. The two associations represent people having invested in the protein fishery or processing. It should, however, be noted, that the largest proportion of the members of DFA is not involved in the protein fishery.

A cluster analysis shows that there are significant overlaps in opinions of stakeholders. The analysis supports that 3 major perspectives exists on the management of the protein fishery: An environment focused perspective, a balanced eco-fishery perspective and an economic - oriented perspective.

5.4.7 Challenges ahead for management of the protein fishery

We expect, that the Danish protein fishery in the North Sea will continue to be challenged by the non industrial catch sector (UK) and environment-driven stakeholders, who advocate for more restrictive regulations. The reform of the CFP (European Commission, 2002) also indicates a shift in management strategy from a fisheries approach towards an ecosystem-based approach. If the EU Council of Ministers approves this change in

[1] Around 24,000 tons of whiting are discarded annually, and mainly in human consumption fisheries, making the whiting by-catch of 5,000 tons in the protein fishery less significant (ICES 2001). However, the figures do not reflect the full biological impact of the by-catch as the by-catch of whiting in the protein fishery often consists of undersized fish and thus include many more individuals compared to the numbers which are discarded in the human-consumption fishery.

[2] The Danish Fishermen's Association (DFA); The Association of Fish Meal and Fish Oil Manufacturers in Denmark (AFMD) and the General Workers Union in Denmark (GWUD). Two British fishers' associations: The National Federation of Fishermen's Organisations (NFFO) and the Scottish Fishermen's Federation (SFF). Four environmental organisations: The Royal Society for Protection of the Birds (RSPB); the World Wildlife Fund for Nature (WWF); Greenpeace and the Danish Society for the Conservation of Nature (DSCN). Three government bodies: The Ministry of Food, Agriculture and Fishery in Denmark (MFAF); the Danish Institute for Fisheries Research (DIFRES) and the Ministry of Agriculture, Fisheries and Food in the UK (MAFF). MAFF is representing the views of both government and research in the UK.

management it will support environment-oriented interests at the expense of economic-oriented interests and thus support development of a protein fishery with further restrictions in the years to come.

Given an increased focus on ecosystem-based management one can expect, that the sand eel fishery, already within safe biological limits (ICES, 2001), will be further restricted as issues like fishing down the food web, impact on birds and marine mammals and benthos caused by the fishery will have increased attention. The Norway pout fishery will in addition to the above-mentioned also has to pay attention to by-catch-beyond the existing measures (area closure and mesh-size regulations) which already reduces by-catches.

The stakeholder preference eliciting process clearly indicates that biological issues are given high priority. Hand in hand with the move towards ecosystem-based management, no take zones (boxes) are gaining support in the EU as a management measure. Since the CFP was introduced boxes have been used as a tool to control the protein fishery in the North Sea. Despite, that Danish fishers are reluctant to boxes, this management instrument appear as the most appropriate tool for balancing the interest of economic and environmental-oriented stakeholders and still maintain a Danish protein fishery. The environmental and non-industrial stakeholders generally accept, the existence of a protein fishery, as long as the biological impact is minimised The challenge is then to find a compromise that will minimise the impact on the eco-system, and still make the fishery economic viable for the participating vessels and the processing plants ashore.

Based on qualitative interviews it becomes clear that the economic-oriented and environmental-oriented stakeholders have conflicting viewpoints. Nevertheless most stakeholders express interests in finding pragmatic solutions. In regard to this, it's interesting that the cluster analysis of the survey results places the WWF together with Danish government bodies. Such eco-fishery-oriented stakeholders can if they manage to form an alliance become important facilitators in establishing a dialogue among the more opponent stakeholders, but also as a single group become very influential in the decision-making process. A main purpose of a dialogue would be to agree on a common set of objectives for management of the protein fishery, and to develop a common scientific knowledge base for stock assessment and impact analysis. In supplement to the scientific knowledge some of the stakeholders have extensive local knowledge (biological, economical, cultural), which might be of relevance for the management of the protein fishery. Scientific knowledge and the political use of scientific data have become increasingly influential in the environmental debate in general and on fisheries management in particular. Increasing demands for scientific data and growing expenses on research puts weight on the argument that fisheries management and the stakeholders would gain from cooperating instead of seeking unique and costly research data. Recent initiatives to talk and cooperate between the catch sector and environmental groups in Denmark and the UK are perhaps the seed to a future development.

In terms of practical regulation, one can foresee that boxes will remain as the key management tool. Several advantages are attached with this measure. Fishers have to some extent adapted to the exiting boxes, boxes are easy to monitor and finally it meets the objective of the future CFP, to limit fishing effort In case of the sand eel fishery the impact of the present box is to be evaluated in 2002/2003, and hopefully as part of this process a

dialogue can be established among management bodies and stakeholders. Although most protein fishers would like the protein fisheries less regulated, Danish protein fisher's have voluntary suggested to implement temporary boxes or seasonal closings (2-4 weeks) as to protect juveniles in the sand eel fishery.

However not suggested by the fishers, a similar strategy can be applied in the Norway pout fishery, The by-catch problem primarily occurs when fishing is undertaken in shallow waters, thus a temporary closures linked with water depths criteria could be considered as a measure to reduce by-catches of whiting or haddock without closing of larger areas as the Norway Pout Box. However, the practical set-up needs to be discussed in a co-management process with the stakeholders groups. The before mentioned initiative on protecting juveniles stranded as a result of internal disagreements and the fact that the organisations involved did not manage to cooperate with management authorities on designing regulations and monitoring hereof.

From the study it is evident that the group of stakeholders on the one hand include interest groups (the Danish catch sector and processing industry) with high risk taking and large investments in fisheries, and on the other hand organisations who (for example environmental groups) may argue for a substantial reduction in the protein fisheries without facing any economic and political consequences. This presents a major constraint for setting up co-management arrangements including larger complex stakeholder groups (Raakjaer Nielsen, et al., 2002). If stakeholders have no management responsibilities, strong incentives for opportunistic behaviour ('free riding') exists, in particular among radical environment-oriented stakeholders. However, most environmental groups do show a pragmatic approach to fisheries management, but as any political player, they also see this survey (AHP) as a tube for expression of principal and strategic statements to the EU (DG-Fish).

A future dialogue between stakeholders is both possible and necessary in order to reverse the historical disputes into a common agreement on management measures for the benefit of a broad set of interest groups (fishers, consumers, fish buyers, ornithologists, tourism, processing industries et cetera). With the current political support for a more holistic approach, the dialogue between stakeholders should include discussions on how to apply the 'new' concept of ecosystem-based management in general and for the protein fishery in particular - a debate which is perhaps just beginning in an EU context. Although often used in research and management contexts, the concept is still unclear and no specific implementation strategy exists (Degnbol, 2002) - which further complicates the decision-making process.

5.5 Management of the Danish Herring Fisheries

5.5.1 Historical background

Fishing for herring has a century long tradition in Denmark and herring takes a prominent position in the Danish diet. This relates to the fishing for herring in the Danish 'inner' waters whereas fishing for herring in the open sea is of a more recent date. It was not until after World War II that landings of herring from the North Sea provided the basis for the

development of a large pelagic industry in Esbjerg, Hirtshals and Skagen on the Danish west coast. In Esbjerg the herring from the central North Sea became an important raw material for the production of fish proteins (fish meal and oil) and in North Jutland the herring from Skagerrak and the Northern North Sea supplied a fast growing filleting industry producing for human consumption in Denmark and Germany.

5.5.2 Target species

The herring stocks exploited by Danish fishers are in a fairly good shape and the 2002 TAC set at the same level as in previous years (Danish quota in tons): Atlanto-Scandic (25,750), North Sea (38,457), Skagerrak/Kattegat (34,462). In addition Denmark is allowed a herring by-catch of some 50,000 tons.

5.5.3 Fishing fleet

Approximately 115 vessels (70 >24m, 23 24>x>15m and 23 <15 m) are employed in the herring fishery in the North Sea and Skagerrak. 24 of the vessels > 24 m are also targeting Atlanto-Scandic herring in the North Atlantic.

5.5.4 Socio-economic importance

The herring fishery is of particular importance to the two fishing communities Hirtshals and Skagen where port facilities have been established for quality handling of large quantities of raw herring for human consumption and the local processing industries specializing in semi-products for export provides jobs for many hundreds of people.

5.5.5 Management of the herring fishery

The Danish quota of herring for consumption has in recent years been split 85/15 in two pools. The 85% is divided among vessels with a track record in this fishery and an informal individual quota system has been in place for several years. The remaining 15% is reserved for vessels without a track record, as an instrument to maintain the herring fishery open for new comers or vessel that only want to participate in a particular season or year due to constraints in other fisheries.

After a decade of argumentation and lobbying from the herring processing industry and the Purse Seine PO the Danish Parliament in May 2002 decided to introduce an ITQ system in the Danish herring fisheries from 2003. A working group with representation from major stakeholder groups and MAFF was established to develop a Danish model and design an ITQ system that would fit in with other fisheries and practises. The system that will come into practise in a 5-year trial period (which may be extended for another 3 years) allocates most of the national herring quota to the vessels on the basis of an application and an assessment of the applicants' track record in the herring fishery (Danish Fisheries Directorate, 2002). A small part of the quota has been allocated to small vessels fishing on a day basis also and to new entrants (young skippers).

The reason for introducing ITQs is a political wish to facilitate a restructuring of the fleet that will reduce the number of vessels and bring in some new vessels capable of supplying quality raw material to the processing industry. The ITQ scheme will be reviewed after five years. It is envisaged that a resource rent collection scheme may be introduced in due course after the review.

5.5.6 Incentive to coordinate and cooperate

Within DFA the debate on ITQs has been ongoing for several years. Fishers representing the purse seine vessels and larger trawlers have been strong advocates for the introduction of a management system that would allow long-term planning as well as temporary or permanent merging of vessel quotas. ITQs have been strongly opposed by fishers representing smaller vessels mainly for general fear of possible ownership concentration and loss of local livelihoods. For those reason the Working Group on ITQ established by MAFF soon became a battlefield. It was recently realised that DFA could not accommodate both viewpoints. For that reason the Pelagic Fishermen's Association have decided to withdraw from DFA.

The processing industry is in favour of ITQs and through the representation of the Association of Danish Fish Processing Industries and Exporters in the consultative boards and the ITQ Working Group of MAFF strongly supports the amendment of the Fisheries Law to allow for this quota allocation system. Other stakeholders such as the Consumer's Council and the Danish Society for the Conservation of Nature have not been active in the debate.

5.6 Summary

What can be learned from the way the policy-making and implementation of fisheries management is carried out in Denmark and the EU from the perspective of user or broader stakeholder participation?

International experience testifies that the chances for fisheries regulation to succeed without support from the fishermen are very slim, because fishermen almost always find ways of bypassing regulations Copes (1986). It is therefore of major importance, that the fisheries management policy is supported by the fishers. In a EU/Danish context the prevailing opinion among different user-groups and administrators is that the current conservation policy based on TAC is not an effective instrument to maintain the resources at a steady level. In addition, the current conservation policy often brings the fishers in a dilemma (in relation to by-catch and discard) where he is forced to react irrationally if he wants to follow the regulation. The fishers are seen as victims of a mistaken fishery policy, and this fact adds to the lack of legitimacy.

At least up to this point in time users/stakeholders only to a very limited extent had influence on the CFP as the EU Commission, in the past at least, did not have the habit of listening to the Advisory Committee for Fisheries Questions during the preparation of its proposals (Hoel, 1993). This situation might hopefully be changed with the new organisational set-up for user/stakeholder involvement at EU level.

In Denmark, as in the other Scandinavian countries, stakeholder involvement in the decision-making process is part of the democratic cultural heritage, where interest-group representation is integrated in the political system. Within the framework of the CFP stakeholders have in Denmark a high degree of influence, and in recent years the advisory function has been broadened out, and has moved from a narrow user involvement to include a larger stakeholder perspective by including consumers and environmentalists, which again reflects the general development within the Danish society, where emphasis also within the Ministry has changed from being mainly industry oriented to taking a broader stakeholder perspective in relation to management.

In this respect the legitimacy of the management system is challenged from two sides, as two different types of legitimacy objectives, external *vis a vis* internal, are at risk. In this respect the Danish case studies represent both and internal (the herring fishery) and an external (the protein fishery) it will be interesting to further analysis how to cope with these issues. In Denmark and EU users claim, that their interests are losing out to other stakeholders, and the management system might establish external legitimacy within the broader society, but lose internal legitimacy among the users, and hereby be caught in an ethical dilemma. This is a great challenge for fisheries management in the future. In addition as pointed out by Jentoft (2000:146): 'The lack of opportunities for users to collectively take on a proactive and responsible role in the management is another causal element of the legitimacy crises'. This again will raise ethical questions, and there is obviously a conflict between what user-communities and organisations consider as relevant for management, and what is decided at national and in particular international level. All these components are present in the protein fishery, which will enable us to analyse the issues in great details and hopefully come up with suggestions on how best to tackle these management challenges.

6. France

6.1 Introduction: Fisheries management between cat and dog?

French fisheries management is balancing between three driven forces: first the historical paternalistic model; second, the national politic of state decentralisation initiated in 1982 and third the evolution of European common fishery policy (CFP). The current institutional framework and its evolution the last ten years are driven by these three forces.

The core of fisheries management is modelled within close and complex relationships between State and its territorial deconcentrated services and fishery professionals. These relationships are closely organised by the central state that created an inter-professional corporatist organisation. The politic of decentralisation has modified the global feature: professional organisations have more competencies and state relies more consistently on deconcentrated regional commissions, decentralised structures and devolved territorial political institution to manage the fishery sector. Nevertheless, state administration stays the central political and administrative management institution. It is also a little bit early to analyse the overall consequences of institutional changes. In fact, numerous institutional changes occurred the last ten years modifying the scale of decisions-making processes and number and status of structures involved.

French fisheries are also strongly embedded into the construction of the common fishery policy since the origin. The CFP is a strong driven force of changes in French fishery institutional organisation at two levels: preventively to be prepared to negotiate with the other partners and consecutively to adjust to EU regulations.

The presentation of the national institutional decision-making framework will explicit weight of each factors and highlight the main trends that fashion the system. The two cases studies focus on particular aspects of the institutional system highlighting informal relationships and the high diversity of situations in French fishery decision-making process.

6.2 French fisheries management: weight of the past and current trends

6.2.1 Conflictive or complementary trends in fisheries management?

Institutional framework embedded in a paternalistic relationship

French fisheries are tightly embedded in an historical context that fashions relationships between the central state and fishermen. In fact, fishermen have a special social status linked with the historical French State ambition. They were considered as the 'nursery of men' of the royal fleet essential to ensure French dominance at sea. In exchange for of giving a part of their time to the King, fishermen were receiving a special social protection.

Inherited from an ordnance taken by Colbert in 1668, the law of the 3 brumaire IV (25 October 1795) created a specialised administration: the *inscription maritime*. This administration was charged to compile a register of fishermen in case of military conflict, then after 1902 it was also in charge of regulating navigation and fisheries and taking care of seamen welfare and health services. This system remains through time constantly accommodated to current issues and new roles. In 1965, a law cancelled the systematic enrolment of seamen in national military fleet, but administrators of maritime affairs kept the charge of social affairs and maritime police. Nowadays, the minister of equipment, transportation, housing, tourism and sea is administrating work rights, retirement, social and health services, specific to fishermen[1] and the Minister of agriculture and fisheries is directing fisheries management. At regional and local level, services of the maritime affairs are the Minister's relay and administrative interlocutors of professionals. The counterpart is close and passionate relationships between fishermen and state administration.

In the 1940s to re-structure relationships between state and fishermen, a corporative fishery organisation was created by the state based on existing inter-professional committees. Inter-professional committees were erected at fishermen's initiative in the 1930s. They were organised by species (tuna, herring, sardine, crabs, mackerel, cod and seaweed) and generally aimed to ensure minimum price, equalise price from port to port and adapt supply to the demand especially for species used in canning industry. They are the common ancestors of corporative organisations and producer's organisations (POs) formally structured in the 1960s.

The building of a corporatist inter-professional organisation initiated in 1938 was interrupt by the Second World War. Nevertheless, the concept grew and was integrated by the so-called Vichy Government that structured a very centralised corporative organisation during the war. After the Second World War, this system wasn't deleted but reorganised (decree-Law of the 21/01/1945) within a less centralistic framework. Since it remains the central and national professional body that collaborates with state administration to fisheries management.

At the beginning of the 1990s, a deep reform of inter-professional organisation has even widend powers of the corporative, pyramidal organisation but still under state legal and financial supervision. In fact the reform is embedded into the State decentralisation and deconcentration movements but the close link between fishermen and state administration rooted in French history is remaining by the reinforcement of a unique organisation integrating all sea workers and covering the entire French territory.

Concepts of decentralisation in fisheries management

French State administration has been historically built on centralistic model. The underlying idea is that State only is able to define general interest and then to arbitrate relationships between general and particular interests. From this concept of State duties come powers of control, arbitrage and expertise. During the second- half of the 20th

[1] The direction of the *Etablissement national des invalides de la Marine* (ENIM) is offering to sea workers an adapted and efficient social protection. the *direction des affaires maritimes et des gens de mer* (DAMGM) is in charge of the security of navigation at sea for commercial and fishing vessels and in charge of following up activities of sea-related workers (education, health, working rights, social rights, promoting employment).

century, the necessity to reform French state became evident. This movement is driven by two major ideas: decentralisation allowing a redistribution of powers is more consistent with democracy; decentralisation ensures more efficient operational model of public action. The term of decentralisation is often used loosely and thus covers two main processes: deconcentration and strict decentralisation.

There is deconcentration when, *into the same institution*, the power of decision is transferred to an authority at a lower level in the hierarchy. Deconcentrated authorities are fully dependant on their upper hierarchical authority that may anytime cancel their decisions. Deconcentration is a redistribution of power which lowers the original concentration of power into the hand of the top of the hierarchy, nevertheless the global attribution of the given administration does not change. Deconcentration aims to tighten relationships between administration and citizen. In fisheries management, state services are deeply deconcentrated to reach fishermen at the lowest possible level, maritime quarter or port.

Decentralisation is a transfer of attributions from the State to an institution (territorial or not), legally distinct from it and having, under state administrative supervision, a certain autonomy of management. The real degree of autonomy of a decentralised institution depends on two main factors:

- process of choice to name the president or directory council (named by the State, elected by, et cetera);
- financial and technical capacities related to management power the institution is in charge of. In its deepest form, decentralisation leads to devolution of power.

From 1958 to 1982 a large movement of territorial deconcentration of the central state occurred. In a first stage, territorial administration at departmental level was reinforced. Then in 1972 administrative region were created: 22 regional councils were elected at universal suffrage and the regional level was thus doted with deconcentrated state administration. Regional councils became fully territorial communities with devoluted power as general councils (departmental level) and municipalities after the 2 March 1982 Law on decentralisation.

Consequences of this two trends of state deconcentration and decentralisation on fishery management are unbalanced depend on management sectors. Fisheries professionals are involved in all fishery management sectors but the degree of state control is higher in conservation and fishing policies than in fleet or port investments or organisation of the market. The reticence to loose too much state control on fishing management is consistent with French conception of state duty and fisheries resource status (common resource). Nevertheless for the last ten year there has been a general trend towards more decentralisation stigmatised by the reinforcement and transfer of decision at the regional level.

6.2.2 Actors of fisheries management

Three main types of actors are involved in fisheries management: political actors (State ministers, regional council, general council and municipalities), administrative actors and professional actors. These actors are involved in a number of structures participating in

fisheries management. Most of this structures are specialised into one sector of fisheries management: organisation of the market, fishing management, fleet investments, port investment, valorisation of the product. This structures have different status: deconcentrated, decentralised, association, co-operative. Most of them involve several types of actors of the sector, but form and levels of involvement differ (figure 6.1).

Fishermen and central state representatives that base the fishery management framework are represented into most of these structures. Regional and local political authorities that are involved more recently in fisheries management are represented in a smaller number of these regional structures.

For example, fishermen are members of the administration council of OFIMER, a national decentralised structure in charge of valorisation of marine products. Their representation is structured through different groups: representative of fishermen, aquaculture, ship-owner and producer's organisation. Fishermen are also represented in regional deconcentrated commissions that elaborate fleet and port investments (CORECODE, COREMODE).

6.2.3 What geographical scale for fisheries management?

Since the beginning of the 1980 and even more consequently since 1990 decentralisation in fisheries management is taking place by the reinforcement of regional level of decision; before decisions were articulated between local and national levels. This regionalisation of fisheries management is occurring through a triple movements of state deconcentration, decentralisation and devolution of power.

Devolution of power to the territorial communities

Territorial communities are political structures, distinct from state administration, in charge of interest of the population on a defined territory. They have their own budget and civil servants, a moral personality (at the opposite of deconcentrated state services), their own competencies given by the French Parliament and a power of decision. Decisions are taken by deliberation into a Council and implemented by local executive powers. There are three territorial communities: Municipality at local level, general Council at departmental level and Regional Council at regional level. Their members are elected at universal suffrage by the population of their respective circumscriptions.

A year after the 1982 Laws on decentralisation territorial communities received specific powers on fisheries management. In fact, their powers are limited to economical and technical support: create and manage fish auction hall, support projects in port and landing sites, support research projects and experimentation, attribute aids or subvention to fleet or aquaculture farm, implement new technologies. Nevertheless, the latter developed case study on small-scale fisheries in Mediterranean Sea shows how territorial communities in supporting professional projects are able to play a sizeable role in fisheries management.

	Political structure	Administrative structures	Professional structures		
European	Council of fishery ministers Fisheries commission of the European Parliament	European Commission DG of fisheries	EAOP	Europêche	COGECA
National	Government Minister National Parliament	MAP-DPMA OFIMER	ANOP	Confederation CMCM FEDOPA SCCMM CGPA	CNPMEM

legend

EAOP European association of producer's organisation
COGEPA General council of agricultural co-operation
MAP Minister of Agriculture and Fisheries
DMFA Direction of marine fisheries and aquaculture
OFIMER Inter-professional office of marine products and aquaculture
ANOP National association of producer's organisaton
CMCM maritime Funds and mutual credit
FEDOPA Federation of artisanal producer's organisation
SCCM Mcentral society of maritime mutual credit
CGPA Management centre of artisanal fisheries
CNPMEM national committee of marine fisheries and aquaculture
CRPMEM regional committee of marine fisheries and aquaculture
CL Local committees
CRIPA regional commission of investment in artisanal fisheries and aquaculture
DRAM Regional direction of maritime affairs
DDAM departmental direction of maritime affairs
QAM quarter of maritime affairs
FROM Regional Funds of market organisation

<table>
<tr><td rowspan="2">regional</td><td>Regional Council
CRIPA</td><td>Regional prefect

<u>DRAM</u>

<u>COREMODE</u>
<u>CORECODE</u></td><td rowspan="2"></td><td rowspan="2">FROM and other producer's organisations</td><td rowspan="2">Regional Funds of Maritime Mutual credit</td><td>CRPMEM</td><td rowspan="2">Co-operative, syndicates</td></tr>
<tr><td>General Council

Municipality</td><td><u>DDAM</u>

<u>QAM</u></td><td>Local sections of FROM</td><td>Local agencies
Local co-operatives</td><td>CL</td></tr>
</table>

Figure 6.1 French fisheries management structures by type
In **bold**: Political structured with devoluted power from central state.
In *Italic*: Structure under state control (decentralised structure or under state financial and juridical supervision).
<u>Underlined</u>: Deconcentrated structure.

