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A Critical Review of the Common Fisheries Policy¹

Carsten Lynge Jensen November 1999

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Abstract

The paper embodies an evaluation of the fishery policy at EU level. The common fishery policy is designed to solve a complex set of problems that emerge in the sector. This embodies on the one hand that the fishery policy is directed towards objectives that have their offspring in different theoretical paradigms for conservation, rationalisation and the community. On the other hand, the common fishery policy is also accommodates to solve the conflicting interests of the Member States; for example the resource sharing. The analysis in the paper shows that the Common Fishery Policy is based on inconsistent objectives, which arise as a consequence of the attempt to formulate a policy that deals with mutually conflicting objectives at the same time.

The paper takes its outline in describing elements in the historical process of the development of the common fisheries policy. It is found that the issue of equal or restricted access to the fish resource has had an important influence on the formulating of the historical policies as it is also has today. In the analysis of the current fishery policy the paper primarily places its focus on the elements of the policies for conservation, structure and control, their objectives and means. It is indicated that the implemented policies do not state solution that entirely prevents the distortions of overfishery and overcapitalisation present in the classical open access fishery. This is e.g. seen in the structural policy, where the Member States are not prevented from acting strategically in order to pursue their own interests. Moreover, the control policy shows that the EU has had difficulties in implementing a reliable policy, which would prevent the Member States from using the control policy in their own favour by implementing a *laissez faire* policy, and thereby indirectly benefit from their national fishing industries.

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1. Introduction

The overfishing and overcapitalisation in the fishing fleet are classical distortions, which can be discovered in the open access fishery that is characterised by free entry and absence of well-defined property rights. The fishery economic literature is full of examples that give normative solutions to the distortions in the open access fishery (Warming, 1991; Gordon, 1954; McKelvey, 1985). The aim in the following is merely positivistic as it emphasises the institutional and regulatory arrangements, which are implemented in the EU. More specifically, the implemented policy's ability to reduce rivalry over fishing resources between the EU² Member States is addressed. In this sense the Common Fishery Policy is analysed from an inter-state perspective, and the implemented policy is seen as a result of different national interests as expressed in the negotiations of the Common Fishery Policy. The result of these negotiations is outlined in a fishing regime, which is presented in the Common Fishery Policy, which employs state property in a form that allows fishermen of all Member States equal access to the Member States' fishing waters³. In addition, regulation of the fishery is accomplished e.g. through the policies for conservation, structure and control at the EU level. The Member States play an important role in the management of the fishery policy, and they have competence to impose national policy that is compatible with the intention of the EU.

In the general perspective, the EU has implemented a range of institutional and legal arrangements, which reduce the classical distortions of the open access fishery. But although the EU de jure is a regulated state property⁴, which implies the use of means to counteract the distortions, the present analysis shows that the fishing policy does not entirely hinder distortions in the fishery, according to Feeny et al. (1996). The premise in the present analysis is that the Member States' incentives for individual economic maximisation and the rivalry

^{2.} In the following only EU will be applied to designate the European Union.

^{3.} Formally, the fishing grounds of the Member States property, but in the EU the state property of extended version means that fishermen from all Member States have equal access.

^{4.} Use and access rights are impacted by regulations of the EU and the Member States.

over the resources did not vanish when the Common Fishery Policy was established. The qualitative analysis presented in the following chapters shows several examples of shortcomings in the applied policy of the conservation, structure and control policy, which leads to market failures in the EU fishery.

In the present analysis of the Common Fishery Policy focus is placed on the implemented fishery policy in the EU. Moreover, it is addressed to which extent distortions and rivalry over the resources are solved by the implemented policy. Finally, by assuming the implemented fishing regime as a benchmark, recommendations are given for fine-tuning the policy to reduce the distortions within the feasible regime.

The qualitative analysis begins in section 1.1. with a brief description of the classic theory of the market failures of over-depletion of the resource and over-capitalisation in the common pool fisheries, and different paradigms for controlling the fisheries are considered. In chapter 2 a historical review of the development of fishery policy is summarised with the purpose to describe the Member States' inherent resource conflicts, which are emphasised in the forming of the Common Fishery Policy. Detailed descriptions and evaluations of the current Common Fishery Policies for conservation, structure, and control follows in chapter 3. These policies are seen to have particular importance in influencing the market failures in the EU fishery. The evaluation of the policies contains the outlining of the main shortcomings of the implemented policies and recommendations to change them. Finally, the conclusion contains a summary of the main shortcomings of the EU Fishery Policy.

1.1. Markets Failures in International Fisheries

The exploitation of the fishing resources is one of the areas where international co-operation is an advantage, the reason being that the fish resources in general are not limited within certain borders. This means that competition will be established between fishermen in different countries in order to harvest from the available fish stocks. Theoretically, the fishing resource is defined as a common

pool resource⁵ that is characterised by two conditions. First, no one has the proprietary right⁶ to the fishing resource; i.e. no one is prevented from exploiting the resource, called non-exclusiveness. The other condition rival consumption, i.e. one party's consumption of the good, reduces the quantity left for the others (Grafton, Squires and Kirkley, 1996).

The general result in the fishery literature is that leaving the fishery "of nobody's property" to the forces of the competitive markets without implementing any kind of regulation will not be optimal from society's point of view. This is seen in the fishery under the open access regime, where there is no property, no regulation on the number of fishing vessels participating, and there are no restrictions on the catches. Society's loss under the open access fishery is monitored by declining catches, decreasing incomes for fishermen, and overcapitalisation by the use of too many vessels and too much gear, and excessive labour input in the fishery (cf. Libecap, 1990). The reason for society's loss under the open access is that there is a difference between the realised equilibrium based on private decision making, and the optimal social equilibrium based on the social costs and benefits (cf. Gordon, 1954). Under the open access fishery the fishermen are assumed to act rationally at the individual level by maximising their own income. This has the implication that the equilibrium in the fishery will be settled at a point where the relevant private marginal cost of access and production is equal to the private marginal return. It is assumed that the individual fisherman does not include the external costs that exist because his production reduces the productivity of others, who use the open access resource. The consequence of the individual decision-maker's ignorance of the external costs is that the equilibrium is located at a point with overcapitalisation and overexploitation of the resources compared with the social optimal production (Munro and Scott, 1985). Moreover, under the open access fishery, the fisherman has no incentives to postpone or reduce the utilisation of the resource, because the other users act individually maximising. This has the consequence that any fisherman reducing his utilisation will have an income that is lower

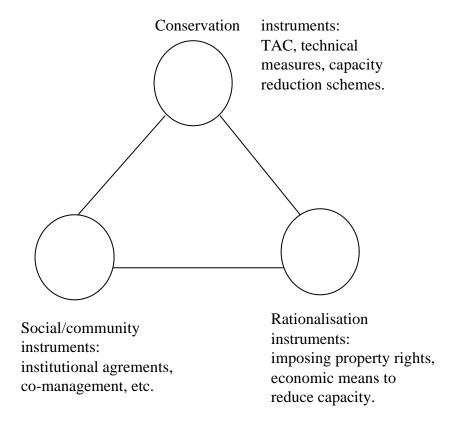
^{5.} The 'common pool resource' concept follows the definitions by Ostrom (1986).

^{6.} The no property concept is not the same as common property. The latter concept it is assumed to be the property of a group of co-owners cf. Bromley (1991).

than the average income. In this sense the individual can not collect the gain by reducing his production, and hence the individual has no incentives to reduce the utilisation below the optimal point of private production.

In general the literature of the fisheries contains a number of different paradigms to solve the market failures in the common pool fisheries. It is important to emphasise that the fishery policy of the EU is constructed of different elements that originate from these different paradigms. A general presentation of the different paradigms is found in Charles (1992), who distinguishes three different paradigms that differ in their outline of the optimal utilisation of the fish resources. The paradigms are the conservation paradigm, the rationalisation paradigm, and the social/community paradigm, and they different fundamentally in the their concepts of describing or »measuring« the optimum exploitation of the fishing resource. A general summary of the paradigms and their instruments are presented in Figure 1. It is important to recognise that although the approaches are mutually conflicting they all are seen to be part of the implemented fishery policy in the EU.