Creation of regional commissions

In response to the decentralisation of power to the regional and general councils, regional commissions, COREMODE and CRIPA, were created in the mid-1980s (figure 6.1).

COREMODEs elaborate regional program of modernisation and development of artisanal fishing fleets and marine aquaculture. It is in charge of investments collectively managed or used. It has a consultative voice on the attribution of subventions for the construction and modernisation of vessel over 16 meters length. It verifies conformity of demands with the POP and grades demands transferred to the European authority for final decision. It is also consulted on investment projects soliciting a financial support from the State or support from the funds of intervention and organisation of fish market. Parallel CRIPA was conceived as a consultative commission on investment program and criteria of attribution for regional Council funding. The CRIPA is also consulted on investment program for modernisation of the fleet under 16m length.

COREMODEs can be considered as deconcentrated structures, they are under the direct authority of state regional representatives and aims to fulfil state duties. But at the difference of other ministerial deconcentrated services composed of civil servants, regional commissions include representatives of professionals, regional council and general councils of coastal department that are thus systematically consulted before any decisions taking place. In practice, the consultative voice of professionals in COREMODE is often pre-eminent in final decision.

In 1998 another regional commission, the CORECODE, was created. It elaborates and updates regional schemas of orientation in order to rationalise choice of collective equipment in fishing ports and landing areas and in order to improve conditions of first selling and expedition of this products. Consecutively, the commission is consulted on any projects of collective equipment and improvement of landing conditions at regional level. Shaped in the same model than CORECODEs, this commission is also chaired by state representatives (regional prefect, regional director of maritime affairs and regional director of equipment) and constituted of territorial communities' representatives (regional council and general council of coastal departments), representative of fish auction markets, fishing ports, producer's organisations and committees of marine fisheries.

COREMODE and CORECODE are one of the privilege ways for territorial politic stakeholders and professionals to intervene in fisheries management sector under direct state control.

Delegation of power and reform of inter-professional organisation

Down this regionalisation trend an important step was made in 1990 and 1991 with the delegation of power to regional prefect and the reform of inter-professional organisation. Those two reforms are closely linked.

Before 1991, the inter-professional organisation was organised around two levels, local and national. Only, two regional committees, one for the Mediterranean coast and one for the North coast were already existing but structured as simple council of president of local committees. Regional committees had essentially an incentive role towards central and local committees to develop project in the fisheries sector and a role of relay between

local and central levels. For example, the regional Mediterranean committee, composed of presidents of the seven local committees, initiated the establishment of a licensing system in Mediterranean fisheries.

Local committees had the so-called power of deliberation to organise fishing activities in their circumscription. Their deliberation would be turned into action by ministerial decree. This shaping of power distribution led sometime to tricky situation in absence of agreement between local committees. The department of Finistère, one of the four coastal departments of Brittany, had six local committees. It was almost impossible to implement management measures that would be taken by only one of the six committees; fish has no such narrow border and fishermen will not apply restrictive measures that do not apply to fishermen 10 km farther. Similarly when fishermen from one committee were going on strike to complain again a situation or regulation, there was often another committee taking advantage of the situation. This situation was prejudicial to the establishment and implementation of fishing rules as well as the weight of fishermen's claims.

To overpass these problems, the 1991 reform creates regional committees; national and local committees remain but role and power of each level were reorganised. The power of deliberation on fishing management was transferred from local to regional committees. The geographical circumscriptions of regional committees match coastal administrative regions (with one exception). A year before the reform, in 1990, State delegated to few of its regional representative, regional prefects, the power to transform deliberation of committees of marine fisheries into action by decree. This measure of state deconcentration has one major consequence. Regional prefect may delegate its power to the regional director of maritime affairs. In practice, this change tightens even more relationships between deconcentrated state services of maritime affairs and committees of sea fisheries at local level.

Creation of regional commissions where professionals, regional and local politicians are consulted, delegation of power to regional prefects, reform of the inter-professional organisation is deeply modifying the overall structure of national fisheries management. Not such deep reform occurred in fisheries since 1945 and the creation of the inter-professional organisation.

Regionalisation of fisheries management responds to a will of State decentralisation. Faithful to the paternalistic tradition and to the State duty conception, regionalisation is mostly based on deconcentration of power and creation of decentralised structures under state control but this supervision let in most cases large capabilities of actions to the professionals. State decentralisation is not the only driving force towards regionalisation, building of a European common fisheries policy is also pushing this way. A closer overview on the committee of marine fisheries will highlight this second trend and the role and capabilities of committee.

6.2.4 Fishing management: the role of committees of marine fisheries

New goals

In 1991, the central committee of fisheries became the national committee of marine fisheries and aquaculture. Beyond the changing name, the reform attempt to modify the role of committees from productivity to conservation goals.

The former committees entirely shaped by the state aimed to rebuilt, expand and modernise French fishing power after the Second World War. Consecutively otter-trawling and seining industrial or semi-industrial fleets were over-represented at national and local levels compared to artisanal and coastal fleets. This organisation leaded to marginalise small-scale fisheries that had less access to subvention and aids and a weaker representation at the highest ministerial centre of decision.

The primary feature of committees turned towards increasing fishing capacity appeared to be in inadequacy with the context of overcapitalisation and surexploitation prevailing since the 1970s. In a first round, committees partly lost their privileged role on market regulation with the appearance in the 1960s of producer's organisations. Then in 1985 regional commissions (COREMODE) were created to manage and control fleet development and modernisation. Market and structural policies management were thus progressively invested by other fishery professionals and decentralised structures where committees were only represented as well as other interest groups.

The 1991 reform re-orientates committees toward organisation and management of fishing within a conservation framework. This reform was strongly driven by the European context. In fact French government had envisaged it to face the more constraining EEC decisions and implementation of the Unique Act after the 1/01/1993. After ten years, most professional's representatives consider that the building of a regional decision level helps to keep under control dissensions into the professionals (small-scale fisheries against high sea fisheries and industrial against craft fisheries) and to strengthen French fisheries professional representation facing European commission and other EU countries.

Regional committees of marine fisheries

The role of each committee level is specific but regional level is the pivot of the structure. Regional committees were doted of the power to deliberate on rules in their circumscription (up to the 12 miles limit). Their regulatory power is directed towards the stage of defining conservation instruments and local organisation of fishing:

a) organisation of fisheries -limitation of fishing time, opening and closure dates of certain fisheries, delimitation of fishing zones, set of cohabitation rules between 'métiers';
b) adequacy of fishing instrument to available resource for certain species or fisheries by the establishment and the limitation of fishing licences, by fishing effort adjustment to fleet size or vessel power, by definition and normalisation of fishing techniques characteristics;

c) limitation of capture (volume) of certain species by sets of fishing quotas per zone or period, and by quotas repartition and management at regional or local (ports) level or by units of effort (fleet, vessel, number of men in board);
d) moreover, regional committees can name and remunerate 'guard-judges' (*gardes-jurés*) in charge of controlling compliance with conservative measures on fisheries management.

Deliberations shall be voted at the majority of national committee council members, then they are submitted to the regional prefect that can reject it or turn it into action by decree for a five years period. In practice, working groups are organised at regional level on sensible species to prepare deliberations taken in the council. These working groups gather data from local committees of marine fisheries and prepare regulation's proposals. Local and regional services of maritime affairs are most of the time involved in this process at the working groups level. These working groups are also using the expertise of other administrations (environment, equipment ...) or structures (IFREMER) to elaborate their propositions. In consequence, it is relatively scarce that a deliberation taken by the regional level is rejected *a posterior* by the regional prefect or the regional director of maritime affairs (by delegation of power from the prefect).

The local and national committees

National and local committees are structured around the regional committee. At the bottom, the thirty height local committees located in port or groups of ports have a consultative role in fisheries management, but have also few competencies in social matters and technical support to the activity. Their main role in fishing management is to organise working groups on sensible questions in their circumscription that will nourish the regional ones; they gather data and eventually make propositions that would be widely discussed at the regional level.

At the upper level, the national committee has two main effective roles: treating questions exceeding regional committees circumscriptions; gathering professionals at national level to built an information from the profession directly available and quickly accessible to the ministerial direction of marine fishery.

The power of regional committees is limited to the territorial sea of their circumscription; implementing measures beyond their circumscription requires to extend the debate at national level. The national committee works like a platform where regional committees can confront their point of view. National and regional committees have similar scope of competencies and powers but at different geographical levels. Thus regulation transbounding regional border can be set up at this level like the implementation of special fishing permit (SFP) that are the equivalent of fishing licence at regional level.

The national committee, located near Paris, is also working very close to the ministerial administration. It is systematically consulted by the Minister on national and European measures on conservation and management of fishing resources; conditions of practising professional fisheries except fixation of salary and work rights, regulation of inter-professional organisation of marine fisheries and marine aquaculture. Relationships between professional's representatives of regional committees and the Minister are widely

organised through the national committee; professionals have thus an easy access to their minister and its upper administration and reciprocally.

Structural limits of committee power

If the legal competencies of national and regional committees may seem broad, they have fundamental weakness that lowers their real management capabilities. The main problem is the low adequacy between technical and financial capacities of committees and their legal competencies.

Bolopion et al. (2000) estimate the minimum necessary budget of a small regional committee from 91,000 to 12,000 euros. The current annual budget of a regional committee approximately ranges from 30,500 to 45,700 euros and the budget of a local committee reaches 15,300 euros. The lower budgets do not even allow to hire a permanent worker. In this context, their role stays sometime consultative and reactive when they could be initiator and proactive. Of course, there are different situations between committees and the president's personality and involvement into the Committee also play a great part in the effective role of its organisation.

A recent ministerial report from a member of French Parliament (Dupilet, 2001) points out the necessity to reinforce financial capacities of committees of marine fisheries. This report also points out the necessity to change current administrative practice in systematising committee's consultation at the earliest possible stage when a project even indirectly linked with fisheries is discussed. In fact, if professionals are consulted about measures directly related to fisheries matters, limits of this systematic consultation are not clear. This is especially true for projects and measures related to coastal development what is inconsistent with the actual trends of fisheries management issues. The work of regional committees, partly because their regulatory power is limited to the 12 miles, has been re-concentrated on coastal fisheries and small-scale fisheries. Several regional committees (Brittany, Languedoc-Roussillon, ...) are thus doted of working groups targeting fishing and coastal development in the territorial sea On this particular point, the situation is also changing, Following the Dupilet report, the national committee has been recently consulted on a report on national management plan on wind-farms at sea at an early stage of the process.

6.2.5 Conclusion

Most of the French fisheries institutional reform preceded EU-negotiations: the reform of inter-professional organisation preceded the Spain entrance in 1993; 1997 fisheries law that officiated the creation of OFIMER, CORECODE and clarified the overall rules preceded the current 2002 re-negotiation of the CFP. Thus, strictly internal driving forces like paternalism and state decentralisation are strongly covered by this external trend. It is worth noticing that the CFP driven force contributed to the regionalisation of French fisheries decision-making. This means in France to weaken decision-making at local level that was existing previously. On the other hand, regionalisation also contributed to devolution of power and decentralisation of competencies.

The CFP driven force as well as internal forces intervenes very unequally on decision-making processes. This fact will be highlighted by the two following case studies: Mediterranean small-scale fleet and Norway lobster trawling fleet in British and Ireland EEZ.

6.3 Mediterranean sea versus Celtic Sea, coastal small scale fisheries versus EEZ trawling fleet: two cases of decision-making process

The two cases chosen to illustrate decision-making process in French fisheries are deliberately opposed: Mediterranean Sea versus Celtic sea, coastal small scale fisheries versus EEZ otter trawling fleet. This choice is rooted on the noticing of the high diversity of French fisheries: three seas (Mediterranean sea, North sea, Channel) and one ocean (Atlantic) with different fishing conditions boarding its coasts, high diversity of vessels, fishing gears, species, cultural habits, markets and management setting. Beyond the diversity specific to the national fisheries context, the PCP does not apply equally on fishing zones: between Mediterranean Sea and the Atlantic, between French or foreign EEZ and coastal water. European common fisheries policy does not apply at all on certain fisheries.

Investigating the Groundfish and Norwegian lobster trawler fleet in the Celtic Sea is pretext to discuss formal and informal decision-making arrangements on quotas setting and implementation at all levels of the process and relationships with other EU groups fishing the same stocks in Ireland and British waters.

The Mediterranean case study highlights the integration of small-scale fisheries management in coastal zone use. It underlines action of territorial communities (municipalities, regional and general councils) and professional organisation specific to Mediterranean coast, the *Prud'homie* in fisheries management.

6.4 Process of quotas setting: the groundfish Norwegian lobster otter trawler fleet in the Celtic sea

The groundfish and Norwegian lobster bottom trawler fleet fishing in Celtic sea, with around 150 boats, is one the three major trawling fleet of Brittany, first fishing region of France. The core of the fleet is based along the southern coast of Brittany in the port of Le Guilvinec and more marginally Douarnenez et Lorient.

Beside *Norway Lobster* (*Nephrops norvegicus*, langoustines), benthic and demersal fishes are targeted; the main species are monk (*Lophius budegassa*, baudroie noire), cod (*Gadus Morhua*, morue), megrim (*Lepidorhombus whiffiagonis*, cardine), witch flounder (*Glyptocephallus cynoglossus*, plie cynoglosse), whitting (*Merlangius merlangus*, Merlan), plus haddock (*Melanogrammus aeglefinus*, églefin), common hake (*Merluccius merluccius*, Merlu) and Ling (*Gadus molva*, Lingue franche). This fleet is thus highly dependant on species managed under TACs fixed by the European Council.

Quota management in France involves scientists from IFREMER, producer's organisations, the Direction of maritime fisheries, the national committee of marine

fisheries, deconcentrated state services and more marginally the regional committee of marine fisheries.

Stages of decision-making in quota setting

If you choose the example of Norway lobsters from stock assessment to TAC and finally quotas, and landings, the history starts and finishes in France after a long road from IFREMER to CIEM to European Commission, CSTEP and Council and finally to national Committee, POs and fish auctions halls. The different stakeholders intervene at almost all levels of the process with a leader at each level and various formal or informal relationships.

Seven stages can be distinguished that involved local, national, European and international levels of decision (figure 6.2):

1. stock assessment by scientists of IFREMER, National level;
2. meeting at the ICES and fixation of TAC by the ACFM (advisory committee of fisheries monitoring), international level;
3. consultation of the scientific, technical, economical fishery council (STEFC) and proposition of national quotas by the European Commission, European level;
5. negotiation on national quotas by the European Council and final decision, European level;
6. division of the national quotas between producer's organisations, national level;
7. quota management into each POs.

From TAC to Quotas (Stages 1, 2, 3, 4, 5)

IFREMER is the national scientific institute in charge of oceanographic research including fishery research (stock assessment, fishing technology, environmental study ...). Stock assessments are made by scientists located in IFREMER stations along the coast. Few of these scientists participate to the advisory committee of fisheries monitoring (ACFM) of the ICES that produces TACs transmitted to the European Commission.

Stock assessment and establishment of reference points for stock under TAC is generally perceived by professionals as a crucial point in the decision-making process considering the current weight of biological data at European level of decision. Thus professional's expectation towards fishery biologists is high. Professionals express various opinions on what links should be strengthen with scientists to improve decision-making process.

The common professional's feeling, crossing French border, is that methodology of stock assessment are not accurate and does not reflect real stock abundance. In France, professionals contest scientific methodologies, but also the low number of researchers and the weak financial capacities given to scientists to proceed their work. There is a strong demand from regional and national committees to participate to stock assessment or at least expectation of including information from the profession into ACFM advice. At the other end, fishery biologists express a will of better explaining scientific bases of their work to professional to improve quality of reciprocal understanding. It is worth noticing

that a crucial part of the data used in stock assessment is coming from fishermen logbooks and fishing declaration.

Generally professionals and scientist agree on noting the last two or three years a common effort towards improving reciprocal relationships; several steps were recently made.

At local levels two types of action can be noted. Meeting are organised at professional demand on stock assessment of sensible species. Again the different level of expectations between the two groups leads sometime at serious misunderstanding, but also some ideas cross in each way and improve each other understanding.

An interesting example is the last ACFM meeting on Norway Lobster that occurred in Lorient. Professional from POs and committees asked scientists to organise a meeting with them at this occasion. The meeting took place but after the ACFM meeting what provoked professional's discontent: they wondered why discussing with them when decision was already taken. This event reflects difference between scientist's will to explain bases of their diagnostic and professionals that would like to carry out information usable to nuance ACFM advice.

This tension between biologist and professionals is mostly due to, on one hand, the apparent pre-eminence of biology in decision-making at the detriment of social and political considerations and on the other hand due to extremely centralised system and low level of professional input in decision-making at European Commission level.

Another type of platform is available to scientists and professionals to discuss on stock diagnostic. Every year scientists from Ifremer, attending ACFM meetings, are convoked by the Fleet and Quotas Commission at the national committee of marine fisheries. This meeting normally occurred after the European commission publishing its proposition of quotas. The purpose of this meeting will be discussed latter but at this point it is worth noticing that in 2002 at scientist's demand one meeting occurred after the ACFM advice but before STEFC consultation and propositions of the EU Commission. This modification responds to a will to explain scientific process outside political debate; it also meets professional desire to intervene at an earlier stage of the quotas setting process.

A new type of interaction, which does not apply yet to the Norway Lobster fleet, took place recently. The producer's organisation PROMA in southern Brittany that gathers a large part of the deep-sea species quotas has hired a biologist to work in tight collaboration with Ifremer. The presence of an internal scientist into the PO is conceived to improve and extend quality of data collection. This experience is innovative in the French context and under observation from the other producer's organisations; nevertheless it requires will from scientists and professionals but also available funding what decrease the potential extension of a such experience even if successful. On a very informal base, certain producer's organisations have also developed contacts with foreign fishery scientists working at the ACFM from countries where their fleet are fishing.

As written above, the Fleet and Quotas commission of the national committee of marine fisheries organises every year a meeting where scientists are present as well as members of the ministerial direction of marine fisheries.

For professionals, this meeting is a privilege time to discuss quotas proposition before European council takes place. Arguments against non-acceptable quotas, different ways to reach biological reference points and socio-economical data are gathered at this

time. This meeting is mainly a way for the central administration preparing the negotiation at the EU council to overview professional's positions and proposals.

Then the work of national committees is to convert this information in arguments and then to grade with the direction of marine fisheries points to negotiate. To perform this task more efficiently, engineers or scientists have been recently hired at the national committee and at the direction of marine fisheries. This relatively new tendency responds to the necessity of better understanding of EU-propositions based on biological data in order to defend French interest.

In 2002 the earlier meeting organised with scientists allowed to built information that could be used by the Minister but also by the STEFC French members that are consulted by the European Commission before it fixes its proposition.

Relationships between STEFC members and professionals are thus developing even if professionals have low confidence on the real power of STEFC to counterbalance European commission's objectives in quotas setting. Producer's organisations have also direct contacts with French STEFC members to provide data and professional's position.

Quotas repartition and management at national and local levels

National quotas negotiated at EU level are shared between producer's organisations (POs). Producer's organisations have been created in the 1960s before the building of common organisation of the market to defend and stabilise landing prices. Quota management by POs started almost informally in France before the appearance of official texts on the subject. The first quotas given to a producer organisation, the FROM Nord, were on North Sea herring before the stock collapse at the beginning of the 1980s. Management in this case was limited to a statistical review of the adherent vessel to ensure quotas won't be exceeded.

In the 1980s, the European Union extended quotas to an increasing number of species and parallel quotas sharing between professional organisations extended. Few quotas were shared only between POs, others like sole quotas were shared by sea coasts then divided between producer's organisations and local committees of marine fisheries. This last system revealed itself to be unmanageable mainly because committees had not the statistical and technical capabilities to participate efficiently to process.

In 1990, the partition of quotas between POs was officiated; the Minister of fisheries and agriculture gave to producer's organisations the quota management of seven 'sensitive' species. The targeted species were those of which quotas were fully utilised or exceeded the previous years: flounder, sole, cod, whiting, pollock, herring and mackerel. All the other species were managed under standard common national quotas.

The European Council also incited to use POs structure to manage quotas through the 1992 EU regulations (CE 3759/92, 17 September 1992). Between 1995 and 2000, the number of species under quotas increased sensibly as well as the number of quotas reached or exceeded. Consequently a long negotiation occurred between 1995 and 1997 on rules and process of quotas sharing between POs in France. The negotiation led to set operational rules, transcribed in the 1997 Law on fisheries orientation. Nevertheless, many gaps remained to solve practical problems that require regular negotiations at national level.

Negotiations were made more difficult because of the co-existence of two types of POs in perpetual opposition. At the origin the opposition was between POs of artisanal fleet affiliated to the federation of artisanal producer's organisations (FEDOPA) and POs of industrial and semi-industrial fleet affiliated to the association national of producer's organisations (ANOP). Nowadays both federations and POs includes industrial and artisanal vessels; the difference is mostly link with the status of POs: co-operative (FEDOPA) or non co-operative (ANOP). The two federations general express different point of view on quotas sharing process and PO's role on quota management. Two POs dominate Lobster Norway fishing in the Celtic Sea: the OPOB is a co-operative OP affiliated to the FEDOPA and the FROM Bretagne is affiliated to the ANOP.