Figure 1. The Paradigms



The Conservation Paradigm

The conservation paradigm is based on the biological management of fish in order to obtain that biomass which gives the long run maximum sustainable yield of fish that could be extracted from the sea. In this sense distortions in the fisheries are measured in terms of deviation from the long run optimal development of the quantity of available fish in the sea. In a sense, the paradigm often advocates that the present catches should be reduced in order to achieve a maximum yield of biomass in the future. The biological advice on the exploitation of the biomass is based on a scientific evaluation of the state of the available resource, the biological productivity, the harvesting pressure and prediction on how the biomass will develop under a certain harvesting pressure (Lassen et al., 1997). The advice based on biological guidance is not targeted in order to achieve objectives of economic or social aspects. The biological advice is solely based on the achievement of the biomass conservation. The main instru-

ment of conservation is to control the total harvest of the fishermen by use of <u>Total Allowable Catches</u> (TACs), minimum size limit of fish, minimum size of meshes and natural amenities. In addition the control of the fishing effort can be based on the biological guidance, which implies scientific models that clarify the relationship between mortality from harvesting and the effort of the operating fishing vessels.

The Rationalisation Paradigm

The paradigm is based on the bio-economic models regarding the exploitation of the biomass given that the objective is to maximise the economic wealth. The magnitude of market failure is measured by the economic loss that occurs compared to the first best solution which is the maximum long-term fishery rent. The rationalisation paradigm builds on the premise that the objective of the society is to maximise the long run economic rent in terms of the economic benefit. Often a sub optimal economic exploitation of biomass can be a result of the competition between the fishermen, which leads to a harvest that is higher than at the maximum economic yield. The objective of the rationalisation paradigm would be failed when the operating fishing vessels are ineffective as valuable economic rents will be lost if the fishing vessel's composition is not optimal (Dupont, 1991). The typical instruments to approach the rationalisation paradigm is (1) to reduce to an "optimal" fishing effort, and (2) transform the fishery from a condition where no one have the property right to a private property, hereby the inevitable competitions of resource is eliminated (Charles, 1992). Seen from the international point of view, the rationalisation paradigm coordinating the countries' fishing contribution should entail advantages over non co-ordinated consumption. One reason for this is that the characteristic of the fishing resource often is that it is mobile across the countries' fishing borders. Consequently, extra economic gain will be obtainable if the countries agree upon waiting to exploit the resource until the fish are of a certain age and thus of greater value. Further, economic gains are available because the countries' vessels do not have the same costs seeing that only the most efficient vessels can achieve allocation gains (Munro, 1990). Seen from the general perspective the paradigm builds on individual cost minimisation behaviour and no consideration is taken with regard to political, social or employment aspects.

The Social/Community Paradigm

The paradigm builds on the broader spectrum of new theoretical fisheries concepts. The general point of view is that in a narrow sense the conservation and rationalisation paradigms for overfishing do not take account of the arrangement of the fishing community including the social and cultural conditions. In relation to the arrangement of the fishing community the rationalisation paradigm focuses on maximum economic yield which builds on fundamental historical and cultural conditions in the development in the Western world. In other cultures (Canada, Greenland) the main decision unit is the entire local community e.g. a village, not the individual (Grima and Berkes, 1989). The result is that in order to establish a sound exploitation of the fishing resource; the institutional framework of the society has to be considered (cf. Ostrom, 1990). Nevertheless, this forms a contrast to the pure cost minimising objective under the rationalisation paradigm. Another aspect is that neither the rationalisation nor the conservation paradigms consider the fact that the fishing community depends heavily on the fishing industry. Thus, the consequences of distribution such as unemployment caused by the biological and economic instruments is not provided for (Charles, 1988). It is therefore recommended to apply instruments within the local community or the socio-economic perspective, which ensure that the social and local interests are considered so that the framework is adapted to the local society ensuring a sound exploitation of the fishing resource.

The paradigms, which are described in the present chapter, can be seen as fixpoints for different objectives and instruments applied by fishery managers to regulate and control the distortions accomplished in applied fisheries. Moreover, the paradigms form a theoretical basis that is used to understand the mechanisms and arguments expressed by the Member States and thereby influence the forming of the Common Fishery Policy in EU. The detailed description of the process that forms the legislation and instruments employed to regulate the fishery in the Union follows in chapters 2 and 3. In chapter 2 the stages in the development of the comprehensive fishery policy is described in historical perspective. Chapter 3 contains an outline and evaluation of the elements in the ruling legislation, which are founded on many of the premises that are described in the paradigms of the present chapter.

2. The Historical Development of the Fisheries Policy in the European Community

2.1. Introduction

The aim of the present chapter is to uncover the transformation that the fishery in the Union has taken from an open access fishery to a fishery of regulated state property. The latter is aimed by implementing policies to preserve the resources and to balance the development of the resource and the fishing capacity employed in the fisheries. The brief review of the historical development in the fishery policy in the following clarifies the inherent resource conflicts between Member States. That is e.g. seen in the negotiation of the relative stabile distribution of the fishing quotas between the Member States, and problems encountering from the Member States' reluctance to abandon their competence to the Community institutions e.g. seen in the control policy. In general the conflict over the resource and hence the incentives of the Member States are emphasised as a driven force in the forming and implementation of the fishery policy.

In general the development of the Common fisheries policy has not been a oneshot event, the policy has rather been evolved gradually over several stages based on changes in the external environment outside the Community, and the change in the political positions of the single Member States.

Until 1977 the fisheries policy in the Community had a rather secondary position by applying objectives that where formulated for the Common Agricultural Policy (CAP). The main objective of the fisheries policy at this point was aimed to increase the insufficient supply of fish to the Common market. The fisheries

policy consisted of the market and structural policies, which were subsidising the fishing industry, by minimum prices on fish and by grants for vessel construction to catch more fish. During this period, the fishery in Europe was one of regulated open access⁷, where the Community shared harvest places with other countries in Europe. At the time there was no reason why the Community should impose severe conservation restrictions on the Community vessels, when the vessels from the non-member countries were not restricted in their fisheries.

The second period emerged by the introduction of the 200-mile EEZ fishery limit by 1977, which gradually turned the objectives in the Community's fishery policy. The implementation of the 200-mile zone founded the necessary condition of exclusiveness that could motivate the development of a comprehensive common conservation policy. In order to adopt the 200-mile fishing zone, the Member States in 1976 agreed on acting in unity in their negotiations of fishery with non-EC members. Although it was difficult at that time to settle a far-reaching Community policy some fundaments was established that could be used in the future negotiations of a more comprehensive fishery policy.

In 1983, the agreements were reached, and thereby forming the basis for a comprehensive Common Fisheries Policy was established. The major achievement was that conservation got a more important role to play in the Community fisheries policy. Moreover, the agreement of the associated policies for structure and control were also agreed upon, but undoubtedly the largest achievement in the negotiations was the conservation policy.

2.2. The Development in the Fisheries Policy until 1977

In the early stage of the European Community there was a lack of means in the legislation to prevent the inherent rivalry and hence over-utilisation of the resources. The Common Fisheries Policies (CFP) was included under the Com-

⁷ Although the fishery is defined as "open access", it is remarked that 12 nautical miles fishery zones is implemented in Europe from 1964.

mon Agricultural Policy (CAP) in Article 38(1) of the Rome Treaty⁸, and the main objectives were laid down in Article 39(1):

- i. to increase productivity by promoting technical progress and to ensure rational development and the optimum utilisation of factors of production
- ii. to ensure a fair standard of living for the agricultural community
- iii. to stabilise markets
- iv. to ensure the availability of supplies for consumers at reasonable prices