The difficulties of negotiation are coming from a contextual fact. Industrial fleet went through a relative decline during the 1980; during the same time artisanal fleet was quickly growing. The three FROM, Bretagne, North and Southwest already had relatively sophisticated statistical system and were taking an account of their landings. This was not the case of co-operative POs, artisanal fleet fishing coastal water had no obligation to fill-up logbooks and their statistics were not very accurate. The sharing process is based on proved historical landings (antériorité de pêche), the ANOP wanted the quota sharing being only based on referred landings, the FEDOPA wanted to take account of the social and economic weight of artisanal fleet in absence of landings statistics.

This negotiation occurred between POs, the FEDOPA, the ANOP and the direction of marine fisheries. Finally, the federation of artisanal producer's organisations succeeded to impose two criteria other than historical landings to share the quotas:

- historical landings;
- economical and social interest;
- market interest.

In practice, only the first criteria are used, but the existence of the two others gives some flexibility of application of the law to the government in the future. The general philosophy of operational rules are maximising quota use for the benefice of the entire fleet and preserving the flexibility of fishing strategies. One quota is shared between POs only if more than 70% of the quotas were landed the previous year; if not, the quota is commonly fished by all POs and statistical records of landings are kept in case of future share. Quotas shared between POs are divided at the pro rata of the average landing of the three previous years. This last rule is made to adjust the quota division to the evolution of fishing strategies. If one PO does not consume its entire quota of one species, it informs its federation that will look for an other POs needing quotas of this species and inversely if one PO feels that it will exceed its quotas, the federation will look for unutilised quotas of this species elsewhere. This system is working into and between the two federations of POs, its goal is to maximise quotas use for the entire fleet; in consequences there is no monetary or other type of transaction between the PO that gives and the PO that receives part of the quotas. Once again to allow an evolution of quota share the following year, the part of the given quotas used by the demanding PO is divided in two parts: 50% will be attributed to the statistical record of the demanding POs and other 50% will be attributed to POs that part of its quota.

Now that this rule were negotiated and accepted by the POs, by the two federations and by the direction of marine fisheries, the annual process of sharing quotas is almost an administrative process. The administration sends to each PO, its calculation for each species with statistical details per vessel. Each PO verifies the data with its own statistic and then final calculations are made. When the final document is ready, it is revised by the Fleet and Quotas Commission that in this matter operates more like a chamber of registration.

Modalities of quota management into each POs are various, nevertheless the most common way is still a free access to the adherent vessels and in best cases a precise daily statistical review to follow the quota consummation until it is reached and the fishery closed. Nevertheless, with recent reduction of quotas, the issue moved from a situation of under-utilisation to a situation of over-utilisation of quotas. Certain POs starts to set up rule of quota distribution into the PO. Nevertheless professionals in France have in majority a negative opinion on individual quotas; one of the solution used is to share the quotas between fleets (type of fishing gear) of the PO. One of the other solutions is carry out by committees of marine fisheries. Regional and national committees are the structure able to set-up licences with associated rules to organise and limit fishing effort. Thus committees of marine fisheries play a role at the first stage of quota setting and at the far end of quota consummation.

6.5 Small-scale fleet (*les petits métiers*) in Languedoc-Roussillon, Mediterranean Sea

6.5.1 The small-scale fisheries

Continental Mediterranean French coastline stretches on 700 km, around 13% of the total French coastline (without DOM-TOM); in the 1990s, fishing landings (30,000 to 50,000t/y) as well as fishing units reaches approximately 1/5 of the total; 14% of the total fishing employment, but one quarter of the small-scale fishing employment are situated along the Mediterranean coast.

In opposition to the other metropolitan seacoasts, Mediterranean Sea has no EEZ; the territorial sea (12 miles for France) joined directly international waters. The common fishery policy framework originally covers Mediterranean Sea. Market and structural policies have been applied since 1983; nevertheless the implementation of technical measures of conservation policy to the professional has occurred only in 1995 (EC regulation n°1626/94), ten years after its implementation in the Atlantic Ocean and North Sea. Moreover, quotas on commercial species are not applied on Mediterranean fishing stocks.

In French Mediterranean coast 86% of fishermen fish into the territorial sea all *métiers*[1] included, and but small-scale fleet fishes essentially into the three or the six miles limits and in salty coastal ponds. The exploitation of strictly national fish stock and inland waters is under national jurisdiction and does not belong to the common fisheries policies. In consequences, decision-making arrangements small-scale fleet if facing are much more

[1] A *Métier* is a fishing practice defined by the association of a fishing gear, targeted species and fishing zone.

imbedded into coastal zone consideration and local particularities. The coastline of Languedoc-Roussillon is heavily used, industry and tourism compete strongly with fisheries. To illustrate the particularity of fishing very close to the coast or in inland salty waters in Mediterranean sea, decision-making process are analysed through two different events: a recent project of artificial reef carried by fishermen in the Gulf of Aigues-Mortes and the establishment and implementation of a clam licence in the pond of Thau.

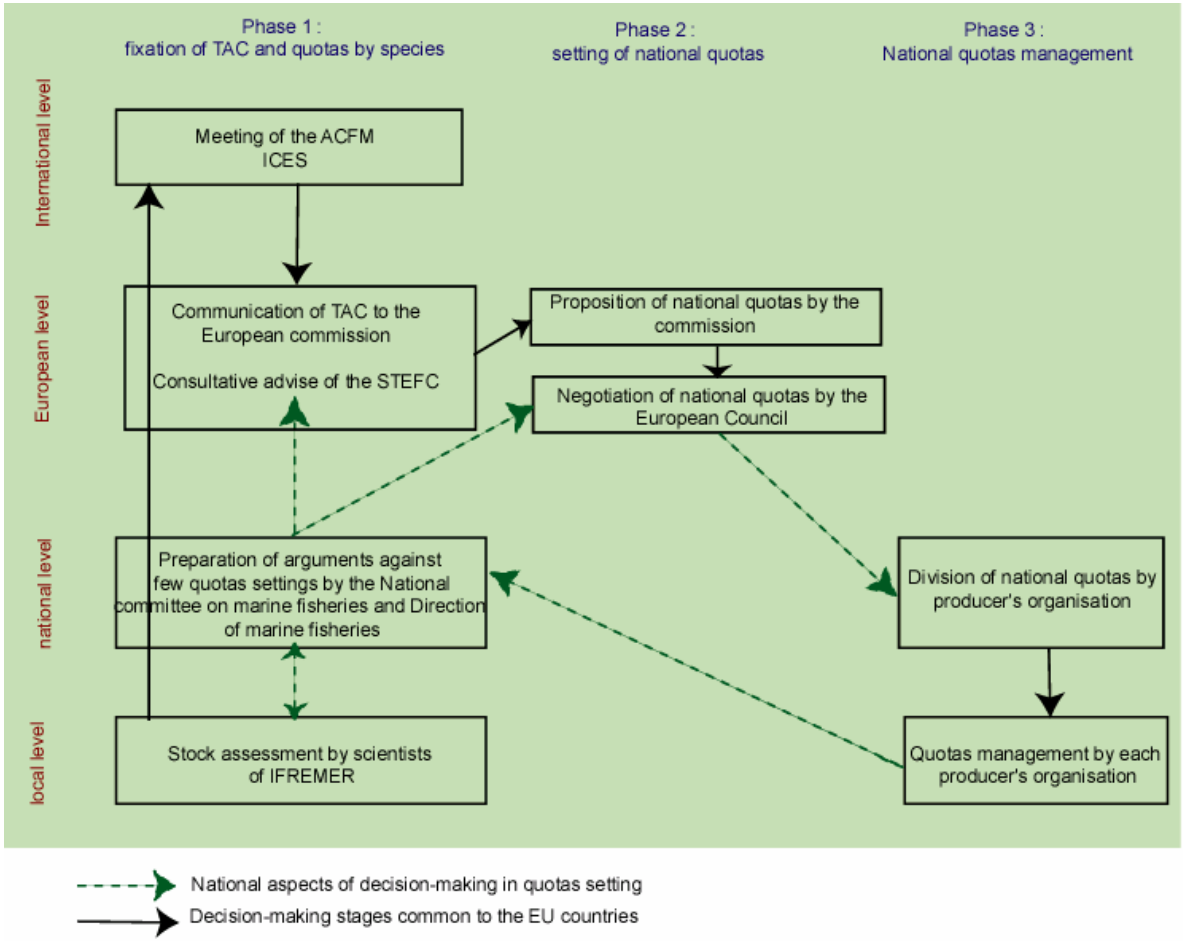


Figure 7.3 Stakeholders interactions during the different phases of TAC and Quota setting

Definition

The so-called 'small-scale fleet' in Mediterranean Sea covers a such override of 'métiers' that they are defined by opposition to the rest of the Mediterranean fleet. Small-scale fishery includes all 'métier' except trawlers (bottom and pelagic), seiners and draggers: the fishery is dominated by set gillnetting and trammel netting, besides combined gillnetting, lift netting, hand and boat dredging, set long-lining, trolling lining, pole-lining, traps and surrounding netting.

Approximately 90% of the Mediterranean fleet belong to the small-scale fishery. In the Gulf of Lions where the core of the fleet is concentrated 769 fishing units belongs to this fishery. Length of fishing boats ranges from 4 to 18 meters. This fleet is characterised by seasonal fisheries requiring multiple gears, targeting various species and exploiting diversified spaces; each fisherman practises several 'métier' per year.

Around 18 species are targeted, Seabream (Pagellus spp., pageot), common sole (Solea vulgaris, sole commune) and Mullet (Mullus spp., rouget), grey Mullet (Mugil spp., muge ou mullet) come first before Atherina spp., Gilthead (Sparus aurata, dorade royale), tellina spp. (télline), European Conger (conger conger, congre), Scorpion fish (scorpaena spp, rascasse), Dicentrarchus labrax (bar) and common hake (merlucius merluculius, Merlu).

Main management structures where small-scale fishermen intervene in Languedoc-Roussillon

Fisheries national structures are also existing in Mediterranean coast: commissions (COREMODE and CORECODE), syndicates, co-operatives and committees of marine fisheries. The regional committee constitutes in Languedoc Roussillon the main structure to promote their project and defend their interest. As in the national framework, they are represented by local committees but also by an old institution specific to the Mediterranean Sea, the *prud'homies*.

Prud'homies are professional organisations issued from medieval and *Ancien régime* corporations and organised by a modified decree of the 18 November 1859. There are thirty-three *prud'homies* covering the entire Mediterranean and Corsica coastline and ten in Languedoc-Roussillon. They are constituted by all the independent self-employed fishermen of their circumscription. Their competencies restricted to the 12 miles limits are focus on fishing organisation, regulations and conflict resolutions at local level. Their traditional intervention is more directed towards gear authorisation and characteristics, share of space between fisheries in coastal salty ponds, opening and closing dates of fishing. They are the initiators of most of local fishing regulations in the Mediterranean Sea.

Their weight and role in fisheries management are highly variable depend on the area; nevertheless they keep a moral authority especially regarding conflict resolution between fishermen. Their role in fisheries management seemed to weaken with the establishment of committees of marine fisheries and the priority given to development of trawling fleet in the 1970-1980. Nevertheless, for the last few years, it seems that they regain local power even if they have no official recognition in French fisheries management framework. Nevertheless, like committees of marine fisheries their weight depends strongly on the charisma of the their leaders It is worth noticing that presidents of committees of marine fisheries and prud'hommes are often personally invested in local politic. Regularly some of them occupies the post of Mayor or member of town council in charge of fisheries.

The regional Council of Languedoc-Roussillon has created an original structure, the CEPRALMAR, centre of study and promotion of salty ponds and marine activities. The structure is a tool of definition, animation and implementation of the regional politic of

coastal zone valorisation. This structure led by the regional Council integrates all partners intervening in fisheries and aquaculture and associates them directly to the definition of regional plans. The administration council is composed of territorial communities (regional and general council, 40%), professionals (regional and local committees, prud'homies, co-operatives, POs[1], 40%), The regional economic and social council (12%) and others (Members of IFREMER, maritime credit, maritime affairs, professional teaching structure, 8%).

Technicians and engineers of the CEPRALMAR work in tight collaboration with fishermen to built innovative projects; their work is complementary to the one of the Mission of marine affaires of the Region that ensures the administrative instruction of project, demand of subvention and preparation of report for the Regional Council.

6.5.2 Management of artificial reefs in the Gulf of Aigues-Mortes

Artificial reef immersion along the Languedoc-Roussillon coast started in the 1960s on a very empirical base and continued in the 1980s and 1990s, the Gulf of Aigues-Mortes project is thus embedded in a solid regional experience. Reef immersion in coastal sea has for official objective to support and develop small-scale fisheries that was in regression for the last 10 years. The expected impacts are:

- materialising space used by small-scale fleet;
- favouring concentration of high-value species and biologic diversity;
- limiting exploitation costs and risks in inciting fishing closer to the coast;
- favouring rationalisation of the exploitation in inciting to use more selective fishing techniques (longline, pots, traps) on reef.

The analysis of the decision-making process will be divided on stages: origin, design, partnership, following-up.

Origin of the project

Small-scale fishermen from Palavas les Flots and le Grau du Roi initiated the project. At the mid-eighties they solicited their prud'homies to built a project on oyster and mussel aquaculture in the Gulf of Aigues-Mortes. This project included immersion of artificial reefs to protect aquaculture farms at sea from destruction by other fishing activities. The Grau du Roi municipality is solicited to support the project with success, nevertheless fishermen at the origin of the aquaculture project left and only the project of artificial reefs remained.

The new project is supported by the two prud'homies and the territorial communities (municipalities and regional council), nevertheless it creates tensions between fishermen. On one side, trawling fishermen are opposed to the project. Trawlers are forbidden into the three miles limits, nevertheless under some weather and wind conditions, they still fish into

[1] The Mediterranean producer's organisations focus on trawling fisheries; small-scale fleet's landings are mostly sold directly at the wharf or to restaurants without going through public auction. Small-scale fisheries are then not concerned by withdrawal price and common organisation of the market. One of the other consequences is the known under-evaluation of the total French Mediterranean production.

the three miles limit. Artificial reefs are conceived as fish concentration device but small-scale fishermen also use them as tool to keep trawlers and draggers away from their fishing zone.

Project design

The project took several years: it was initiated in the mid-eighties and the first reef immersion occurred in 1999. During this time, technical meeting were organised to define what could be done, how, what partnership could be find. In its stage, technician from the CEPRALMAR played a leading role. They organised information meetings and concertations between the different partners: fishermen, scientists, administration, elected representatives of territorial municipalities. Work groups were organised to discuss and define reef characteristics: type, form of reef modules, localisation into the three miles limit.

Project partnership

To support the project, mayors of municipalities along the Gulf of Aigues-Mortes were contacted and informed on the project. They created a multi-actors syndicate for the development of fisheries and the protection of marine zone in the Gulf of Aigues-Mortes that supported politically the project. The syndicate gathers the regional Council of Languedoc-Roussillon, Hérault and Gard General councils, municipalities of Carnon, Palavas, Le Grau du Roi and La Grande Motte. It took decisions on reef characteristics (type, localisation) after concertation with the other partners; during the concertation small-scale fishermen had chosen two third of reef localisation and one third was chosen by otter-trawling fishermen.

The syndicate also managed the funding and delegation of the implementation to specialised enterprises or institutes. These structures are in charge of technical building of the project to obtain a concession on the public marine domain (*public maritime domaine*) and organise the call for tenders.

Fishermen are not represented in the syndicate, but as stated before several of the territorial communities representatives have the double cap: elected representative in municipalities and professional fishermen, president of committee of marine fisheries or prud'hommes. The current president of the syndicate is the municipality councillor on marine affairs of le Grau du Roi municipality, professional fishermen and the treasurer of the local committee of marine fisheries.

Implementation and follow-up

To implement the project, the syndicate relies on consulting company. On a first stage, one consulting companies realised an impact assessment of reef immersion. Then the syndicate delegated to another one the demand of concession. As artificial reef are immersed on the public maritime domain (*domaine public maritime*), a temporary concession must be granted by the State. In practice, this concession is given by the maritime and navigation service of the Languedoc-Roussillon that depends of the regional services of maritime

affairs. Another scientific organisms is in charge of monitoring and following-up the site: its uses and its colonisation by marines species, a first report was produced in 2001.

Perspectives

After this first project, other artificial reef immersion project is actually under study. The Syndicate is carrying this new project.

6.5.3 Clam licensing system in the pond of Thau

The pond of Thau is the biggest (1,700 ha) and the deepest (10m) salty pond in Languedoc-Roussillon. There is a large variety of exploited species and an extensive mussel and oyster aquaculture. Shellfish constituted for a long time the main income source; other shellfish were also abundant in the pond. Certain species disappeared but clam still constitutes a primordial resource. Until the 1970s, fisheries in the pond of Thau were productive; fishermen alternated fishing activities in the pond and at sea. During the summer time when shellfish suffers from the heat and several species are spawning into the pond, fishermen redirected their effort towards coastal seawaters. This informal management system of the pond was ensured by the cohesion of the profession in the prud'homie. The equilibrium broke in the 1980s, leading fishermen to envisage a clam licensing system.

1987 licensing system: a failure of the decision-making process

The prud'homie of Thau initiated the project of clam fishing licensing, led by the changing context in the 1980s. In the 1970s, maritime affairs accorded many fishing cards to new fishermen in the pond without consulting of professionals, in particular the Prud'homie traditionally regulating the fishery. Parallel, clam price increased significantly in the 1980s attracting new fishermen in the pond. Pressure on the resource increased also supported by the development of illegal fishing practices. Illegal fishing is an endemic issue in the pond but it reached a peak at this time with a convergent movement of increasing number of professionals and non-professionals poachers and the introduction of unauthorised fishing gear (scuba diving gears). To stop this process, the prud'homie of Thau pond suggested to limit the total number of fishermen by a clam licensing system.

Project design

The prud'homie could have edited a 'prud'homal' regulation, but then prud'hommes would have had to ensure its implementation and control. With the recent entrance of new fishermen in the pond and the development of an uncontrolled illegal fishing, the prud'homie felt not equipped to ensure this task by itself. It proposed the project to the administrative service of maritime affairs that accepted the principle and then led the project. Maritime affairs are then in charge of implementation and control.

Project implementation

A decree officiated the implementation of a clam licensing system in 1987. Following an agreement between IFREMER and the prud'homie, a license was issued to each fishermen of the pond; 750 licences are issued in 1987. Then to regulate licence issuance, a commission was created; it is presided by the regional director of maritime affairs and composed of IFREMER representatives and the prud'hommes of Thau pond. The commission examines demands and delivers licences. On commission's proposal, the prefect of Hérault department is responsible of cancelling temporarily or definitively licences of fishermen caught fishing illegally. Administrative services of marines affairs are in charge of updating the licensee file.

After a few years, fishermen noticed the total inefficient of the licensing system. The level of illegal fishing was still uncontrolled: controlling patrols were almost absent and even worse at the beginning of the ninety's, an evaluation of the licensee file showed a consequent number of dead fishermen in the file. Several time, fishermen asked the regional prefect to set up a stricter control of illegal fishing without result. They ask directly the Minister of environment, M Lalonde, to obtain a fishing boat to patrol on the Thau Pond. The boat was delivered but without motorisation. Facing the inefficient control system, prud'hommes decided to create their own police. They were patrolling in the pond accompanied by fishermen to stop illegal fishing. After two years this police stopped its activity discouraged by reprisals (destruction of fishing gears).

In the mid-nineties clam fishery is hit by new crisis: landings dropped and price decreased due to the importation of Tunisian clam. Facing this situation, fishermen decided to restore the management system.

1999 Licensing system: a new decision-making process for more success

The establishment of a pilot study

Facing the crisis, fishermen required a global analysis of the situation. A 'research-action' was initiated to complete this task. This study was partially financed by fishermen themself; CEPRALMAR, French State and PESCA programme were the other financial partners.

A working group was constituted with professionals (regional and local committees of marine fisheries, the four prud'hommes of Thau and the master prud'homme, State administration (Maritime affairs services), territorial community (CEPRALMAR) and scientist (fishery biologist, economist, political scientist). The working group defined three objectives:

1. elaboration and validation of a diagnostic;
2. presentation and confrontation of the diagnostic to all stakeholders of the sector;
3. elaboration and implementation of a new management plan.

Choice of management measures: working group's proposal

During the diagnostic phase and even more significantly during the validation phase, the choice has been made to elaborate a new licensing system in the pond of Thau. This licence would be managed by professionals that would fix the maximum number of licence

and issuance criteria. This licensing system would not be limited to the clam fishery but extended to the other resources (multi-species fishing licence) in order to control the total effort on the pond and to preserve the polyvalence of fishing activities. The system would be managed by the prud'homie of Thau.

Implementation and management of licensing system
Those proposals were accepted by professionals and a decree of the regional prefect officiated the licensing system in 1999. Since 1991, the regional committee of marine fisheries has the legal authority to manage licensing system in its circumscription; for efficiency purpose the committee delegated the licensing system management to the prud'homie of Thau pond. The prud'homie manages licence issuance and licensee file. Issuance of licence is conditioned by the inscription to the prud'homie of Thau submitted to entry criteria (registered fishing vessel, minimum number of fishing months).

Perspective
The new system is relatively successful, nevertheless it remains a consistent level of fraud and illegal fishing. The service of marines affairs in charge of fishing control proposed to the professionals to establish a system of transportation slip to help control illegal fishing. Each fisherman would have to fill a slip (fishing date, species and quantity by species) when he delivers its landings to the first buyer; the slip would be transmitted to the service of maritime affairs. The distribution of transportation slip will be financed by the prud'homie that received a subvention from the regional council for this purpose.

6.6 Conclusion

The case studies show on one hand a decision-making process strongly embedded in European context and in the other hand a decision-making process relatively free from European constraints. It is worth noticing that in the first case the main processes of decision-making involve national and local structures but occurred mainly at national or European levels. At the opposite, decision-making processes in the second case study involve strictly local and regional structures that operate at local level.

In a global perspective, the CFP had an influence on French institutional changes favouring regional level of decision at the detriment of strictly local level. French local structures revealed to be too weak to participate in decision-making processes at European scale. Certain regional and local structures, like POs and regional committees of marine fisheries, even suggest to organise trans-regional structures (by sea coasts or other types) to be able to face more efficiently the centralistic behaviour of European Commission. This is partly due to the financial cost for professional organisations to participate actively to decision-making process. This also due to the perceived necessity to represent the largest possible interest group to have a weight in the process.

In Mediterranean Sea where the impact of the CFP is lower and fisheries more concentrated into the territorial sea, local structures are much more involved into decision-making processes and fishing management. The re-direction of fisheries management

towards issue of space use in territorial sea and inland salty ponds even revived historical organisation like prud'homies that have no real recognition at national or European levels.