In order to attain these objectives, the Member States are obliged by Article 5 to 'take all the appropriate measures' while in Article 7 ensuring 'no discrimination on grounds of nationality'. The Rome Treaty was directed towards securing the economic and social welfare, which achieved by maintained price stability (the common market policy) and by increasing productivity based on the experience obtained by the development of the economy in agricultural communities. However, under the open access fishery (regime) that existed, the implemented policy would rather stimulate the tendencies towards over-utilisation than preserve the resources. The initiatives towards conservation were initiated as negotiations between European States9 independently of Community institutions. An example of this is the North East Atlantic Fisheries Commission¹⁰ (NEAFC), which during the 1960s and early 1970s recommended the appliance of preservation schemes such as the size of meshes, minimum size limit, preservation, etc. in the light of scientific estimations of the stock. The means of the NEAFC were, however, limited by the fact that they could only recommend but had no formal competence. The reason for this is that each participating country was sovereign and could refuse to comply with the recommendations. Thus, the results of the co-operation were limited as only the measurements agreed to by all parties could be implemented effectively. However, as the countries wanted to further their own interests, as a symptom of a classic free rider problem, none

⁸ The Treaty of Rome, 25 March 1957.

The negotiations were conducted multilaterally between both independent states and Member States without the participation of the EU.

¹⁰ Participating countries: Belgium, Denmark, East Germany, Finland, France, Iceland, Ireland, Netherlands, Norway, Poland, Portugal, Soviet Union, Spain, Sweden, United Kingdom and West Germany.

of the countries wanted to cover the loss from the preservation schemes and consequently they could not agree about particularly far-reaching limitations in the fishery.

Meanwhile, the first Community legislative Act in fisheries was initiated in 1971¹¹. The regulation followed the requirements within the agricultural tradition by the founding of a common organisation of the market in fishery products that supported prices and protected and conformed to the Community market. Moreover, a Community structural policy was set up that aimed to coordinate the structural policies of the Member States. Third, and most important the principle of equal was stated in Article 2(1) of the structural regulation 2141/70:

'Rules applied by each Member State in respect of fishing in the maritime waters coming under its sovereignty or within its jurisdiction shall not lead to differences in treatment of other Member States. Member States shall ensure in particular equal conditions of access to and use of the fishing grounds situated in the waters referred to in the preceding subparagraph for all fishing vessels flying the flag of a Member State and registered in Community territory.'

On these grounds the general principle for the fisheries (like the remaining matters in the Community) is that distortion of competition may not occur. This principle was now continued so that the vessels in the Member states had equal "access" and were not discriminated in the fishing zones of other Member States. Finally, a concern about conservation and overfishing in the fishing zones of the Member States is stated in Article 5 of 2141/70 where catch could be restricted in certain areas and periods or with respect to fishing gear for species that where heavily depleted.

The next event affecting the body of the Community's fishing policy was the enlargement of the Community with Denmark, Ireland, and the United Kingdom. Actually, the accession negotiation began the very day after the original

six Members States¹² had agreed on 2141/70. This had the implication that the new Member States had to accept the acquis communitaire in the terms of the Treaties and all legislation based upon them which had been adopted prior to the accession. However, the United Kingdom had difficulties with accepting the intentions of equal access in Community waters as laid down in 2141/70. The reason was that this would allow fishermen from other Member States access to fish within the 12 nautical miles fishing zones, formerly exclusively fished by British inshore fishermen although some foreign fishermen were allowed fishing rights between six and twelve miles in certain areas and for certain species. In general the position of the British inshore fishermen was that the Community had not employed a proper conservation policy. This would allow foreign vessels to use finer meshed nets than the British and trailing chains along the sea floor in order to chase fish into their trawls. The concern of the inshore fisherman was that this would wipe out the inshore fish resources (Young, 1973). The position of the British Government in the negotiations of the Act of Accession was to keep a status quo by respecting the British fishing right within the 12mile zone although this was not in accordance with the acquis communitaire. The settlement of the equal access dispute was the determination of some temporary exceptions in the Act of Accession¹³. Thus, the principles of equal in all waters of other Member states were temporarily limited by defining certain areas where the Member states could exclude the catch from other Member States within 6 nautical miles, which could be extended to 12 nautical miles in certain areas. Moreover, according to Article 102 the Commission shall within the end of 1978 make use of its competence to secure a sustainable utilisation of the resources. This has the implication that the Member States' competence to regulate the fisheries would be temporary and assigned to the Community. However, in general the dispute over equal access was only the top of the iceberg of what was to come in the development of a comprehensive fishing policy in the Community.