In both cases those trends meet the French politic of state decentralisation that transfers part of territorial organisation and monitoring to the regional Council after 1982. In supporting projects and financing investment inland and at sea, territorial communities are playing an increasing role in fisheries management. The second vague of decentralisation has been recently opened by the French First Minister, but it is too early to overview how it will impact on the fishery sector.

7. The Netherlands

7.1 General description of the Dutch fisheries[1]

7.1.1 Introduction[2]

Starting 1975, the implementation of a EU-TAC and quota system for certain commercial fish species changed everything in Dutch fisheries. It produced a major social, economic, cultural and institutional transition process. This process, although never ending, seems to have found calmer waters by the end of the millennium. Earlier, these waters were rough and wild, to the extent that not everybody could survive. A minister drowned, and several fisheries enterprises were ship wrecked or had to sheer away to foreign harbours and many honest fishermen became - against their will - pirates and traders in a black market.

This situation could not last and finally the parties accepted restrictions within a new management framework. For this purpose a new organisation has been created: groups of fishermen. The new management system is often referred to as co-management.

Here co-management is considered an *institution*. In the broadest sociological sense an institution is a cultural pattern or a system of roles that regulates behaviour concerning certain functions of group life. An institution need to become institutionalised, this process of stabilising interaction and communication patterns between people will result in more or less enduring social relationships and social balances (Van Doorn et al. 1962:123). However, institutions cannot come out of the blue and institutions cannot be designed and implemented by external authorities only.

> 'In the Dutch situation the co-management institution did not drop out of a clear blue sky, because there was history (the rough waters), but also there is an institution named neo-corporatism, which has some similarities with the concept of co-management. Next to this, a part of the fishermen had in the 1990s formed groups and pooled their ITQs, however their aim at that moment was not to co-operate with government and regulations (they were pirates and traders in the black market). Also external authority did not design the system; a steering committee, composed of fishermen of the national fisheries organisations, the chairman of the Fish Commodity Board, policymakers and a representative of the fish traders, agreed together upon a division of responsibilities in fisheries management.' (Stuurgroep Biesheuvel, 1992)

[1] This study is a compilation of parts of studies and articles on Dutch fisheries, by Ellen Hoefnagel.
[2] Hoefnagel 2002 Corporatist Origin of the Dutch Co-Management System, In: *Conference Proceedings IIFET 2002 conference: Fisheries in the Global Economy*, Wellington New Zealand. Forthconing in 2003.

By 1993 the responsibilities for quota management had been delegated to *groups* of fishermen. The fishermen, fishing for sole, plaice, shrimp, herring, cod and whiting possess an access right to the resource in the form of Individual Transferable Quotas (ITQs). In their groups they pool their ITQs and manage the total group share of quotas. In this they were successful.

7.1.2 The process of institutionalisation

For the purpose of dividing responsibilities of fisheries management tasks a new organisation has been created: fishermen's groups. This new management system is referred to as co-management. The concept of co-management is not precise (OECD 1996), but is a broad term referring to joint management, most often used in relation to resource management with considerable input from the users/stakeholder or local communities (Karlsen et al., 2002). Here co-management is considered an *institution*. Organisations and institutions differ in the sense for instance that an organisation can be established over day, while institutions have to grow in time. One could say that an institution gets under your skin. Institutions do have the following characteristics (Bunte, 2002):

(1) 'Institutions restrict the set of possible actions in one way or the other by laying down some 'do's' and 'don'ts'. The regularities require or forbid certain actions in certain situations.'
(2) 'Institutions create regularities in the behaviour of individuals. Everyone conforms to the regularity and expects everyone else to conform as well. If someone deviates, sanctions are imposed on the deviator. Moral values are attached to both conformance and non-conformance. These values are used to reinforce institutions: conformance is approved and non-conformance disapproved.'
(3) 'A social institution offers a solution to a co-ordination problem; a perennial, basic problem. Individuals face a co-ordination problem, if they all decide by themselves which action to take and all these individual decisions jointly determine the outcome (payoffs). Institutions restrict the set of possible actions and outcomes, and hereby they enable individuals to co-ordinate their behaviour. This allows stable expectations, for instance.'

These characteristics consider behaviour but also mention expectations, moral values and (dis-)approval. These concepts point at an invisible world, a world inside heads of individuals sharing meanings, values, and norms with each other. It is not difficult to learn rules and regulations. However, to learn common sense, meaning of behaviour or non-behaviour, preferences, shared emotions, biases and blind spots is something else.

In the Dutch situation the co-management institution did not develop overnight, because there was history (the rough waters), but also there existed institutions like neo-corporatism and compartmentalisation, out of which the concept of co-management 'grew' in a way.

Neo-corporatism and compartmentalisation

In the Netherlands corporatism is a social doctrine that has the organisation of civilians in occupational groups (corpora) as an ideal situation. Corporatism has an organic worldview: not conflict is central in the corporatist way of thinking, but the harmony between different societal groups. In Western Europe after 1945 welfare states came into being that had corporatist features. Firstly, the creation of welfare states was only possible by a compromise between employers and unions. A compromise that in the Netherlands persisted by organisations as the Council of Labour (Raad van de Arbeid) and the Social Economical Council (Sociaal-Economische Raad). Next to this the Netherlands had other corporatist features, because the 'verzuiling' or the compartmentalisation along political-religious lines, formed a 'consociational democracy'. In this compartmentalised society, political decision-making lay in the hands of the elite of the different compartments. In this democratic model the same-layered social structure can be found as in corporatism. In the fifties the 'verzuiling' was at it's peak. The decompartimentalisation, 'ontzuiling', started in the sixties, leading to a new form of social structure, which is called neo-corporatism. The social organisations that before belonged to a 'zuil' or political-religious compartment and their elite operate then as interest groups. Those interest groups take far-reaching decisions in consultative bodies without consulting the parliament.[1]

Frouws (1997) who studied the manure policy in the Netherlands says about the Agricultural Policy Community (ACP) and it’s reactions on restrictions:

> 'Interest intermediation and policy formation in the APC can be analysed as a neo-corporatist exchange, characterised by a close partnership between the organised agricultural interest and government ... The participating organisations were granted the privilege of influencing public policymaking in exchange for their cooperation, the legitimisation of negotiated policies and the disciplining of their constituency. This neo-corporatist exchange was 'ruled' by a permanent search for consensus, elitist decision-making, membership passivity and isolation vis a vis non-agricultural 'outsiders'. The APC was like a state within the state and the Landbouwschap functioned as the 'farmers parliament'. It had a near monopoly of political power and expertise and thus provided the farmers' lobby with a great advantage over environmental and other interest groups' (Frouws 1997:211).

One could read in a way for Agricultural Policy Community: The Fisheries Policy Community. The Fisheries Policy community consisted of:

- experts from the Ministry of Agriculture and Fisheries (The Fisheries Directorate);
- the Fish Commodity Board;
- leading fishermen's representatives;
- members of the Parliamentary Committee on Fisheries;
- economists from the Agricultural Research Institute (LEI).

[1] Encarta Encyclopædia.

During the 'rough waters' period, when the Fisheries Policy Community could not or did not want to legitimise Common and national Fishery Policy and especially after the 'drowning' of a minister in 1990 Parliament wanted more influence so fishermen and their representatives had to change their attitude. In 1993 the Steering group, partly composed of people from the Fisheries Policy Community and fishermen, came up with the idea of co-management. Which in a way is comparable to neo-corporatism, it is democratic but less elitist. Fishermen nowadays are less atomised individuals that do not leave policy to the elite. They have formed homogeneous occupational groups with group responsibilities that have to take in account the wider society.

Re-institutionalisation

So in the sixties and seventies, when the Netherlands became de-compartmentalised and influence of the European Union became stronger, especially noticed by fishermen through the TAC and quota regulations, the institutions of the political-religion compartment, the Fisheries Policy Community and the freedom of the seas were shaken. A kind of institutional gap arose: there was no well functioning institution in this period of adjusting to restrictions.

The new institution - co-management groups - could fill the gap. The process of institutionalisation can better be understood as a process of re-institutionalisation. This is seldom a process in which total new values, aims, norms and expectations will be born out of the interaction. Mostly it is about reforming old elements into new combinations (Van Doorn et al., 1962).

Within Dutch society family enterprises are important. Through the value of having a healthy family enterprise that earns good money, values like hard work, respect, austerity, saving, sovereignty and capitalism are passed on to the next generations. When the process of de-institutionalisation developed, fishermen started to fight for the continuance of their family enterprise and their way of life, their position in (large) society, in their villages, among their colleagues. They still valued those core values hard work, sovereignty and capitalism. As a fisher put it: 'I have always worked hard and I had learned that it was good to work hard, I continued to work hard and landed amounts of fish I was used to. I caught what I could catch. Then suddenly I found myself in prison. What was good yesterday was criminal today'.

Although it looked as if the value 'hard work' was attacked, this was not really the case. The case was that catches were restricted. The meaning of hard work was not synonymous any longer with large quantities of fish. The core value sovereignty had changed. This meant that those family enterprises had to take more and more in account the wider society and especially environment.

This of course counted for the whole of (Dutch) society; however, fisher families (and farmers) were the ones to notice this so intensely. Sole and plaice fishermen were the ones (or that part that was left, there were winners and losers) that could adapt to the new situation the best. They found a capitalistic solution to their restriction in sovereignty; they became gradually owners of the right to catch fish. Fishermen nowadays do not fight government any longer, because they understand they have to cope with restrictions or otherwise stop their enterprise. Their goal remained to continue their family enterprise and

derive good living from it. Means are still hard work and capitalism became more important. Respect for government after a decrease is gradually growing, the level of sovereignty changed (lessened), austerity is less, more luxury is permitted, savings are important but investments are more important. The goals remained the same, values and means are gradually adapting to new situations - the importance of co-operation in groups -, however core values like hard work and capitalism remain the same. Co-operation in groups means a real new adaptation to fishermen. They changed from atomistic individuals (at sea, not in their communities) who left politics to an elite, into co-operative individuals taking into account colleagues, policy, the wider society and environment.

For the ministry situations changed as well. The ministry changed its attitude gradually from co-operative towards the fishing sector (neo-corporatism) to a restrictive, authoritarian one and lately into a restrictive, but a less authoritarian attitude and now co-manages the National quota with fishermen. For the future of the co-management system it seems to be important that groups of fishermen do not only get delegated responsibilities, but also need to become more involved in the decision-making process. A start is made by the North Sea Commission Fisheries Partnership Group, which tries to tune the knowledge systems of biologists and fishermen. Legitimacy of policy and TACs adjustments is the cornerstone of co-management and participation in decision-making will enlarge legitimacy. In the near future new restrictions concerning food safety and environmental demands will make the life cycles of the family enterprises again uncertain and will be a test to their adaptive strategies.

Organisations, institutions and human behaviour are in the long run not completely stable structures. People do change their pattern of behaviour, institutions, organisations, ideas and group balances when their aims change or when they find other, better ways to reach their goals.

7.2 The Oakerson framework and co-management experiences in the Netherlands

7.2.1 Introduction

In the Netherlands since 1993 more responsibilities in fisheries management have been assigned to fisheries organisations (groups within POs). The management system in the Netherlands is referred to as a co-management system. In the new system individual quotas are managed by user groups, while government remains responsible for the compliance with the common Fisheries Policy.

Objectives of this study are:

1. to analyse experiences with co-management in the Netherlands in order to determine conditions for successful co-management;
2. to study the legal, economic and social effects of co-management on individual, organisational and governmental level;
3. to evaluate the effectiveness of the Dutch co-management system.

The study aims to assess the different factors that determine the effectiveness/success of co-management. For that purpose the experiences of the different actors in the new system have been studied. The positive and negative experiences of individual fishermen, fisheries organisations, and the Dutch government were analysed, taking into account all relevant legal, economic and social aspects. The relations between the groups and their members on the one hand and the groups and the government on the other were investigated in order to understand the developments and the outcomes of co-management. Special attention has been paid to the effects of a combination of an ITQ system and co-management on the social and economic position of fishermen.

In order to reach the objectives and to structure this report a conceptual framework (of Oakerson) to analyse 'commons' is adopted. The reasons for this are twofold: 1) it delivers an analytical tool; 2) the framework makes international and systematic comparison possible. Different international fora are interested in commons, in this case fisheries management. For example the OECD [1], and scholars like Jentoft and McCay (1995). When we analyse fisheries management, we study questions related to commons management. This is so because the use of the commons is characterised by individual consumers who appropriate a portion of the (shared, EH) flow of benefits and make that portion unavailable to others (Oakerson 1992: 41). Translated to our fisheries subject this means: the use of the European Union fishing grounds and the fish stocks occurring in this territory is characterised by individual European fishermen who appropriate a portion of those fish stocks and make that portion of fish unavailable to others. Unlike pure public goods (listening to the wireless, for example), the commons (fish stocks) cannot be shared without limit. This asks for coordination, or management. Fisheries resources are managed in a variety of manners: ranging from external authority regulation to self regulation by user groups. All kinds of in between variations exist. In the Netherlands the Dutch portion of the European stocks has been 'co-managed' by user groups and government since 1993. The Oakerson framework gives room to these variations, by distinguishing different, so-called decision-making arrangements.

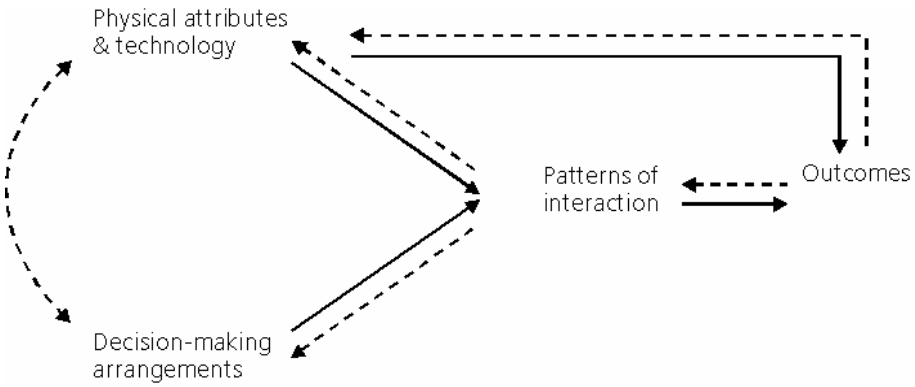


Figure 7.1 A Dynamic Framework for analysing the commons
Source: Oakerson (1992).

[1] Nielsen and Vedsmand (OECD issue paper on the efficient management of living marine resources: cases from Denmark, 1995) adapted this model for analysing fisheries co-management arrangement in a slightly different manner.

The framework consists of four sets of attributes or variables that can be used to describe a commons: 1) the physical attributes of the resource and the technology used to appropriate its yield; 2) the decision-making arrangements (organisation and rules) that govern relationships among users and relevant others; 3) the mutual choice of strategies and consequent patterns of interaction among decision makers; and 4) outcomes (ibid: 43).

In this report these four attributes will be described for the management of the Dutch quotas, especially the flatfish quota, focusing on the new management scheme which is referred to as co-management.

After studying the outcomes, we will try to use the model as a diagnostic tool working backwards through the relationships between the variables in order to understand conditions (and obstacles) for effective and successful co-management.

Research questions

1. How did the new co-management scheme function?
2. Does the new management scheme lead to an efficient quota management?
3. Does co-management improve the distribution of net benefits?
4. What are the conditions of effective and successful co-management?

7.2.2 Physical & technical attributes

In this chapter we consider the physical attributes and constraints of the natural resource Dutch fishermen exploit as well as the constraints placed upon the used techniques.

Boundaries/jointness

The Dutch fleet is fishing the coastal waters (12 miles zone), the mid-distant waters (North Sea), and the high seas. In this study we only consider the Dutch cutter fleet fishing the North Sea, because this is the main fisheries in the Netherlands and this type of fisheries is involved in co-management. The cutter fleet fish mainly for demersals, like sole, plaice and cod, whiting and also pelagic fish, like herring. Physical boundaries are the fluctuating sizes of the different stocks fished for in the European waters, especially the North Sea. These North Sea stocks are joined with some of the European Union Member States bordering on the North Sea, namely Belgium, Germany, Great Britain, and Denmark, and to a certain extent with the non-Member States Norway, for plaice.

Excludability

Since 1977, fishermen of non-EU Member States are excluded from the European Union part of the North Sea (200-mile zone/Exclusive Economic Zone). EU fishermen are sometimes seasonally banished from fishing grounds which function as nursery areas.

Subtractability

In 1993 473 Dutch cutters fished on the North Sea, with 2,184 fishermen aboard. Total HP in 1993 was 491,000. The Dutch fishing enterprises are family-based, fishermen are paid a

share wage. Since 1960 the beamtrawler is the cutter type fished with. Because physical boundaries and technical attributes were not in equilibrium various kinds of measures to recover equilibrium have been introduced since 1975, some of a technical nature and aimed at a capacity reduction. Below we describe decommissioning schemes, licensing systems and fishing gear measures.

Decommissioning

As has been stated above the capacity of the Dutch cutter fleet has been bigger than necessary to catch the allotted quotas since the introduction of quotas by NEAFC in 1975. In 1975 the government set up a decommissioning scheme for the cutter sector. In the years 1975 and 1976 165 ships were laid up. After 1976 the interest for decommissioning weakened, mainly because sole catches and prices were high. In 1987 the fishery industry and the government agreed on a new decommissioning scheme to which the industry contributed again. Over 90% of the decommissioning costs have been financed by the EU. The direct result[1] of the decommissioning programme has been that 135 vessels have been withdrawn from the fleet. These vessels represent 22% of the engine power on the fleet as at 1987. However, the withdrawal of 135 vessels did not result in an equal reduction of the size of the fleets: mainly the fleet fishing for cod and whiting has withdrawn vessels without replacing them. Withdrawn beam trawlers have in general been replaced. During the running time of the programme, the fleet size has also been modified by replacement investments and international transfer of vessels. In 1987 616 vessels sailed with a total of 560,000 hp, in 1994 this was respectively 469 and 492,000 (see also table 7.3). The capacity reduction achieved, has resulted in a 70% reduction of effort on cod and whiting catches. The programme had no substantial impact on the total fishing effort on sole and plaice, due to the allocation of extra sea days to remaining vessels. The decommissioning programme has been much to the benefit of the remaining fleet.

Licensing

In 1985[1] capacity licensing was introduced in the Netherlands in order to maximise total engine power of the fleet. On a licence the engine power of a vessel is registered. Fishing licenses can be freely transferred. It is also possible to aggregate more than one license on one vessel. The licensing scheme is coupled to the EU Multi-annual Guidance Programme. When the licensing system was introduced fishermen could get a license for their existing engine capacity and for engine capacity for vessels under construction. The latter provision in the scheme resulted in additional new capacity. By the end of 1988 the fleet had expanded by 14 per cent compared with the position before licensing. In 1987 measures[1] were taken to prevent the constantly increasing engine power of individual fishing vessels in the beamtrawl-fleet. The maximum engine capacity in new vessels was specified at 2000 HP. At the time of establishment of the measure some 80 beamtrawlers exceeding 2000 hp were already in service or ordered previously. These existing vessels were allowed to

[1]An appraisal of the effects of the decommissioning scheme in the case of Denmark and the Netherlands. Draft final report 10-4-1995. Danish Institute of Fisheries Economics Research.

continue operations. But in case of transfer of (part of) these licenses without the >2000 hp vessel the engine power exceeding 2000 pk can not be transferred.

Fishing gear

In order to limit the fishing capacity of the Dutch beam trawl fleet further a maximum beam width was introduced in 1987. Each of the beams may not exceed 12 meters.[1] This measure was adopted as an EU-technical measure later on. Beam trawling inside the 12 mile zone is restricted to smaller vessels (up to 300 HP). For these vessels the maximum beam width is 9 metres (two times 4.5 metres).

Another technical measure is the implementation of minimum mesh sizes, in order to reduce the rate of fishing the youngest age groups of fish stocks. According to the Biesheuvelreport (June 1992: 7) however, the technical capacity of the Dutch fleet is still too big (for the allowable catches).

7.2.3 Decision-Making Arrangements

In general, decision-making arrangements are defined by authority relationships that specify who decides what in relation to whom (Oakerson, 46). In the framework of Oakerson, decision-making arrangements are divided into operational rules, external arrangements and collective choice arrangements.

In this report the operational rules concern the management/regulation of the use of the European fish stocks and the national quotas; the external arrangements are here defined by decision structures of organisations and institutions outside the immediate user-group; collective choice arrangements are rules that establish conditions of collective choice within the user-group.

Operational rules

The development of the Dutch fisheries management system till 1993
The main components of the Dutch fisheries management system[1] are quota management, capacity and effort limitation, and enforcement regulations and agreements. This set of rules and regulations evolved gradually. The Dutch management scheme is nested in the Common Fisheries Policy (CFP) of the European Union.

Quota management
The Dutch quota management system has developed over the past 20 years. For different groups of species different methods to manage national quotas have evolved. The system and its development can be described as follows:

Plaice and sole

In November 1974 the North East Atlantic Fisheries Commission (NEAFC) established TACs for the year 1975 for several species including plaice and sole. The Dutch flatfish

quotas were set considerable lower than the 1973 and 1974 flatfish landings. Dutch catches of plaice and sole had to be reduced by 10 and 40% respectively.

The Dutch government officially delegated the management of the national quotas to the fisheries industry. The Fish Commodity Board (FCB) was asked to fulfil this task. The FCB developed a regulation[1] to limit effort and landings in the flatfish fishery. On the basis of this regulation several decrees of the chairman of the board were established. However on 22 November 1975 sole fisheries were closed because the national sole quota was exhausted. At the beginning of 1976 the FCB returned its quota management task to the government. In 1976 the government introduced individual quotas in the fishery for plaice and sole. The minister of Agriculture and Fisheries stated in parliament that a system of individual quotas could increase operational certainty. It would enable fishermen to maximise their profits by regulating their landings and to plan their fishing activities in advance and discuss their plans with their financiers. A limited part of the national quotas was not included in the allocation, but was kept as a 'National Reserve'. This reserve was meant to compensate for eventual excess landings.

The quota was allocated on the basis of historical catches and/or engine power. The individual quotas received by fishermen that exploited their ship prior to 1 January 1974 were based on the highest amount of plaice and sole landed in the years 1972, 1973 and 1974. For ships under 1,250 hp commissioned after this date, quotas were based on the average performance of the vessels in the same hp-group. For ships with more than 1,250 hp, quotas were fixed by the Ministry. This system met a lot of resistance from parts of the industry because it resulted in considerable differences in quotas between vessels of similar capacity. As a result, the system was revised in 1977, adjusting IQ's both to engine power and to historical performance. The 1977 allocations are still the basis of the present quota system.

In the 1977 system, fixed by-catch quota per hp-group for non-beam-trawlers over 250 hp were frozen at the 250 hp level. This resulted in a relatively large number of small quotas. Because of their limited size these quotas are often referred to as 'mini-quotas'.

When the quota system was introduced in 1976 flatfish quotas formally were only transferable together with a vessel. Soon however it proved to be possible to circumvent this rule by using legal constructions. In 1985 quotas became officially transferable without a vessel.

The transfers are subject to the following rules:

- quotas can only be bought by owners of a fishing vessel that is registered on a EU list and who are in the possession of a licence;
- fishermen can only sell their plaice and sole quotas as a total whereas it is allowed to buy parts of these quotas;
- the transfers have to be approved and registered by the Fisheries Directorate.

Since 1985 the transfer of quotas is subject to rules restricting them to limited periods during the year. This was done to prevent doubtful transfers at the end of the year when quotas are nearly exhausted.

Cod and Whiting

The NEAFC 1975 quotas for cod, whiting and haddock were relatively high compared to Dutch landings in previous years, so initially no national measures were needed to comply with these quotas. In 1979 quota management responsibilities reverted to the Dutch government again. In this year cod was very abundant in the North Sea and catches were high, so that by September the 3rd the national cod quotas was exhausted and the cod fishery had to be closed. To prevent the early closure of the directed cod fishery a system of permits (K-documenten) for the directed cod fishery was introduced in 1981. Under the new system part of the national cod quotas was reserved for the 'K-document' holders (20 vessels with a long cod fishing history). This part was based on an amount of 200 tonnes per vessel.

In the early 1980s the Dutch beam trawl fleet expanded considerably. As a consequence more cod was caught as a by-catch and the part of the national quotas reserved for the roundfish fleet came under pressure. To reduce the cod landings of the beam trawl fleet, in August 1985 landings by beam trawlers were limited to 200 kg (5 boxes) a week. This measure could not prevent the early closure of the cod fishery in 1985.

On 30 December 1987 the management system for the roundfish fishery was revised.[1] In addition to the 'K-document' roundfish (R-document) and seasonal roundfish (SR-document) permits were introduced. A fisherman could obtain an R-document if at least 65% of his income in at least two out of the years 1984, 1985 and 1986 was obtained by landings of cod, whiting and haddock. A S-document was given to fishermen who could demonstrate that at least 25% of their income in 1987 was made up by landings of cod, whiting and haddock and who had fished at least 6 succeeding weeks with trawl nets or static gear. The national cod quotas were divided between the three groups of permit holders and the fishermen without a permit (mostly beam trawlers). To regulate the uptake of these quotas and to prevent early closures a maximum weekly amount of landings of cod and whiting was set. This measure (kistenregeling) has been criticised by fishermen because its inflexibility. Fishermen have been obliged to throw fish overboard when catches were too high whereas weeks with low catches could not be compensated for. The 'K-, R- and S-documenten' were not transferable without a ship until 1 January 1994. The Ministry had to be asked to issue a new permit to the new owner in case a ship was sold. When a ship was laid up the validity of the document expired. The permits were explicitly not cumulative. On 1 January 1994 the system was revised again. Nowadays permits can be transferred without the transfer of a vessel. It is also allowed to cumulate permits. This is expected to lead to a flow of permits (fishing rights) into the beam trawl fleet. Another important change is the change from weekly to monthly quotas.

Herring

For the few vessels fishing seasonally on herring a licensing system developed into group (PO) quotas that work out as ITQs in practice.

Effort regulation

Apart form a capacity reduction which already has been discussed in section 2, there also exist another input reduction regulation: the days at sea regulation.

Days at sea
To adjust fishing effort to the national quotas a restriction of the number of days spent at sea (Zeedagenregeling 1987) was introduced in 1987. The year before an obligation to tie up vessels for a number of weeks spread over the year had proven to be ineffective. The allocation of days within the framework of the days at sea measure is dependent on type of fishery, documents, individual quotas and engine power.

So far the operational rules till 1993. In 1993 a new management system has been introduced, above-mentioned schemes like ITQs, licensing system and days at sea regulation remain operative. Before we turn to co-management we first will give an outline of institutions and organisations playing a role in fisheries management and decision-making arrangements.

External arrangements

Institutions of government-industry cooperation are commonplace within fisheries nations of the Western hemisphere and user participation is an integral part of a country's fisheries management regime (Jentoft and McCay, 1995:233). However, how these institutions work is dependent on their design as well as on how they are implemented in their context. Basically, there are three alternatives available for institutional design that to a varying degree allow user-groups to be involved:

1) Government may restrict its role to informing user groups of decisions it is ready to make;
2) Government may prefer to consult with user groups (for instance by setting up advisory boards);
3) Government and user groups may co-manage the resource (ibid: 229).

What follows is an outline of institutions and organisations playing a role in the Dutch fisheries sector and sometimes playing a role in management. We will classify management influence within the three mentioned categories.

Non-user group institutions and organisations playing a role in Dutch fisheries management[1]

Supra governmental
Each year the European Commission determines Total Allowable Catches per species and area in the European seas, on the basis of biological advice (ICES) and political negotiations. The Dutch minister of Agriculture, Nature Management and Fisheries is a representative in the Council. The EC also determines the Common Fisheries Policy for 10 years, now till 2002. The EC allocates national quotas for different species to the Member States. The EC *consults* the Advisory Committee on Fisheries which consists of representatives from all sectors of the fishing industry plus consumers. The European

[1] The institutions mentioned in this and next section have partly been extracted from one of the reports of an EC funded research project (no. AIR2-CT93-1392) on the role of producers' organisations in EC fisheries Management: Phase I national report, the national fisheries management system of the Netherlands, LEI-DLO 1994, Bert Keus en W. Smit.

Association of Fish Producers' Organisations and Europèche have representatives in the Advisory Committee, which consists of three sub-committees. Relations between the sub-committee on resources are strained for the reason that the sub-committee is frequently not consulted on proposals (concerning TACs) until after they have been adopted by the Commission (Holden 1994: 211-212).

Governmental institutions

The central governmental institution dealing with fisheries management is the *Directie Visserijen, Ministerie van Landbouw, Natuurbeheer en Visserij* (Fisheries Directorate of the Ministry of Agriculture, Nature Management and Fisheries). This Directorate is responsible for the establishment of fisheries management schemes. The Minister has to discuss and give account on fisheries matters in Parliament.

Furthermore within this Ministry there is the *Algemene Inspectie Dienst* (General Inspection Service) which is monitoring fishing activities and has legal powers to lead violators to court.[1]

Collective choice arrangements till 1993

Collective choice arrangements are defined as rules and tasks that are included in the responsibilities of user group organisations that establish conditions of collective choice. Collective choice arrangements concern the management of the common.

In between institution

The Fish Commodity Board.

For the fishing industry the central institution is the *Fish Commodity Board* (Produktschap voor Vis). The FCB works according to a law, determining a system of public bodies by industry sector. In the FCB all sectors in the industry are organised: the catching sector, aquaculture, processing and trade on wholesale level, retail trade and trade unions.

Every firm in the country contributes financially by means of an obligatory levy. This levy is organised differently according to sectors:

- fisheries and shell fish culture: levy on sales;
- aquaculture: fixed amounts per business;
- processing and trade: levy on purchases, including imports;
- retail trade: fixed amounts per business.

The industry is represented through national and regional professional organisations. These organisations appoint delegates in the central board and in sectoral sub-boards. For the Fisheries Directorate this FCB is the logical partner in discussions of proposed management schemes. The FCB is less involved in the execution of the schemes. However, in some cases translation of national or sectoral schemes into sectoral or individual fishing rights was organised by the FCB (for example herring quotas between trawler- and cutter sector and individually for cutters; individual shrimp fishing licenses).

For the FCB a central management task is developed in monitoring and steering the functioning of POs and from 1993 on, of co-management groups. The FCB has the ultimate responsibility for their functioning.[1]

User group organisations

Producer Organisations
In the Netherlands *Producer Organisations* were set up according to EC rules in 1971, originally mainly playing a role in the implementation of the common organisation of the market for fishery products. Until 1986 there existed only two POs in the Netherlands: PO-West and PO-Oost. In 1986 and 1987 PO-Wieringen and PO-Vissersbond came into existence respectively, of which the latter became really active only in 1993. Since the introduction of the co-management system new POs came in to existence (see below). In 1993 about 95 per cent of the Dutch fishing fleet was a member of a PO. As we saw already these POs are represented at the European level.

Local, regional, national and (sub)sectoral organisations
The industry itself is professionally organised in a number of organisations on local, regional, national and (sub)sectoral basis.[1] Apart from their contribution in the establishment of management boards of the FCB these organisations are only sideways involved in discussions of (proposed) management schemes. The professional organisations working on a national or regional basis in the catching sector (excluding organisations of fisheries sectors not being dealt with in this study, like fresh water fisheries, aquaculture, shell fish culture, et cetera) are:

- *Nederlandse Vissersbond*. This organisation is built up out of a number of local organisations. It contains a part of the beamtrawlfleet, a big part of the roundfish fleet, the majority of the shrimp fleet and a number of multi-purpose vessels, based all over the country;
- *Federatie van Vissersverenigingen*. This Federation combines some local organisations, especially those organizing the bigger beam trawlers. These are mostly based in Urk, Den Helder, Texel, Goedereede and Katwijk.

Conclusion
It can be concluded that until recently the execution of the management schemes was centralised to a large extent. The European Commission and The Council annually sets TACs still without consulting relevant partners in the industry (the sub-committee resources). Although the Dutch government officially delegated the management of the national quotas to the fisheries industry, through the FCB in 1975, the FCB returned its quota management task to the government one year later. Still, for the Fisheries Directorate the FCB is the logical partner in discussions of proposed management schemes. Apart from their contribution in the establishment of management boards in the FCB, fisheries

[1] One of the organisations arising from the FCB is the *Sociaal Fonds voor de Maatschapsvisserij*. This organisation is dealing with a mutual social security system for fishermen working on a share basis. These fishermen are not considered as employees in the sense of the national social security systems.

organisations are only indirectly involved in discussions of (proposed) management schemes.

From the three alternatives available for institutional design that to a varying degree allow user-groups to be involved, government restricted the role of user groups to informing them and consulting the CFB. In 1993, however, part of the executionary responsibilities was delegated to the fishing industry. The Dutch government decided to delegate (part of) the responsibility for quota management to the fishing industry. A study group, presided by the former Prime Minister Biesheuvel, worked out a delimitation of responsibilities of government and industry. The responsibilities were not delegated to Producers Organisations directly, but to *groups* to be formed within Producers Organisations.

Collective choice arrangements from 1993 onwards

The above-mentioned organisations and set of rules and regulations evolved gradually. Also the co-management of quotas is not a radical, total reorganisation. Still, co-management means institutional change and an explicit plea for collective action to the fishermen.

As has been said before, the co-management system mainly regulates the cutter sector. The cutter sector is the most important fisheries sector in the Netherlands, fishing for sole, plaice, shrimp, herring, cod and whiting.[1] The co-management scheme is nested in the Common Fisheries Policy (CFP) of the European Union and the national management scheme. Here below, in this part of the section 'collective choice arrangements' we will look at the composition of this user groups and at the institutional design of these co-management groups.

The co-management groups

As is said before in 1993 about 95 per cent of the Dutch fishing fleet was a member of a Producers Organisation. Within each PO one or more 'groups', are active. Totally eight groups have been established in 1993, in which 410 vessels are participating. The groups' sizes vary between 22 and 87 vessels (at the end of 1995 group sizes had gradually increased.[1] The groups are composed according to the type of vessel/gear/species, region and membership of one of the two national fishermen's organisations. Groups are rather homogeneous, which is a good basis for cooperation. Cooperation between groups is organised by the Fish Commodity Board. In table 3.1 the shares of each group in the fleet and in the fishing rights are summarised. The table confirms the variety in the groups' relative size and activities and their specialisation on parts of the fleet's activities.

The following POs[1] and groups were in operation in 1993:

- *PO-West*. This PO organises 127 active vessels in the cutter sector (part of the beam trawler fleet, the roundfish fleet and the multi-purpose fleet, a major part of the shrimp fleet). Within this PO two 'groups' exist;
- *Groep Delta/Zuid*. This group consists of 57 (mostly large) beam trawlers and a number of 300 hp multi purpose vessels generally based in the South West of the country;
- *Groep Nieuwe Diep*. This group contains 22 (mostly large) active beam trawlers based in Den Helder;
- *PO Oost*. This PO organises 87 active vessels, large beam trawl cutters and some medium sized beam trawlers or roundfish cutters, practically all based at Urk. Within this PO one 'group' is created;
- *Groep PO-Oost.* This group includes all 87 vessels;
- *PO Wieringen*. This PO organises cutters in (the former island) Wieringen: 43 active mostly smaller or medium multi purpose vessels (flatfish beam trawling and/or roundfish pair trawling and/or shrimp fishing). Within this PO one 'group' is created;
- *Groep PO-Wieringen*. This group includes all 43 active Wieringen based vessels;
- *PO Texel*. This PO organises most of the cutters on the island of Texel: 30 vessels, mostly big beam trawlers. Within this PO one 'group' is created;
- *Groep Texel*. This group includes 26 vessels, most of them relatively large beam trawlers and some vessels partly pair trawling on herring;
- *PO Nederlandse Vissersbond.* This PO organises members of the professional organisation with the same name. Members are 195 active cutters with a wide range of activities. Within this PO three 'groups' are created;
- *Groep Nederlandse Vissersbond I*. This group combines 65 active vessels, all small shrimp fishing vessels and mostly based along the coast of the Friesland and Groningen provinces, (together the shrimp fishing members of the Nederlandse Vissersbond);
- *Groep Nederlandse Vissersbond II*. This group combines 24 active vessels with flatfish and roundfish rights based at Urk;
- *Groep Nederlandse Vissersbond III*. This group combines 86 active vessels with varying fishing activities and based all over the country excluding Urk.

The number of non-members decreased quickly. Non-members are mainly two kinds of fishermen who represented together 3% of the total capacity of the Dutch fleet:

- fishermen with small vessels, those who do not fish on assigned quotas like the Crangon shrimp;
- a very small number of fishermen with a lot of quotas and days at see, gradually the most of these fishermen became group member in the last years.

[1] Two of these PO's are not involved in the Groupsystem and will be left aside in this report: *PO Mosselbedrijven*. This PO organises the fleet engaged in mussel culture, about 80 vessels. The management of the shellfish fishery in fishing plans has been organized in Zevibel until 1994. In 1994 however this task is transferred to the PO *Mosselbedrijven. PO Redersvereniging*. This PO is affiliated to the Redersvereniging, the freezer trawlers' organisation and includes 13 trawlers. In the freeze trawler sector no groups are formed.

Table 7.1 Summary of each group's share in fleet and fishing rights in 1993 (per cent of total fleet)

Group	No. of vessels	Aggregated engine power	Aggregated hp days issued	Aggregated flatfish ITQ's	Aggregated roundfish licences
A	11.5	22.1	21.3	21.1	7.5
B	4.4	8.3	9.3	11.1	2.6
C	17.5	30.0	27.0	29.2	13.1
D	5.2	7.9	8.4	8.8	5.6
E	8.7	2.4	2.6	1.2	13.4
F	13.1	2.6	3.4	0.2	0.0
G	5.4	6.1	5.5	6.8	4.6
H	17.5	14.3	14.2	15.7	31.4
Not in group	16.7	6.3	8.2	6.1	21.9
All groups	100	100	100	100	100

Co-management design in the Netherlands

Institutional aspects of the collective choice arrangements

In the new system, responsibilities in the management of individual quotas have been devolved to groups of fishermen. These groups are formally independent legal persons. It is obligatory that the chairman of the group is a person without interests in the fisheries sector. All group members have to be member of the same Producers Organisation (PO). In daily practice the functions of PO and groups are often carried out by the same staff of people. The secretariats of the groups are carried out by or on behalf of the Fish Commodity Board.

Group membership is not compulsory. To induce fishermen to enter a group, group members do get a slightly more favourable treatment than outsiders. This led to a high participation in the groups.

The aim of the groups[1] is: to maximise economic results on the basis of joint management of the individual quotas of group members; to guarantee a consistent fishery policy; as well as to improve durable exploitation of the available fish stocks in an economic responsible way; to install manageable fishing systems; to confirm groupmembers to private and public law regulations; to be responsible for management of quota for sole and plaice and eventually other fish species.

The group tries to reach its goals by designing fishing plans; by implementing and inspecting regulations; by arranging arbitration; by imposing sanctions; and by organizing smooth intra-group ITQ exchanges.

Every group member has to sign an agreement. This agreement comprises the following obligations:

- to design annually a fishingscheme;
- to sell his catch in acknowledged auctions;

[1] Memorandum of association of the Group PO Oost 5-1-1993. Memoranda of associations of the different groups differ slightly.

- to make available his VIRIS logbook statistics and fish auction data to the group management board;
- to deposit his individual quota for group management;
- to assure for payments of penalties;
- to authorize the group managementboard, the Fish Commodity Board and the General Inspection Service (AID) to inspect his individual catchdata;
- to pay penalties imposed by the group management board;
- in case of exceeding his individual quotas (rented quotas included), to pay to the group the gross proceeds.

The group management board is responsible for management of the pooled quotas. The board is entitled to impose penalties/fines and other sanctions, including the closing of fishing activities for the group or a group member. Fines have to be appropriated in such a way that in the end the transgressor is never favoured. All these implementation tasks and management rules can be referred to as collective choice arrangements. They are concerned with the operational rules of the management of the common, more specifically with group and individual quota management. The government remains responsible for controlling the national quotas and tasks pertaining to CFP.

Some economic aspects

Most of the Dutch fishermen became group member as a result of positive economic inducements, which are a) 10% more days at sea and b) the possibility to rent and hire quotas during the year. Outside the group the rent market is closed early in the year. On the other hand fishermen felt motivated to join the groups because of a threat of a forced reduction in capacity in the case of unsuccessful results of the system.

The 10% extra days at sea as well as the extension of the rent market result in more flexibility for fishermen, which may lead to better economic nett results. It was expected that the collectively agreed voluntary sale by auction would improve prices. There are no direct financial costs for group membership. PO-membership costs include group membership.

Juridical aspects

Since the establishment of the co-management scheme, two legal systems came into operation: some arrangements now pertain to private law, others pertain to public law.

Private law arrangements

Next to the implementation task, groups have to maintain their management rules. Boards try to handle this by controlling and sanctioning practices. The boards have to monitor their members concerning design and execution of their fishing plans and to monitor that group quotas are not exceeded. The boards have to compare the weighed amounts of fish which have been offered at the auction with the actual amount sold. Boards also have to fine members who transgress the auction rule, or individual and group quotas or their days at sea limit.

For membership, fishermen have to subscribe to the fine prescription for different potential transgressions. These sanctions vary according to the gravity and to the

frequencies of repeated transgressions and aim at pruning away profits. In case of a disagreement, conflicts can be laid before the Arbitrage Foundation for Fisheries. This Foundation has been established especially for this purpose. Nevertheless, discussion on rightness of fining should be avoided, in order to implement a 'tit for tat' strategy. This means that immediately after detection of a group rule breach, a fine should be imposed.

Auction sale
EU fishermen under CFP are not obliged to sell their fish at auctions. Of course, the caught fish needs to be registered because of the monitoring of the assigned quotas. This can be done in different ways. Some Dutch fishermen have pled many times, though unsuccessfully, for 'veilplicht': the obligation to sell catches on an official auction, in order to make catches more 'visual'. What is impossible in public law, is now feasible in private law. Fishermen in the group system voluntary agreed on selling catches at specific auctions.

Social control
Since the start of the co-management scheme, fishermen have to cooperate with government. However, they also have to cooperate with each other to a larger extent than ever before. Yet next to the management board of the groups, and next to the General Inspection Service, the participating fishermen should control among themselves as well. At the design phase of the co-management system this seemed to be an important idea, which had to result in a decrease in monitoring costs for government.

Public law arrangements
Tasks of the General Inspection Service are monitoring and controlling on European and national fisheries regulations, especially monitoring total catch at group level to prevent exceeding of national quotas. In the previous situation, the General Inspection Service had to control the individual landings of fishermen, now this is a task of the group board. In practice however, the monitoring of the observance of group management rules has been carried out by the General Inspection Service as well. Yet, the inspection system changed from controlling individual landings into process control: to control from landed fish to the auction sale and subsequently to compare auction data and catch declaration data. When transgression of European and national regulation are detected, prosecution follows.

7.2.4 Patterns Of Interaction

'Patterns of interaction result directly from the mutual choice of strategies by the members of a group. Given the physical features of the commons and the characteristics of the relevant technology, on the one hand, as well as the decision-making arrangements available to govern its use, on the other, individuals make choices, from which there emerges some pattern of interaction' (Oakerson, 49). One can say that these patterns can be measured along a scale ranging from a free-rider strategy to a cooperative strategy as far as it concerns the interaction pattern of the exploiters/fishermen. We also want to know how government and organisations score on the scale of cooperativeness, because we are discussing *co*-management. For this purpose we will study incentives and motivation to

cooperate in the co-management scheme of participants on three levels: the fishermen's level; the governmental level; and the organisational level.

1. Incentives and motives to cooperate and to contribute: Patterns of interactions on the individual Fishermen Level

Among other things, the fishermen from the sample (see appendix A) were asked for their motives to join a fishermen's group , as well as for their motives to stay group member.[1]

Motives to cooperate

The logic to cooperate

One of the aims of the group system is that the new system (on the long run) has to be beneficial for fishermen (Biesheuvel, 1992:10). In short this means: to obtain economic profit through cooperation.

An important question in the literature about cooperation (collective action theory) is the following: 'Are rational individuals, who look after their own interest, willing to cooperate when there is a joint benefit in the long run?' A question related to this is whether the rational and egoistic groupmembers with a group interest will act so that this group interest will be secured.

This is the theoretical perspective of the prisoner's dilemma, mentioned in the report of the Biesheuvel Steering Committee and of for example Hardin's tragedy of the common predict, that rational individuals will not cooperate and will not emulate and realise a group interest. Mancur Olson (1965) gives a moderate positive view on the possibility of individuals to cooperate with each other. Olson also states that the possibility of a group profit is not sufficient to realise collective action. He also states that they can if they fulfil one of three side conditions: 1. the number of groupmembers has to be small; or 2) coercion to join a group; or 3) membership is made attractive with positive incentives.