¹¹ O.J. L236, No. 2141/70, 20.10 1970; O.J. L236, No. 2142/70, 20.10 1970.

¹² Belgium, German Federal Republic, France, Luxembourg, Netherlands and Italy.

¹³ O.J. L 073, 27.3 1972.

¹⁴ In force to 31 December 1982, Article 101, Act of Accession.

2.3. The Fisheries Policy after the Introduction of the 200 EEZ Zones (1977)

The next push towards a more comprehensive Community fisheries policy was installed as a consequence of the establishment of the 200-mile limits from 1 January 1977 decided at the Third United Nations Conference on the Law of the Sea. This led to exclusive economic zones (EEZ) in the fishery, in the sense that vessels in Community were prevented from accessing catches within 200 nautical miles of the coasts of Iceland, Norway and Faeroe Islands. This was of major importance for the vessels of the United Kingdom and the German Federal Republic. The adoption of 200-miles economic zones raised two important issues for the Community. First, it would have to make reciprocal negotiations to get access to the distant waters. Second, the Community had to implement the 200 nautical mile zone of the Member States and decide how this change would influence the fishery policy in the Community?

First, the intention of the Commission was to play an active role in the negotiations of the reciprocal resources with the third countries. The argument was that the Community would stand stronger in negotiations with non-members such as: Norway or the East European countries, when acting in unity (Gundelach, 1977). In addition it would be of mutual benefit to the Member States if they could prevent the third countries from getting access to the resources in the Member States' waters. Finally, the Community could obtain access to fish resources in third countries' fishing zones by allowing structural grants or favourable trade accesses to the Community market. The latter conditions could only be applied, when the Member States acted in unity, because it would demand a general acceptance of the Council.

As seen in Table 1, the majority of the Member States were interested in the access to resources in the zones of the non-member states. Therefore, it was not difficult to get a mutual understanding that it could be an advantage that the Community was given the competence to negotiate with non-member states. At the final meetings at The Hague in October 1976, all Member States but Ireland were anxious to adopt the necessary institutional arrangements for the Commis-

sion to engage in the external negotiations. Ireland argued that it did not have any distant water fleet to deny the Commission its mandate to the external regotiations until such a time when Ireland received guarantees in the Community's internal fisheries policy. As a result Ireland accepted the procedure for external negotiations¹⁵ on the condition that they be admitted the guarantees for a progressive development of its small fleet by a doubling of the 1975 catches by 1979.

¹⁵ Not published in any official journal, however, a summary was published in 1981, O.J. C 105/1, 1.2. 1981.

Table 1. Catches by Zone and Country (1973 Figures)

Country	Total (1,000 metric tonnes)	Catches in terri- torial waters and national zones adjacent to these waters (assuming a 200-mile limit)		Catches in zones of other Member States (assum- ing a 200-mile limit)		Catches in zones of non-Community countries (assuming a 200-mile limit)	
	=100%	1,000	%	1,000	%	1,000	%
		m.t.		m.t.		m.t.	
Belgium	49.1	25.9	52.7	15.4	31.4	7.8	15.9
Denmark (Incl. Greenland)	1453.4	990.9	68.2	263.2	18.6	199.3	13.7
German Federal Re- public	418.2	21.2	5.1	113.3	27.1	283.7	67.8
France	593.9	159.3	26.8	274.7	46.3	159.9	26.9
Ireland	80.1	72.0	89.9	8.1	10.1	1	
Netherlands	220.4	78.6	35.7	134.8	61.2	7.0	3.1
United Kingdom	1048.7	667.0	63.6	3.4	0.3	378.3	36.1
Italy	289.9	191.1	65.9	_		98.8	34.1
Overall To- tal	4153.7	2206.0	53.1	812.9	19.6	1134.8	27.3