The Biesheuvel Steering Committee seems[1] to follow the theses of Olson and has taken the safe side. Probably knowing that the ambition to (and promise to) gain economic profit is not enough for a fisherman to become groupmember, the Committee adopted not one but all three of the mentioned conditions. Namely: 1) groups include at least 15 companies and 100 companies at most, so groups are relatively small; 2) if there are not enough participators or when groups fail to fulfil their management tasks, finally the so-called Stok van Mok will be put into action. Which means a forced capacity reduction; 3) groupmembers are more privileged than non-members, namely a) additional days at sea and b) larger possibilities to rent or hire out quotas.

A more detailed explanation of these 3 conditions and fishermen's reactions to them are given in the following.

1. Small groups

Olson states that small groups will be more successful than large groups in reaching collective action. His arguments are, that groupmembers of a relative small group can control each other so they can overcome the so-called free-riders problem.

[1] It concerns a qualitive analyses, statements of fishermen have not been quantified any further.

Although, the fishermen involved in co-management think that social control is not working, they are well informed about the situation of their co-groupmembers. However, they assert never to report a colleague. They even assert to 'turn around' if they notice something illegal/disloyal towards colleagues. Now that fishermen are better informed than ever about each other's way of acting, it can be expected that it will have a positive effect on preventing free-rider's behaviour.

Fishermen rarely mention group size spontaneously as a motive to join the group. Because a number of groups developed, choice possibilities did occur. Fishermen could choose the specific group they expected to feel at ease with. The choice was often determined through membership of the two national fishery unions: Nederlandse Vissersbond and Federatie van Visserijverenigingen. Then, most groups can be characterised according to region and/or type of fishery. PO-Vissersbond 3 is an exception to this. Fishermen who are members of PO-Vissersbond 3 live in several regions and there are several types of fisheries. The interviewed fishermen of PO-Vissersbond 3 thought that this was an advantage in connection with the rent/hire possibilities of more than only sole and plaice quotas, especially of cod.

2. Coercion: Stok van Mok

The 'Stok van Mok' is seldom mentioned spontaneously (possibly additional) as a motive to join the Biesheuvel groups. The idea of the Stok van Mok faded into the background because the groups operate satisfactorily, according to the fishermen. Some fishermen did not take the threats of the Stok van Mok seriously, others did.

3. Positive incentives: extra days at sea and longer rent/hire

The fishermen's motivation to become group member points to the third criterion, namely the extra days at sea and the larger rent/hire possibilities of the quota. Especially the latter has been a strong incentive to join groups. Moreover, the larger rent/hire possibilities are so satisfactory that this lead to the continuing of group membership. The larger rent/hire possibilities lead to an optimal use of property rights, according to the fishermen. The fishermen who have quotas left, rent the quotas to a colleague who needs more quotas than he owns. One of the interviewed fisherman wonders if it is wise to maintain weak companies in this, in his opinion, artificial way. This opinion was not shared with others. Fishermen who own a lot of quotas just liked the possibility to help weaker fishermen. Because of personal economic profit, but also to be able to maintain the modern but small Dutch fleet. One fishermen, who is also a board member of the group, thought that the increased numbers of days at sea (as a result of the extra days at sea and the small vessels with a high number of days at sea) did not simplify the monitoring tasks of the groups.

Contextual and historical perspective to cooperate

Economical incentives, external enforcement and group size stimulated fishermen to cooperate with the co-management system. Beside these, other factors have contributed to the massive joining of fishermen groups. As the report of the Biesheuvel Steering Committee (p.4) indicates, the relation between Government and fishermen was heavily disturbed, in particular after the fall of Minister Braks. Both parties agreed that this

relationship has to be improved. The control has been tightened, especially after 1990 (Braks's fall). From 1986 fishermen try to strengthen their companies by buying property rights, which can be seen as an indicator that restrictive policy was taken more and more serious. So fishermen have adapted to restrictive circumstances for quite some time. The period before the groupsystem has been very stressful for the fishermen. Now, when it is more peaceful and the shortage of quotas can be solved much better, this leads to relaxation and satisfaction.

Intrinsic motives to remain cooperative

The introduction of the co-management system at the right moment and to use economical incentives and low external enforcement, has stimulated fishermen to join the relatively small, reliable fishermen groups. The economical incentives (extra days at sea and more flexibility for the rent/hire of quotas) and the clear groups also encourages remaining cooperative. But the group system has more advantages:

Participation
Fishermen believe that an efficient fishery policy depends on the feasibility of rules. Policy makers realised this also, especially after the fall of Minister Braks. Co-management seems to be a solution for this. Most fishermen confirm that the rules within the system were more practically oriented. However, they always stated that this was not yet sufficient. The rules for the unloading of catches were regularly mentioned as an example of an impractical rule. The question remains whether fishermen or their representatives are joining the decision-making process sufficiently. The fishermen, for example, are not involved with the determination of TACs. Many of the interviewed fishermen hope and expect that in the future POs will perform more tasks, and will for example arrange the exchange of quotas between countries.

Information
Although many fishermen keep up their landings, their figures did not always correspond exactly with the official figures. Nowadays, discrepancy does not often occur. Besides, fishermen are often informed about their quota exploitation and are warned when they have landed 80% of their personal quotas. The published quarter surveys of all groups give clarity about the national quotas exploitation. The fishermen experienced clarity about these figures as positive, and as an extra incentive to stay in the group. The information about the possibility to rent/hire or sell, which they get via the group board suits well. In the past you had to go after it yourself, nowadays it is arranged, according to a fisherman. Because more information is available, it does not seem to increase the rent unnecessarily as before.

Auction duty
The auction duty forms an attractive part of the group system from the start. To put the fish behind the market did not suit everybody. For a lot of fishermen it is a relief that this has been made more difficult. The expectation that the auction duty would have a positive influence on the price is disappointing to the fisherman. The cause of the rather low prices

has to be sought outside: with imported fish from former Warsaw Pact countries. Some expect that wages in those countries will increase and so will the price of imported fish. In any case this is an external factor. Auction duty is positively judged upon. But the market has to be closed on the other side as well, according to a fisherman. The trade wholesale and retail trade) should also have to buy on the auction and not from private individuals (anglers et cetera).

Summary

Motives for membership
Fishermen mentioned the larger rent/hire possibilities of quota together with the extra days at sea as the main incentive to join the groups. Besides these reasons, they wanted to come in smooth waters with the government and each other.

Motives to remain group member
According to the fishermen, important motives to stay group member are the extra days at sea, larger rent/hire of quota and the good functioning of the groups. The information about the exploitation of own and group quota and about rent/hire and selling possibilities of quota are judged upon very favourably. Fishermen are satisfied with the auction duty. Group rules are judged as more flexible than governmental rules. Within the groups the fishermen see larger possibilities to influence future policy than outside the groups.

Motives to cooperate, contribute and coordinate: Group management board
Group management board consist of fishermen and an independent chairman. Some of the chairmen are paid for their services, others are against payment so as not to bring their independency in danger. Chairmen and board members consider their position honourable and challenging. They are asked to take a seat on the board and agree upon that voluntarily. Most of the board members are non (ex/older) fishing members of family-based fishing companies (except for the chairman). Their incentives are engagement in policy matters and fisheries matters, influence and pursuit. The position is considered to be honourable, although not enviable, because of the monitoring tasks of the board.

Incentives to cooperate, to contribute and to coordinate: Patterns of interactions on the Organisational Level

PO
POs originally mainly playing a role in the implementation of the common organisation of the market for fishery products, which in practice was a small task, are now involved in co-management. Fishermen can become member of a co-management group through their PO membership. In most cases the management board of the PO consists partly of the same persons as in the group management board. This additional task gives the Dutch POs more existential sense and prospects.

FCB [1]

The FCB carries out management tasks and has to look after the sector's interest. With the start of the 'co-management' system, the FCB has to execute five new tasks:

- be secretary of the separate groups;
- approbation of the fishing plans of the separate groups;
- approbation of the appointment of independent chairmen of the groups;
- co-monitoring of the auction duty;
- to inform the Ministry on co-management matters.

Incentives to cooperate for the FCB are the willingness to participate in fisheries matters, because of their formal task to look after the sectors interest. However, more clearness is necessary about the formal position of the FCB in the co-management scheme.

(National) Fisheries Organisations

Fisheries Organisations (Nederlandse Vissersbond en Federatie van Visserijverenigingen) exist through the membership of fishermen.

In most of the cases the management board of the PO consists partly of the same persons as in the group management board as stated before. In the case of the two relevant national fisheries organisations, we can state that PO-Vissersbond and the FO Nederlandse Vissersbond (NVB) partly overlap and this is also partly the case with the Federatie van Visserijverenigingen and PO-Oost.

It can be stated that fisheries organisations on the national level are very much involved in the co-management scheme, however this is not formally organised.

Their incentives to cooperate and contribute can be found in that they are there to look after the fishermen's interests and do not want to be ruled out, by POs or Groups. The solution for the NVB was to revive their PO (founded in 1987, became inactive) and to create three groups. Some of the PO-West members joined PO-Vissersbond. PO-West created two groups and PO-Wieringen created one group, most of the members of these two POs are allied with the Federatie. PO-Texel is a new PO/group, of which most of the members are member of the Federatie. Schematically represented:

VISSERSBOND	*FEDERATIE*	
PO-Vissersbond - group I - group II - group III	PO-Oost PO-West PO-Wieringen PO-Texel	- group PO-Oost - group Delta/Zuid - group Nieuwe Diep - group Wieringen - group Texel

Figure 7.2 National Fisheries Organisations of the Netherlands

[1] Biesheuvelgroepen-Quo vadis? (FCB, 1995).

Incentives to cooperate, contribute and coordinate: Patterns of Interaction on Governmental Level

The most important incentives for the government to cooperate, contribute and coordinate are:

1. to ameliorate relationship with the industry;
2. to manage quotas efficiently; and
3. to lower transaction costs.

Ad 1) and 2) Excessive catches in the past caused problems and led to the introduction of a set of diverse management schemes, among others the co-management scheme. In November 1991, a working group was established by the Minister of Agriculture, Nature Management and Fisheries in order to propose an increase in correspondence of fishing patterns of the Dutch fishermen and market opportunities. The establishment of this so-called 'Stuurgroep Biesheuvel' was a reaction to the disturbed relation between fishermen and government, caused by a lack of confidence in government and of acceptance of fishery policy on the fishermen's side, and on government's side a lack of confidence in fishermen's and tradesmen's behaviour. One year earlier, the former minister of Agriculture, Nature Management and Fisheries had to resign as a result of uncontrolled excessive catches of sole. After this happened, tensions between industry and government were clearly noticeable. In June 1992, the Stuurgroep, which was composed of representatives of government and fishing industry, of lawyers, of organisational advisers and of an independent chairman, the former Prime-minister mr. B.W. Biesheuvel, issued a report.[1] In this report several ideas were presented in order to make fishery policy more acceptable to the fishing industry. The key ideas are 1) distribution of responsibilities between government and fishing industry and 2) cooperation between fishermen: co-management. This co-management system has to improve economic results within the restrictive frame of the existing catch limits. In February 1993, as already became clear, the co-management system was implemented, and (above expectation) 95% of the total number of hp in the cutter sector united in 'groups'.

When the management scheme proves to be unsuccessful in managing quotas and fishing performances, a forced capacity reduction shall be implemented three years after the start of the co-management scheme. Considering the historical perspective of a 20-year-old restrictive fisheries policy, three years of becoming adjusted to cooperation is a rather short time span. Within those previous twenty years, fishermen who now have to cooperate have been engaged in tough competition for fish and especially for fishing rights. Its effects are still present. In fact, fisheries policy and quota regulations were more likely to cause divergence than a process which automatically led to cooperation. In the unfolding of fisheries policy, fishermen and government learnt from their experiences and now we see processes leading to convergence, resulting in co-management.

Ad 3) According to Bromley transaction costs can be divided into three elements: information, contracting and enforcement costs (Bromley 1991 in Whitby 1994 'Transaction costs and Property Rights: the omitted Variables?'). Whitby states, however,

[1] Beheerst Vissen. Rapport van de Stuurgroep Biesheuvel, June 1992.

that our ignorance of such costs is quite remarkable. In this study we will not quantify these costs either. Nevertheless, we will consider here especially the enforcement costs, because lowering monitoring costs is officially mentioned in the report of the Steering Committee Biesheuvel (pp. 10) as a government aim in cooperating in co-management. It can be estimated whether monitoring costs increased or decreased by comparing the number of person years and number of checks spent on monitoring fishing regulations by the General Inspection Services before and during the co-management period. An estimation will be made whether information and contracting costs have changed. Information costs concern the 'actions' to inform the industry on policy matters; contracting costs are here considered as administration costs for ITQ transfers.

7.2.5 Outcomes

First the effect of co management for fishermen will be described. Then we will turn to the effects on the organisational and the governmental level. Within these sections, effects on decision-making arrangements and the physical and technical attributes will become clear, as far as possible.

The effects of co-management for individual fishermen

To study these effects a case study of Group PO-Oost has been carried out.[1]

In this case study we address the following topics: What are experiences of members of group PO-Oost with the co-management system (this section) and how are their economic performances (next section)?

Case study of Group PO-Oost

The Group PO-Oost has been selected because this group is concerned with demersal fisheries which are the major fisheries activity in the Netherlands. Another reason is the large number of fishermen participating in the group.

Overview

The Group PO-Oost is located in the traditional fishing village of Urk, which is a former island in the former Zuiderzee. Since ancient times Urk has been largely dependent on fisheries. In the past 20 years the capacity of the Urk fleet and the wealth of the fishing community have grown considerably. Since the introduction of strict quota control measures fishermen from Urk have managed to aggregate a considerable share of flatfish ITQs (32 and 30% of the national plaice and sole quotas).

In Urk an important part of the Dutch beam trawl fleet is based, even if the fleet cannot sail to its homeport nowadays. In Urk also a large part of the national fish processing industry is located. The majority of the fishermen living in Urk land their fish in the fishing ports of Harlingen, Lauwersoog or Delfzijl/Eemshaven. Fish landed in

[1] In a later phase of the project interviews with members of some of the other groups have been held as well. Because research results did not differ from that of the case study PO Oost, we decided to present only this case study. Results of total sample of interviews are presented in the previous section on 'patterns of interaction' (see appendix A, methodology).

Harlingen is mostly traded on the Harlingen auction 'Insula' which is owned by PO-Oost. Fish landed in other ports is generally transported by truck to the Urk municipal fish auction.

Since Group PO-Oost membership is homogeneous (predominantly larger beam trawlers) it was decided to interview a sample of 11 members and to interview these members in depth rather than taking a larger sample and have more superficial interviews. These 11 fishermen own 18 vessels flying the Dutch flag. The 11 fishermen represent about 20% of the group PO-Oost's over 10 meter fleet[1] (89 vessels). The interviews were held in December 1994.

Fishermen's perspective on co-management experiences

Group Management Board

The Board of Group PO-Oost overlaps with the staff of the local fishermen's organisation 'Visserijbelangen' and with the staff of the Producers Organisation PO-Oost as well as with the staff of the national fisheries organisation the Federatie van Visserijverenigingen. So the tasks which stem from the new co-management system are carried out by these same persons at the same office.

The chairman of the group however is independent, he is the head of a local school at Urk. From the interviews it became clear that functions of PO, 'group' and the local fishermen's organisation 'Visserijbelangen' are difficult to distinguish for fishermen who are generally member of these three organisations. The making of a distinction between PO and 'group' certainly in the case of PO-Oost is merely a formal matter whereas in daily practice PO and 'group' are seen as one organisation by both PO-staff and PO-members.

Responsibilities

All respondents answered positively on the question whether Group PO-Oost should have more competencies. Especially with regard to the fixing of quota respondents wanted more responsibility for the fishery sector. It became clear that these responses were brought about by dissatisfaction with the procedure for fixing TACs in which in the opinion of respondents biologists had too much influence. Respondents argued that the forecasts of biologists had often been wrong and that policy should take more notice of economic factors and practical knowledge from fishermen.[1]

Contact

Most firm managers indicated that they generally contact the PO-office every week. These contacts concern new developments, quota transactions, information about regulations, problems with inspections (at sea) and the Argos system.[1] All respondents claimed that they were well informed by the Group.

[1] It must be taken into account that the interviews were taken off at a moment when considerable reductions of sole (30%) and plaice (50%) TACs were proposed by the European Commission.

Rules
In order to investigate whether fishermen are inclined to observe rules laid down by a fishermen's organisation (PO/group) better than rules laid down by the government respondents were asked about their opinion on this matter. A majority of the respondents (70%) answered that they personally were inclined to observe group rules better than rules laid down by the Ministry. Main argument for this attitude was the opinion that rules laid down by the industry were better adjusted to the daily practice of the fishery since the rule makers have more knowledge of the conduct of the fishery. Thirty percent of the respondents did not make a difference between governmental and PO/group rules. One of them argued that fishermen tested every new rule.

Control
Fishermen notice that controlling tasks are mostly performed by the General Inspection Service. According to the fishermen this controlling is effective. Fishermen are afraid of high fines, this has a positive effect on behaviour.

Social control
The question whether the increased responsibilities for the sector and the pooling of quotas in the group of PO-Oost had resulted in (more) social control in the fisheries community of Urk revealed that only a minority of respondents felt that this was really the case. About three quarters of the respondents did not see any increase in mutual control. Two respondents argued that in a community like Urk there had always been a great deal of social control as nearly everything became public in this community.

Advantages of group membership
The unrestrained possibility to hire or rent quotas within a group was mentioned by all respondents as the most important advantage of group membership.

Quotas
Some respondents argued that the new system results in the supply (renting) of quotas to fishermen who do not possess enough quotas themselves to fish the whole year through. In the last two years with a relatively high plaice TAC compared to plaice catches, the supply of plaice fishing rights was sufficient for all group members. It can be expected however that quota supply will dry up in years with lower TACs and that fishermen with small quotas will be in problems as a consequence. In these circumstances the group will have to make sure that group quotas are not exceeded. Since the group has some management powers concerning the group members' individual quotas it will be interesting to see if the PO is willing or able to shift individual fishing rights brought into the group from fishermen with large (surplus) individual quotas to fishermen who run into problems as a result of insufficient quotas. Or in other words whether the PO is a manager of group quotas or merely an office for transfers of individual quotas.

Information on quota offers reached every member regularly by post.

Auction rule
The voluntary agreed auction rule is assessed positively by all fishermen. Since many of them already sold their catches at the auction, nothing seemed to have changed. Although many fishermen stated that now supply and demand is clearer, which is an advantage.

Future
All but one of the persons interviewed felt that perspectives of the Dutch fisheries sector were improved as a result of the group system. One fishermen even felt that the new system had been the only way to solve the in his eyes immense problems related to control and enforcement the sector faced in the late eighties.

The respondent that did not feel that future perspectives of the sector had improved argued that the future of the Dutch fishery sector is totally dependent on the (quota) decisions of the EU Council. Another respondent argued that the situation had improved theoretically but that fisheries by nature are unpredictable.

Asked about their ideas on the future role of groups in the Netherlands, the most common answer given was that groups or PO's should have more influence and that policy makers should listen more to the industry. Specific ideas about major changes of the current fisheries management system were not ventilated. Ideas about practical adjustments of rules or technical measures were often presented.

It can be concluded that the interviewed fishermen of Group PO-Oost are quite positive on the operation of the co-management system. Although the degree of participation/influence could increase. Now we will focus on the economic effect of the co-management system.

The effects of the combination of an ITQ system and co-management on the social and economic position of fishermen: The economic performance of group PO-Oost[1]

Income distribution
We looked at the distribution of the economic results of individual vessels. Instead of looking at average levels of results and incomes it is interesting to see if this distribution has changed. In establishing the group system the cohesion of the group's members and the allowed liberal exchange of (parts of) fishing rights between members may give room to a relatively efficient use of these rights. Besides a likely increase of the general level of incomes this could also lead to diminished income differences within the groups. To this end a case study has been done, aimed at the PO-Oost group, based at Urk. This group is rather big, earning some 25 per cent of the Dutch cutter sector's gross proceeds.

Of this group economic results are calculated for all sailing vessels (80) owned by the group's members. Some 20 of these vessels appear in the LEI-DLO panel and have their detailed results ready. Of the other 60 vessels results are estimated. For this estimate a number of essential data of those vessels are known:
- technical data (HP, GRT, age of vessel and engine) out of fleet statistics;
- data on days at sea by gear out of VIRIS log book statistics;

[1] See part 1 of this report for the methodology.

- data on landings by species by gear out of VIRIS log book statistics, checked by fish auction data.

On this basis rather accurate estimates of financial results can be made, using Hp-group averages calculated out of the LEI panel.

A useful criterion to value economic results is 'average return to labour per crew member' as used by LEI-DLO frequently to measure economic performance. This figure is calculated as the sum of crew remuneration (including social premiums) and net result (the latter after deduction of all capital costs like depreciation and interest over the aggregate invested capital) divided by the number of crew. Thus surplus income is attributed to the production factor labour, after rewarding the production factor capital at shadow prices.

In years preceding and after the establishment of the groups (1993) standard deviation could be calculated of that part of the LEI-DLO panel being representative for the types of vessels and fisheries of the PO-Oost case study. This part of the panel consisted of between 64 and 76 vessels through the period 1988-1994. For these vessels standard deviation of the return to labour per crewmember, adjusted to 1993 prices (in NLG), was:

Table 7.2 Standard deviation of the return to labour per crew member of the LEI panel (NLG)

1988	1989	1990	1991	1992	1993	1994
45,800	68,000	68,600	84,400	56,300	43,000	48,100

The level of standard deviation increased in the first period after the formulation of more stringent management measures in 1987. Probably the sector had some difficulties adjusting to the new situation. In the meantime one must keep in mind the general decline in fleet capacity, starting in about 1989. An apparent adjustment, at least partly including this diminution of the fleet, led to sharply decreasing standard deviations after 1991. It cannot be ascertained if (in 1993) the establishment of the group system had a word in this. Calculated in the same way standard deviation for the PO-Oost group was:

Table 7.3 Standard deviation of the return to labour per Group PO-Oost crewmember (NLG)

	1993	1994
	78,400	59,600

The level appeared to be substantially higher that of the LEI-DLO panel. One of the reasons for this is clearly that in the PO-Oost group several vessels only sailed during a

part of the year (mostly caused by fleet mutations like replacement of vessels). In the LEI-DLO panel only full year sailing vessels are represented for reasons of comparability. If only with regard of PO-Oost full year sailing vessels are included in the calculation the figures are 44,800 and 45,900 NLG respectively. And then they are very much in line with the general level.

Furthermore variations within PO-Oost, including vessels sailing only a part of the year, showed a decline from 1993 to 1994. This development cannot be attributed to a changing fleet as the size and structure of this PO remained grossly the same, and also the number of vessels not sailing the full year was about the same. The PO-Oost members as a whole probably needed a year to adjust to the new situation (namely liberal possibilities to exchange quotas), as the full year sailing fleet was already in the course of adjustment in 1993. Probably they did a good job utilising the opportunity of intra-EU trade of ITQ's to make the most of these quotas. It must be said that quota costs (net cost of individual quotas: interest on the value of quotas owned plus cost of hiring extra quotas, minus proceeds of quotas hired out) increases income differences. Without quota costs the standard deviation (of all vessels) should be 55,300 and 56,000 NLG respectively (naturally at higher average income levels).

It can be concluded (for the whole cutter fleet as well as for the case study producers' organisation) that up to now there is some evidence that the establishment of the groups did diminish income differences in a certain way. It seems that one of the purposes of the group system, namely to give room to a more efficient use of fishing rights, did so with regard of the average level. On top of that regarding incomes on individual vessels the system does also seem to benefit the 'have-nots' to some extent. By the figures one may suppose that intra-EU trade of ITQs, be it executed on an exclusively commercial basis, still created some convergence. In this aspect the fishermen, still acting individually, did experience some mutual interests within the producers' organisations. This is the more striking as there is no evidence that the producers' organisations as a whole (or their management) have intervened, for instance by influencing ITQ rent prices or by influencing the direction of ITQ shifts. This supposition is corroborated by the judgment of group managers and other experts.

However, there still exist rather wide income differences within the cutter fishery. Especially within PO-Oost in 1994 incomes grew wider apart.

Future developments

As the cost of acquiring vessel and fishing rights generally is prohibitive for newcomers in the trade in the future one may expect a concentration of these rights to the 'haves' out of the hands of the 'have nots'. Which effect this will have on fleet capacity is yet unclear. It is conceivable that in the course of years some of the vessels generating low incomes will stop activities, especially in times the general level of incomes is relatively low. As the fishing rights (individual quotas, days at sea, HP-licenses) will be taken over by prosperous enterprises eventually new vessels could appear within those enterprises and a return to the present-day number of vessels is not unlikely, especially in times of improving general income levels.

Outcome on Organisational level

FCB

An additional task, apart from the already mentioned tasks, was delegated to the FCB. In order to reach uniformity between groups a coordinator was appointed by the FCB. Several meetings were held to establish a high degree of uniformity and communication between groups. The coordinator was quiet successful in this task.

According to the FCB their tasks cause too great an organisational and budgetary burden. The FCB wanted the Ministry to pay for these co-management tasks; however, the Ministry refused. A procedure has been started by the FCB in order to let the Ministry pay these transaction costs. Co-monitoring of the auction duty caused problems for the FCB as well. Last but not least fishermen experience the working style of the FCB as meddlesomeness and patronising.

It is also stated that the legal status of the co-management tasks of the CFB is unclear (A. Berg, 1995).

FO/PO/Group

Quotas and effort management and the group system

In recent years landings kept well below quotas (described in section 5.3); however, this cannot be attributed to the co-management system solely, as this was only established in 1993. But at least since that establishment the sector still adhered to the quotas as a whole and fleet capacity did not increase. One gets the impression that the group management system at least helped in consolidating levels of input and output resulting from the management structures in the years preceding its establishment. In that way the group system seems to have had a stabilising effect on the cutter sector.

In 1994 the share of quotas that was used rose, this development being accompanied by an increasing use of the vessels. It is conceivable that the liberalisation of intra-group trade of individual quotas (and days at sea attributed to those individual quotas) within the groups has contributed to that development. It may be concluded that on the one side the fleet as a whole fished well within the quota framework, but that on the other side the fleet succeeded in a more economic usage of the quotas.

Group control and social control

The monitoring task of the group management board concerned the auction duty in particular. It can be concluded, however, that the group management board was not very 'active' in performing this task (neither was the CFB and auction staff):

Table 7.4 Breaches/irregularities auction duty a)

	1993	1994	1995 b)
Reported by:			
- General Inspection Service	46	26	6
- (-Special case Vlissingen)	(108)		
- CFB	3	4	1
- Groups	0	4	1
- Auction staff	0	2	0

a) AID report to the Ministry 30-10-1995; b) Period 01.01.1995-30.09.1995.

The so-called social control was too much asked for in the initial stage of a group process. Social control is only possible when group norms are accepted and internalised. Probably the idea of social control has been misinterpreted by the designers. Social control is a rather subtle behaviour within groups with strong cohesion. The breach of a group norm mostly does not result in official prosecution, but the punishment varies from gossip to group exclusion. However, when it is not yet clear if certain behaviour is disapproved of by every group member, it is not clear how to react. Fishermen experience social control as a form of treason, instead of socially correct behaviour. So social control does not function.

Outcome on Governmental Level

The combination of positive inducements and some coercion made fishermen decide to cooperate. Fishermen who often are portrayed as selfish individualists, apparently are able to cooperate under favourable conditions. During the 2½ years of co-management under consideration, national quotas were difficult to exceed with the existing fleet capacity. So the conditions to start the co-management system indeed were rather favourable. As already became clear, the government had three incentives to cooperate in the new management system:

1. to improve relationship with the industry;
2. to manage quotas efficiently; and
3. to lower transaction costs.

The most important criteria for successful co-management in the government's point of view are the absence of excessive catches. The following section describes in detail quota and effort management in the co-management system (incentive 2).

Landings

As said before quotas issued by the European Union form the framework in which the Dutch cutter fishery operates. So one of the tasks of the national fisheries management is trying to fit fishing operations within that framework. For the cutter fishery demersal fish is by far the main target category, especially sole, plaice, cod and whiting. Accurate data

[1] AID report to the Ministry 30-10-1995.

on time series of landings by species are not available, but LEI-DLO estimated total financial proceeds of these species rather accurately. A way to compare quotas and landings is to use those financial proceeds. For that end those estimated real proceeds can be confronted to potential proceeds out of quotas: a summation of national quotas multiplied by average prices of these species. For a long range of years this comparison is shown in table 7.5.

This comparison of (weighted) total landings with (weighted) quotas reveals for a range of years that landings as a percentage of quotas steadily dropped (an exception is 1987, in which year total Dutch quotas somehow was reduced by some 20 to 25 per cent). In recent years landings kept well below quota. The development is illustrated in figure 7.3 on next page. A remarkable feature revealed by the graph is that the cutter sector's real proceeds show a far more regular pattern than that of potential proceeds. Do fisheries adjust more smoothly to changing stocks and their catchability than TACs and quotas?

Table 7.5 Proceeds of demersal fish of the cutter fishery and the potential proceeds out of national quotas, multiplied by average prices (million NLG nominal)

Year	Real proceeds	Potential proceeds	Real as a percentage of potential
1975	234	212	110
1976	257	236	109
1977	264	227	116
1978	313	211	148
1979	352	264	133
1980	363	344	106
1981	426	417	102
1982	447	408	110
1983	518	413	125
1984	539	447	121
1985	622	594	105
1986	588	581	101
1987	563	470	120
1988	503	469	107
1989	493	487	101
1990	528	578	91
1991	575	707	81
1992	495	628	79
1993	481	614	78
1994	481	575	84

Source: LEI Fisheries Directorate; Fish Commodity Board.

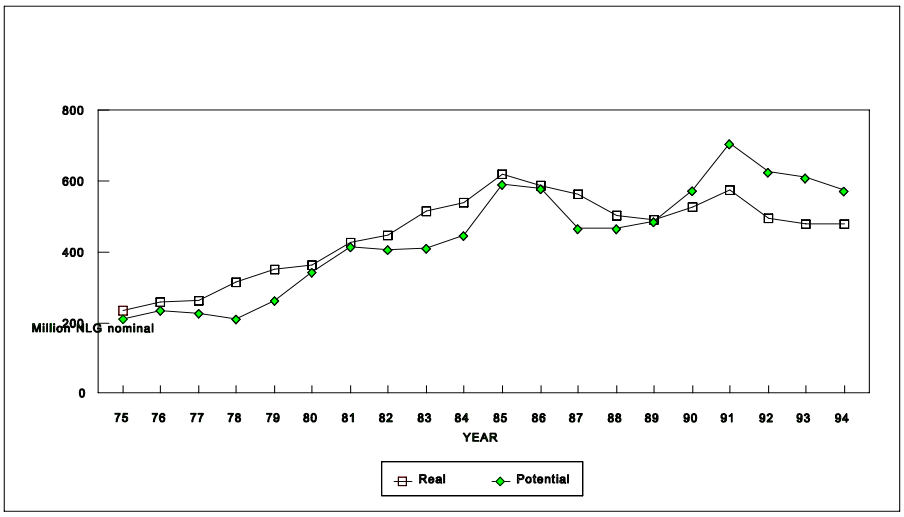


Figure 7.3 Cutters demersal fish proceeds

Fleet capacity and effort

Development of landings should be compared with the development of fishing capacity (fleet) and effort (days at sea). In table 7.5 the development of fleet (and employment), effort (nominal HP-days) and average number of days at sea per vessel is shown.

Table 7.6 Number of vessels, total engine power, HP-days and average number of days at sea per vessel

Year	Vessels	Total crew	1,000 HP	Million HP-days	Average days per vessel
1975	588	2,511	367	70	192
1976	547	2,290	355	67	190
1977	498	2,106	323	57	178
1978	497	2,133	28	55	168
1979	500	2,186	333	56	167
1980	518	2,314	363	59	163
1981	549	2,522	408	64	158
1982	565	2,544	443	76	171
1983	581	2,780	476	84	177
1984	610	2,929	512	90	175
1985	618	2,990	534	90	169
1986	615	2,970	537	85	158
1987	616	3,036	560	86	153
1988	607	2,825	588	91	155
1989	588	2,641	586	87	149
1990	553	2,486	559	83	148
1991	512	2,292	521	79	151
1992	482	2,195	492	81	164
1993	473	2,184	491	86	176
1994	69	2,251	492	90	183

Source: LEI.

The figures show an accompanying drop of fleet capacity and for that sake employment on the fleet. The nominal number of HP-days first also dropped, but rose in recent years. The average number of days at sea per vessel showed an increase as of course constant effort divided by a decreasing number of vessels will already result in higher effort per vessel. Moreover clearly the catchability of the species package under quota regime became less as an increasing effort was needed to reach an even under 100 per cent usage of quotas. This led to an even sharper increase of the number of days at sea per vessel, reaching the level of pre-quota times.

Next government's perspective on co-management experiences is further described.

Achievements

The Minister of Agriculture, Nature Management and Fisheries mentioned several achievements of the groups in a speech held on a symposium on co-management (June 9th 1995) and in his mid term review of the system (June 16th 1995). Achievements were in short:

- of the sailing total cutter capacity (hp) 93% in 1993 and in 1994 96% united in groups;
- the private auction sale regulations have been observed quite well: In 1993 of 24,000 landings 46 were incompatible with the auction rule and in 1994 this was respectively 27,000/23;
- a 'tit for tat' strategy has been increasingly implemented with success;
- national quotas has not been exceeded (for more details, see above);
- an increase in flexible exploitation of quotas resulted, for instance a nearly 100% utilisation of sole quotas;
- many fishermen seem to be satisfied with the group system;
- finally, the Minister ascertains a willingness of group management boards to fulfil management tasks and responsibilities.

Problems

These 2 1/2 quiet co-management years have occasionally been disturbed. Especially some members of a certain group systematically circumvented the private auction rule in the period during 1993 till February 1994. This circumvention concerned 1.6% of the group sole quotas and 0.06% of the plaice group quotas. Although these quantities are not extremely high, transgressions were structural and asked for measures. An understanding between transgressors and the prosecutor has been reached.

Public law and private law converge now and then, which causes problems.[1] Controlling tasks are rather intertwined and some fishermen have been double fined. It occurred that criminal judges imposed fines while group management boards already did so too. As a result management board are less willing to control and inspection is mostly performed by the General Inspection Service.

All in all, quality of inspection seems to be improved and the number of transgressions is decreasing (see table 7.7).

[1] A.J. Berg. Vissen in troebel water. Juridical comments on Dutch co-management of marine fish resources. Lecture held on the co-management symposium, Noordwijk June 9th 1995.

Table 7.7 Results of the General Inspection Service a)

Year	Number of checks	Number of transgressions	Percentage transgressions/ checks
1991	15,871	1,207	7.6
1992	17,404	854	4.9
1993	12,290	984 b)	8.0
1994	8,913	618 b)	6.9

a) Mid-term review of the co-management system of the Ministry of Agriculture, Nature Management and Fisheries, June 16th 1995; b) Charges included which were dismissed due to change in regulations.

This also means a lowering of the monitoring costs, which was one of the incentive 3 for government to participate in co-management:

Table 7.8 Monitoring effort AID

	1990	1991	1992	1993	1994	1995 a)
Number of person-years	100	101	86	75	71	58

a) Period 01.01.1995-30.09.1995.

The main part of the administration of temporary quota transfers is handled by the group management board. So contracting costs consequently lowered for government. The same counts for information costs.

Some external factors are worrisome, like falling prices for roundfish and negative valuta influences. Furthermore, future TAC's are expected to be lowered. However, the Minister is of the opinion that this should cause problems in any fishery management system.

All in all, the Minister stated to be very satisfied with the operation and effects of the co-management system, which points to an amelioration of the relationship between the industry and the Minister (incentive 1). The Minister suggested the Dutch Parliament to prolong the experimental term of three years with one year (till January 1st 1997).

7.2.6 Conclusions And The Conditions For An Effective And Successful Co-Management System

First we will present the conclusions by answering to the first three research questions, then we will answer the fourth research question on the conditions for an effective and

[1] Mid-term review of the co-management system of the Ministry of Agriculture, Nature Management and Fisheries, June 16th 1995.

successful co-management. Finally the ideal situation for Dutch co-management will be presented.

How did the new co-management scheme function?

Government and organisations as well as fishermen, having all their own incentives to cooperate, contribute and respectively coordinate, are quite positive about the functioning of the co-management system.

An amelioration in the mutual relationship of government with the industry is established especially by more flexibility in regulation and an increase in legitimacy, participation and responsibilities on fishermen's side and, on government's side no worries about over catching (these three years).

Fishermen mentioned the larger rent/hire possibilities of quotas together with the extra days at sea as the main incentive to join the groups. Besides these reasons, they wanted to come in smooth waters with the government and each other.

According to the fishermen, important motives to stay group member are the extra days at sea, larger rent/hire of quotas and the good functioning of the groups. The information about the exploitation of own and group quotas and about rent/hire and sell possibilities of quotas are judged upon very positively.

Fishermen are satisfied with the auction duty. Group rules are judged as more flexible than governmental rules. Within the groups the fishermen see larger possibilities to influence future policy than outside the groups.

Transaction cost lowered for government, however, partly shifted to the CFB as well as to FOs and POs/groups. It is uncertain whether the lowering of government's monitoring costs will appear to be structural, considering the lowering of quotas in 1996.

Monitoring still remained in actual practice a task of the government, self or social control was disappointing, however understandable considering the youth of the management scheme. Now that fishermen are better informed than ever about each others way of acting, it can be expected that it will have a positive effect to prevent free riders behaviour.

Legal uncertainty. Tensions between public and private law became clear. The legal classification of the management scheme seems to be incorrect. The form pertains to private law, however the tasks like management, monitoring and standardisation pertain to disciplinary jurisdiction. A suggestion is to make a clear distinction between monitoring and sanctioning.

The motives to join groups (among others: flexibility in renting and hiring of quotas as well as more days at sea) also seem to be motives to stay in the groups.

Does the new management scheme lead to an efficient quota management?

The new management scheme leads to an efficient quota management. Since the implementation of the co-management system, the sector still adhered to the quotas as a whole and fleet capacity did not increase. One easily gets the impression that the group management system at least helped in consolidating levels of input and output resulting from the management structures in the years preceding its establishment. In this way, the group system seems to have had a stabilizing effect on the cutter sector. In 1994 the share

of quotas that was used rose, and this development was accompanied by an increasing use of the vessels. It is conceivable that the liberalisation of intra-EU trade of individual quotas (and days at sea attributed to those individual quotas) within the groups has contributed to that development. It may be concluded that on the one side the fleet as a whole fished well within the quota framework, and, on the other side that the fleet succeeded in a more economic usage of the quotas.

Improves co-management the distribution of net benefits?

The establishment of the groups did diminish income differences in a certain way. It seems that one of the purposes of the group system, namely to give room to a more efficient use of fishing rights, did so with regard to the average level. But regarding incomes on individual vessels, the system seems to benefit the 'have nots' only partly. From the figures one may infer that intra-EU trade of ITQ's occurs exclusively on a commercial basis, but there is evidence that this trade contributed to a more equal distribution of fishing rights and therefore of incomes. In this aspect the fishermen experienced some converging interests within groups, while still acting individually. Income differences still are notable. The groups themselves as a whole (or their management) have not yet intervened, for instance by influencing ITQ rent prices or the flow of intra-trade. This supposition is corroborated by the judgment of group managers and other experts.

As the cost of acquiring vessel and fishing rights generally is prohibitive for newcomers in the trade one can still expect a concentration of these rights to the 'haves' out of the hands of the 'have nots' in the future. The effect this will have on fleet capacity is yet unclear. It is conceivable that in the course of years, a number of low income generating vessels will stop activities, especially at times in which the general level of incomes is relatively low. As the fishing rights (individual quotas, days at sea, Hp-licenses) will be taken over by prosperous enterprises an eventual increase of the number of vessels within those enterprises is not unlikely, especially at times of general growing income levels.

All in all it can be stated that the economic management of quotas (ITQs) was very successful in the co-management system; relationships ameliorated; transaction cost lowered for government, but increased for organisations; the legal framework needs to be adapted; and monitoring and sanctioning tasks should be separated. The scheme caused no major problems in the three years of its implementation. Next we come to the answering of the fourth research question.

What are conditions of effective and successful co-management?

To discover this, we will use the framework as a diagnostic tool working backward through the relationships between the variables. We also will use terms and ideas from the design principles of successful self regulation from Elinor Ostrom (1992) and the comparison of these design principle with the design principle of Dutch co-management (Hoefnagel 1995).

First we will value the core elements of three years co-management experiences in the Netherlands within the variables of the Oakerson framework: + indicates a positive result; - indicates a negative result; +/- an insufficient or unclear result. Then we will weigh

those elements by looking again upon the outcomes. Finally we will develop ideal core elements of successful co-management within the Oakerson framework.

Outcomes

+ efficient quota management in terms of no overcatching and better economic usage of the available quotas;
+/- uncertain results upon effects on income differences;
- expectations for further concentration of fishing rights;
+ positive attitude towards the co-management scheme of all groups and institutions (In 1996 95% of the fleet joined in groups again);
+ an amelioration of the relationships between sector and government;
+/- transaction costs partly shifted from government to non-governmental institutions, unclearness about proportionality of this shift;
+/- legal frameworks need to be worked on;
+/- monitoring remained chiefly a governmental task;
+ sanctioning system is frightening.

Total of 9 core elements of which 4 are positive, 1 is negative, 4 are unclear/uncertain. These outcomes are directly related to 'the physical and technical attributes' as well as 'the patterns of interaction'. We will first consider the patterns of interaction.

Patterns of interaction

+ on all levels a high degree of cooperation, contribution and coordination. Focusing especially on user-groups;
+ predominantly homogeneous groups;
+ short-term incentives (additional days at sea and expanded possibilities to rent/hire quotas);
+ long term incentives (participation/influence/flexibility in a part of the operational rules; direct information channels; relaxation in relationships);
+ slight coercion;
+ appropriate moment and context.

Total of 6 core elements of which 6 are positive.

The physical and technical attributes

+ clear boundaries (excludibility, subtractibility, jointness);
+/- quotas were bigger than catch possibilities (effort and landings). In fact this was positive for co-management in the short term, however, on the long run this has a negative effect on stock sizes, which could be dangerous for a cooperative attitude in the long run;
- in 1995 quotas lowered (in 1996 quotas lowered strongly); stocks are not in good shape, however, there is no direct, complete relationship between co-management and stock sizes because Dutch fishermen catch a percentage of the stocks and other influences play a role. Influences from an ecological nature as well as a man made

nature: behaviour of other European fishermen fishing the same stocks (patterns of interaction on a European scale), and deriving from decision-making processes (external arrangements and operational rules of other Member States).

Total of 3 core elements of which 1 is positive, 1 is negative, 1 is insufficient. The physical and technical attributes and the patterns of interaction are related to the three other variables, so play key roles. The variable patterns of interaction are a very strong one in this case as we would see above: of the 6 core elements all 6 elements were positive. This is not the case in the other variable. It is interesting to think of the ideal situation for the physical and technical attributes.

* clear boundaries;
* effort and landings in equilibrium with quotas, ideally catch = quotas;
* incentives to leave respectively enter the industry when there is no equilibrium (to enter the industry is difficult due to property rights in the form of ITQs, to stimulate to leave the industry is possible for example by decommissioning);
* TACs, decommissioning, property rights implementation/change et cetera should be discussed in decision-making arrangements.

Decision-making arrangements

+/- groups form an extra layer in hierarchical layered and nested structures;
- no direct influence on external arrangements on EU level (influence via Minister, not via sub committee); influence between user groups and Minister via FCB;
+ participation in design co-management by fishermen and government in Steering Committee and subscribed by all relevant partners; co-management is a national affair;
+ homogeneous groups;
+ development of operational rules by groups (auction duty; fishing plans; renting market et cetera);
- according to design: monitoring and sanctioning by government and user groups, in practice- unclear social control- monitoring by government (AID);
+ sanctioning practices are effective;
+/- Arbitrage Foundation is installed, not yet functioning well;
+/- legal framework has to be adapted.

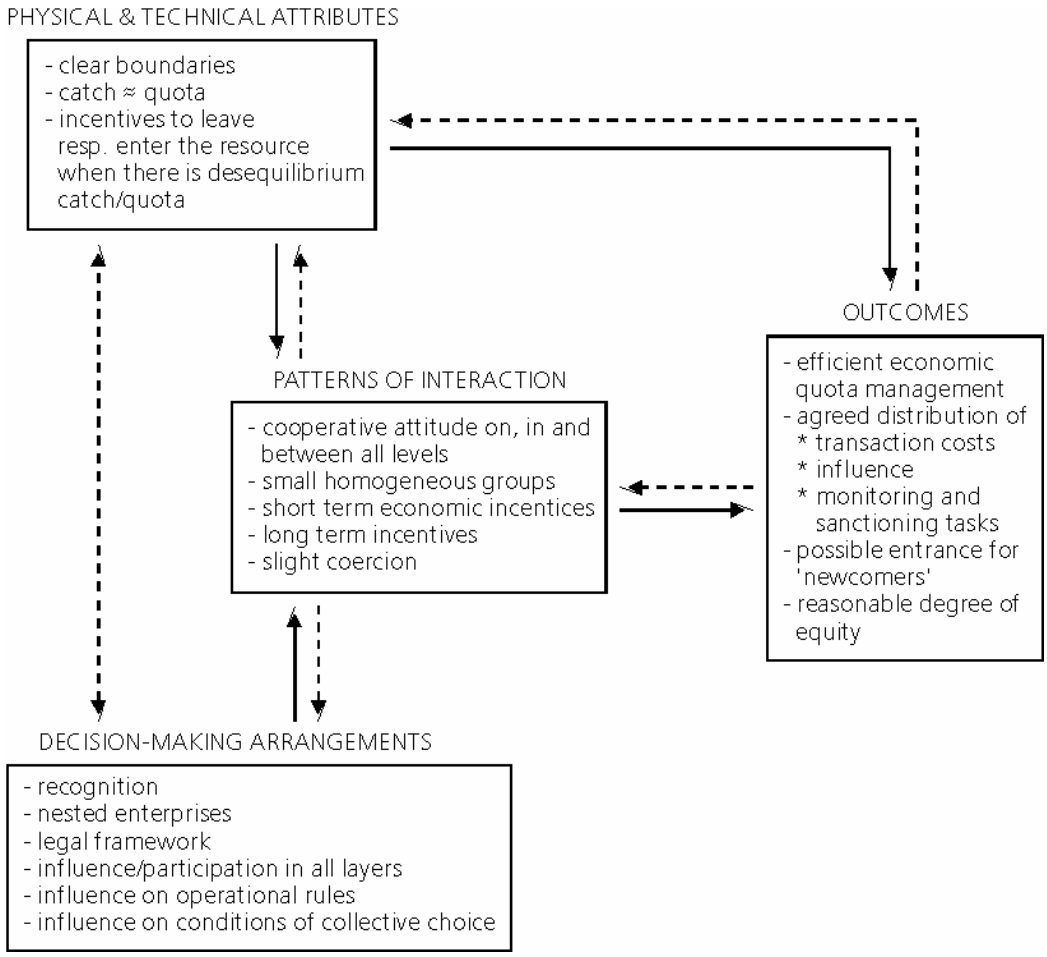


Figure 7.4 Dynamic framework presenting the ideal conditions for an effective and successful co-management of quotas in the Netherlands

Total of 9 core elements of which 4 are positive, 2 are negative, 3 are unclear or insufficient.

It should be taken into account that circumstances were rather favourable due to relatively high quotas and low catches. Because of the latter we are unable to pronounce upon whether the co-management system prevents exceeding of quotas. Nevertheless, it can be concluded that much has been achieved in three years time: co-management of fish resources is functioning in the Netherlands. The balance between the mentioned positive conditions and the less successful elements of co-management design and actual operation seems to be in favour for the continuing of the system, considering the 1996 renewed subscription in groups of 95% of the Dutch fleet. The less successful elements of the co-management scheme may form future obstacles if these remain unchanged. Situations cannot be perfect, however, a clear aim at perfection will be stimulating for participants. The aim then is the ideal situation, which is represented in figure 7.4.

7.2.7 Epilogue

Many changes occurred in Dutch fisheries management since the EU tried to implement an active fishery policy in the seventies and eighties. Dutch government had to change from a stimulating actor within a neo-corporatist setting into a restrictive one, without a well functioning institutional setting. The co management institution has finally filled up this institutional gap. This new institution could be created after a period of trial and error, of de-institutionalisation and re-institutionalisation. Co management seem to fit well in Dutch management tradition, and is therefore not complete new. It builds on old institutions, traditions and values. New though is the more conscious role of fishermen in the co management of fisheries management. They have to operate less individualistic and less autonomous, taking into account more and more their colleagues, society, policy and the environment.

7.3 The Dutch shrimp case and the Oakerson model

7.3.1 Introduction

Shrimps (Crangon crangon) can be found along the entire coast, sometimes even at a few metres from the beach. The shrimp fishing fleet is therefore characterised by small vessels with a very limited draught. The estuaries in Zeeland and the Wadden Sea are attractive places for the shrimp. As the shrimps are caught, they are immediately cooked aboard ship. After having been cooked, the crew cleans the shrimps from any impurities and the shrimps are stocked in refrigerated fish holds. At the auction, the shrimps are first transported over a sieve to sift the undersized shrimps. Then the sale in the auction room can commence. The traders send the shrimps to shelling shops in Holland or abroad (to Morocco) (PV 2002).

The shrimp fishery is an uncertain enterprise, in movement in prices and catches. A well-known and traditional solution to this uncertainty is to direct one selves in low periods towards other fisheries. For a part of these enterprises the shrimp fishery became less important than before and the flatfish or round fish fishery became the core activity. Others left the shrimp fishery completely aside. The larger beam trawler enterprises of today originate from this group (Salz and De Wilde, 1990).

Within the shrimp fishery of today (220 vessels) one can distinguish along many types:

- the pure shrimp fishermen;
- the mixed fishery enterprises;
- fishermen with a G.K. licence (circa 90), which are allowed to fish the Wadden sea and the coastal zones;
- fishermen with a G.V. licence, which are not allowed to fish the Wadden sea (about 135);
- vessels with a certificate of reliability from the Vessel Inspection;
- vessels without this certificate of reliability;
- vessels with an extra licence and ITQs (like whiting, cod, sole, plaice ITQs);

- vessels without an extra licence and ITQs;
- vessels that sold their licence and ITQs recently.

Many of these distinguishing features are developed by policy. In the context of overexploitation of marine resources and the complexities involved in developing effective conservation policies, the concept of common-pool resources (CPRs) is often introduced. Common-pool resources (CPRs) are resources (i) for which joint use involves subtractability: use by one user will subtract benefits from another user's enjoyment of the resource system, and (ii) for which exclusion of individuals or groups involves high transaction costs.

Though the Crangon crangon stock in the European marine resources is a CPR, it seems not vulnerable to over-exploitation. Hence, no quota system has been installed to control the shrimp fishery, as has been introduced for many other European commercial fish stocks. Nevertheless the quota regulations have their influences on the shrimp fishery as well. Since 15 years the shrimp fishery sector is increasingly confronted with regulations. This case presents the results of a research into the effects of the introduction of regulation by using the Oakerson model. The Dutch shrimp fishery case shows that self-regulation under market forces and governmental regulation under CFP forces are essential developments.

7.3.2 Physical & Technical Attributes

In this paragraph we consider the physical attributes and constraints of the natural resource Dutch shrimp fishermen exploit as well as the constraints placed upon the used techniques.

Since 1977, fishermen of non-EU Member States are excluded from the European Union part of the North Sea (200-mile zone/Exclusive Economic Zone). EU fishermen are sometimes seasonally banished from fishing grounds that function as nursery areas.

Due to a bilateral agreement Dutch fishermen are allowed to fish shrimp in Germany and Denmark. One is only allowed to fish shrimps with a licence (GV or GK licence, given by the ministry of LNV).

The shrimp fishing-fleet consists of circa 220 boats. Of these 220, only about 90 are allowed to exploit the Wadden Sea. Typically, the shrimp sector has been less capital intensive than the other Dutch fishing industries. 'When one wanted to become an independent fisherman starting from scratch, one became shrimp fisherman.' From old, the shrimp fishing-fleet has been characterised by older and smaller boats for a number of reasons. In general, a shrimp fisherman sticks to the coastal zone. Large vessels then do not generate enough extra profit to cover for the additional costs. Furthermore, one needs one crewmember only, to fish shrimps. But most importantly, 'the shrimp prices were so low usually, that there was nothing left to invest on, at the end of the day.' The last years, both landings and prices have increased drastically, and investments in vessel improvement as well, which led several interrogated stakeholders to make the following remark:

> 'The new ships, built now, after a couple of good years have to make a gross revenue of about 10,000 euro (per week), but a fisherman does not think about the fact that the amount of shrimps necessary to make such gross revenue, put prices under

pressure. The fisherman is impulsive, he invests on a good year. He thinks mainly on the short run.'

So an important constraint in the shrimp fishery is the relation total amount of catches of the fleet and the prices.

7.3.3 Decision-Making Arrangements

In general, decision-making arrangements are defined by authority relationships that specify who decides what in relation to whom (Oakerson 1992, 46). In the framework of Oakerson, decision-making arrangements are divided into operational rules, external arrangements and collective choice arrangements.

Here the operational rules concern the management/regulation of the use of the shrimp stock; the external arrangements are here defined by decision structures of organisations and institutions outside the immediate user-group; collective choice arrangements are rules that establish conditions of collective choice within the user-group.

Operational rules

Licences are important in Dutch fisheries; this is also the case in the shrimp fisheries. For the mixed fishery fleet quota management is as well an important management regulation. Apart from that total capacity of the shrimp fleet is frozen.

Licences

Since the sixties the condition to receive a licence is a maximum capacity criteria, namely 221 Kilowatt. There are two types of shrimp licences. The GK licence that allows one to fish shrimp in the Wadden sea and the 12 miles zone, the number of these licences is frozen in 1988 for nature conservational reasons. And the GV licence that allows fishermen to catch shrimp within the 12 miles zone, however the Wadden sea area is excluded. Since the cod fishery *became* less profitable due to low catches (and consequently low TACs) coastal fishermen turned again towards shrimp fishery which the fishermen of which shrimp are the core business did not like. They organised a fishermen's protest and, because they asked for it, in 1992 the number of GV licences has been frozen too.

European regulation

Since 1983 one of the pillars of CFP is its fleet policy, the multi-annual guidance program (MAGP). The core idea of this policy is that investments in a vessel is a long term financial burden that means a long term exploitation in fisheries and implicitly means a long term pressure on stocks. Until MAGP IV the shrimp fleet that was for 70% dependent on shrimp catches was not under the MAGP regime.

So to fish shrimp in the Netherlands, does not only imply a national shrimp licence but as well a so called 'list one or list two' licence. List 1 is a list with a special type of vessel on it. This is the MAGP segment Euro cutters: These are small multi-purpose beam

trawlers with engine power <= 221 kW, fishing mainly in coastal waters within the 12-mile zone (Davidse and De Wilde, 2001). These Euro cutters are allowed to fish for flatfish and shrimp with beam trawls within the 12-mile zone on the condition that the length of each beam trawl is less than 4 m (4.5 m overall) (EC regulation no. 55/87). Total horsepower of List 1 has been frozen since the first of January 1998. Mutual trade is possible within the total. So after 1998 shrimp fishermen had to pay for extra horsepower (De Wilde, 2001).

Meanwhile the shrimp fleet had nice financial results, and fishermen started to invest in extra capacity. They paid their investments by selling (mainly) cod and whiting ITQs and cod and whiting licences. Fishermen who sold their ITQs and licence are now pure shrimp fishermen. They do not belong any longer to List 1, the Euro cutters. Nowadays the pure shrimp fleet segment is due to this development becoming too big. Producers Organisations (POs) only receive subsidy for crush prices from the EU if they fulfil their MAGP obligations. That's why is decided to reduce capacity when capacity is traded by 40% Kilowatt (and 35% tonnes). Capacity can only be bought from stopping shrimp enterprises. When a shrimp fishermen decides to buy 60 Kilowatt he needs to buy 100 Kilowatt. In this way the segment will decrease in capacity and the Netherlands can fulfil its obligation toward the EU.

Inclusion on the so-called 'List 2' allows shrimp fishermen to use beam lengths over 4.5 m for shrimp trawling and, as an exception, for fishing for sole (of course, only if in the possession of sole quotas) on the condition that these fishermen have fishing for shrimp as their main activity (70% of their catches is shrimp).

Nowadays, these List 2 permits are traded, although they were not meant to. As one of the informants noted: 'Even if permits or licences are officially not tradable, who is going to control and how? Experience shows that fishermen trade everything what becomes scarce, allowed or not.'

For 'List II' a 'grandfather' system has started in 2000, implying that only boats continuing to fulfil the conditions are to remain on the list.

7.3.4 External arrangements

Ironically the shrimp fishermen were until recently rather free from national and EU regulation; nowadays they are more limited than the Euro cutter segment. While these euro cutters were already under a severe management regime due to quotas and other regulations. The fishermen that has chosen for a mixed fishery are better off according to a Wieringen fishermen:

> '…Shrimp fishery has been divided in segments. As result a group of shrimp fishermen has been classified in a segment that they can not leave anymore. Here (Wieringen) shrimp fishermen can do other things as well, here the fishermen have invested in licences and ITQs. Here they have built it all up, while at the other side (Wadden area) they have sold all rights. Then you have a bare business left. Of that group 40% has to disappear because there is an overcapacity according to the Multi Annual Guidance Plan. We are not in that group.'

Government and the EU are becoming stronger players in the shrimp fisheries. Traders have always been a very strong player in the shrimp fishery.

Trade

Nearly 100% of the in Dutch water caught shrimp is landed on 6 fish auctions. Still de prices are not made by the auction system, because:

- The oligopolistic position of the Dutch shrimp trade. According to Moret, Ernst & Young 5 traders control circa 90% of the Dutch shrimp trade (1994);
- Dutch traders are also active at the Danish and German shrimp market, where no auction system functions. Van de Beek (1998) concludes that the Dutch, German, and Danish shrimp market is one market. About 70% of the German and Danish shrimps are traded to Dutch merchants, which of course have its effects on prices.
- The main part of the Dutch shrimp fleet that catches shrimp in Denmark during winter, sells directly to the Dutch traders;
- Large landings cause low prices, however at first reasonable prices are made, which stimulates large landings;
- The traders store extra landings in freeze houses. In 1990 LEI ascertained that a 10% increase in landings in the high season, means a decrease of 6,3% in price in the next half year, due to freezing practices (Salz and De Wilde, 1990).

Collective Choice Arrangements

Neo-Corporatism in the shrimps

In other Dutch fisheries segments neo-corporatism played an important role. (See national case study.) The shrimp fishery was traditionally not that strongly regulated. Still the Fish Product Board does play its role.

Fish Product Board

Fishermen, fish and shellfish farmers, fish processors, whole-sellers, and retailers are united in the Dutch Fish Product Board. In the case of shrimp fishery, the different stakeholders meet twice a year in the Shrimp Advisory Board. This Board discusses and decides upon issues in the areas of, for instance, public health, quality, inspection, research and trade. For the Fish Product Board, an important controlling task is at the fish auctions. An officer of the Fish Product Board is permanently based at each auction. These officers check whether the fish has been correctly classified according to freshness and size. Furthermore, they check the fishermen's membership of the product organisations and the product organisations concerning their supply and price arrangements. In addition, the officers of the Fish Product Board inspect the products whether they are suitable for human consumption.

The producers' organisations (POs)
POs are mainly implemented for playing a role in the implementation of the common organisation of the market for fishery products. In the Dutch shrimp case their main function is to crush shrimps if prices become to low. The EU subsidizes a part of the costs.

Further, sieving is used as market regulating instrument: Fish Product Board facilitates agreement between POs, depends on price and landings, only too small shrimps are destroyed. The power of POs is very limited, they are more or less 'caught' in a prisoners' dilemma:

> 'We have always sanctioned fishermen who did not obey to the rules. But it is tricky because there are multiple POs shrimp fishermen can become member of. They can switch to another PO when not agreeing but merging these POs is very difficult as well because there are so much different kinds of shrimp fishermen, who all have different interests.'

Fishermen's organisations (FOs)
The Fishermen's' Union (Vissersbond) and the Federation of Fishery Associations (Federatie) nationally represent fishermen. The first organisation attracts members from smaller fish businesses (most shrimp fishermen are therefore member of this organisation), fishermen are direct member. The Union established an own PO, the PO 'Vissersbond'. From the second organisation, the Federation, local associations are member, thus fishermen sent delegates to Federation meetings. The following anecdote demonstrates the historical background of the complexity of the organisational structure in the relatively small shrimp sector. D.E.T.V is the original fishermen association at Wieringen. Due to 'purely power hunger of one person', new association was established in the mid seventies, 'Visserijbelangen', though both local associations represented exact the same interests. Visserijbelangen choose another strategy, became member of the Federation while traditionally D.E.T.V. was member of Union. Then Visserijbelangen established its own PO as well. Thus union is linked to D.E.T.V. and PO Vissersbond while Visserijbelangen and PO Wieringen are 'one package' and have strong ties with the Federation.

7.3.5 Patterns of Interactions

'Patterns of interaction result directly from the mutual choice of strategies by the members of a group. Given the physical features of the commons and the characteristics of the relevant technology, on the one hand, as well as the decision-making arrangements available to govern its use, on the other, individuals make choices, from which there emerges some pattern of interaction' (Oakerson 1992, 49). One can say that these patterns can be measured along a scale ranging from a free-rider strategy to a cooperative strategy as far as it concerns the interaction pattern of the exploiters/fishermen. We also want to know how government and organisations score on the scale of cooperativeness. There are other parties; traders and German and Danish shrimp fishermen.

Trade

In spite of the dependency of the shrimp fishermen of a few tradesmen, many informants do not judge negatively upon them:

> 'You would almost state that Heiploeg is god to some fishermen. The fisherman lands his shrimps and the whole catch is directly bought up. The enormous price fluctuations in the shrimp trade, a small trader simply cannot anticipate. That is why one is so glad with these two big men. And they really do not take an unreasonable part of the profit.'

> 'The better prices of the last years are no coincidence. Trade has brought the sale mechanism to a certain level and that stabilises at the moment. Both parties have an interest to realise better prices. Last year we had luck. In Germany there was nothing to fish. You sometimes think the fishermen have influence but that is not true. It is the trade that determines the price. Puul [a second big Dutch shrimp trader] and Heiploeg, you can judge that story in two ways. If you want something, you try to get as much grip on the situation that is what they do as well, in a certain way. Hygiene, sales increase, that kind of things demands for large investments and these two traders have invested. Parties that did not show up are parties that could not follow this model and try to undermine the market in certain periods. But the two big traders are the only ones who can handle these large quantities. Heiploeg and Puul offer a certainty which did not exist before.'

Still when prices are high, traders do not store, in order to have to buy not too much. Consequently demand is decreasing and prices are decreasing. Because of low prices demand is increasing.

This well-known cyclical process is difficult to regulate for shrimp fishermen, while they have to catch shrimp and most of them are not allowed to fish other species. The Euro cutters however, can switch from demersal fisheries towards shrimp (if they have a licence). So if quotas are low, they will choose to fish for shrimp, lowering consequently shrimp prices.

Also the German and Danish (and to a smaller extent the Belgian) shrimp landings have influence on the price movements. That's why the Dutch, German and Danish Pos started a 'trilateral consultation'.

Trilateral Consultation and self management

The trilateral consultation appears to be formed in reaction to the Sylt fishery and the internationalisation and concentration of trade. The Sylt is an island in the 12mileszone of Germany, accessible for Dutch fishermen thanks to a bilateral agreement. Dutch fishermen have explored the area since the seventies but more structural since the eighties. Three reasons evoked by the Sylt fishery leading to the trilateral consultation, are mentioned: interseasonal cold storage, the meeting of different nationalities, great oversupply.

'If the large vessels start to fish at the Sylt at the beginning of the year, the prices go down rapidly. In reaction, catch restrictions are introduced. But then the Wadden fishermen start to protest because their season starts in August.'

Influence of trade was that they became price manipulators through international trade lowering the prices at unexpected times, in other words, international closed price development, made possible by the developing monopoly position of two traders in the three most important shrimp landing countries.

'Fishermen landed seven, eight tons shrimps per week which led to marginal prices and a great oversupply and if we did not catch anything in the Netherlands, the Germans might have a good year and then we still did not receive a good price.'

Besides POs, traders and a few fishermen participated in the trilateral consultation. Fishermen and traders agreed on the amount of weekly landings, and the traders guaranteed a minimum price of 5,50 or 6 guilders a kilo, in scarce periods the price can go up till 10 guilders. Traders left some three years ago. One says it is because of the NMA interference, others state that trade became angry with the fishermen when these men introduced strict catch restrictions. Some say that it was advantageous for trade as well to regulate landings, as it would decrease transaction costs.

'It is true that the trade has often participated in the consultation. And if the storage then is crammed ... They rather do not give insight about the status of their stocks because that is valuable information for competitors, but if the stock is huge ...'

Self management at risk

So when market developments make it necessary, the POs meet in order to try to influence the market. In the beginning they agreed on a fish time reduction: a fishing ban in the weekend. The last few years one tries to restrict landings to keep prices at a reasonable level (De Wilde, 2001). Although not all informants are convinced of the direct relation between the good prices of the last years and catch restriction, they all agree that without the catch restrictions the whole situation would be far more difficult to control. Somehow, everybody agreed that the trilateral consultation became a more powerful player thanks to the agreement among the POs the last years.

So due to all kinds of patterns of interaction, like licensing, investments, selling of ITQs, Euro cutters, freezing of capacity, few traders, storage possibilities, quota regulations and market developments self-management came into existence.

However, the fishermen that developed themselves, as mixed fishermen, fishing for shrimp and quota fish, are becoming les interested in collectively arranged self-restriction.

'We have now arrived at such a point that we steer for our own course. We are a mixed sector. If there is a something to earn in a certain period and the others refuse, that is then their decision. We do not restrict because of the restricting. When there is something to fish, you have to be at sea. Our own course is that we will not comply

too much with things others tell us to do, which hinder making a proper gross revenue' (spokesperson P.O. Wieringen).

'We have arranged good prices for three year now, so that at length producers received such a price that they could make some investments. And that is where the misery starts again' (spokesperson trilateral consultation).

'…at the other side (Wadden area) they have sold all rights. Then you have a bare business left. Of that group 40% has to disappear because there is an overcapacity according to the Multi Annual Guidance Plan. We are not in that group. Artificially you sustain this overcapacity by catch restriction. We think this is rather unworkable. You do not have to be that social' (Wieringen fisherman).

So solidarity and self-management appears to be at stake in this sector. What does the shrimp sector needs next?

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