Source: Driscoll and McKellar (1979)

The question of the internal fisheries policy in the Community was more difficult to settle. In the outline of the implementation of the 200-mile zones, the Member States had different interests as seen in Table 1. On the one hand particularly the British fishermen anticipated a double pressure from the implementation of 200-mile economic zones. First of all, the UK vessels would have a relatively great economic loss due to the foregone catches in the distant waters. Second, the British fishermen felt that they would be obliged to share the rich abundance of resources within the British 200-mile zones with

rich abundance of resources within the British 200-mile zones with fishermen from other Member States. In addition, the British fishermen had only minor interest in the getting access to the 200-mile territories of the other Member states. The latter could have been seen as a compensation for the British losses in distant and domestic waters. The Dutch and French fishermen, on the other hand, would be heavily affected if they were denied the access to the 200-mile fishing zones of the other Member States.

The Commission presented the first proposal¹⁶ in February 1976 which among other things covered:

- i. the fixing of the of twelve-mile exclusive coastal zones that the Member States could reserve to vessels traditionally fishing and operating in that geographical area
- ii. the establishment of the 200 nautical mile fishing zones within which the Community should manage the resource through the setting of Community based quotas

The position of the British Government was that they could not accept the 12-mile zones and alternatively they proposed the establishment of extensive exclusive national zones of at least 50 miles. The standpoint of the British Government was influenced by the opinion in various British fishermen's organisations. At a meeting in Edinburgh April 1975 these organisations had agreed that Britain should press for a 200-mile limit fully enforceable against non-EEC members, and for a 100 mile limit fully enforceable against all Member States (Driscoll and McKellar, 1979). The position of the French and Dutch governments were in favour of the intention of equal access as laid down in 2141/70.

The Irish and British governments outlined a proposal that took account of the national fishermen's demand for exclusive fishing zones and the Community partners' demand for equal access. The proposal contoured a variable coastal belt with a range between 12 and 50 miles, which should vary according to certain regional factors, such a the social and economic conditions prevailing in

individual ports. The proposal was attempted as a compromise between the principle of non-national discrimination and the principle of regional development. Although the Irish and British governments toured around the European capitals campaigning for their proposal, there was no progress in the negotiations.

At the final meeting in The Hague, the Member States were not able to reach any new agreements on internal exclusive zones in the Community. Moreover, proposals had been presented by the Commission to implement a common conservation policy. The basic instrument was to fix the annual Total Allowable Catch (TAC) for each stock or group of stocks, and to distribute the permission catches fairly among the fishermen of the Member States, using a system of quotas. The Member States were not able to reach any agreement on the implementation of such a Community quota policy. The final result agreed upon by the Member States in The Hague resolution can be summarised as,

- i. individual states were allowed to take non-discriminatory national conservation measures within their own zones (12 nautical miles)
- ii. the settlement of a process for an internal distribution of the TAC, the Hague preferences, which later was to be used in the final negotiation of the conservation policy (internal distribution of the resources). This contained, 1) an attempt to take account of the traditional fishing pattern of the Community fleet by taking account of the Members States catches during a period of reference; 2) certain preferences (later termed the "Hague preferences") were to be applied to fishermen in certain regions where there were (and still are) few job opportunities for alternative employment; 3) the losses suffered by Member States' fishing vessels in third countries after the introduction of the 200-mile EEZ have also been considered.

The Hague resolution had the political implication that the Member States were assigned the competence to impose conservation measures within their own territorial zone. As a consequence of this assignment the Irish Government imposed a regulation "Sea Fisheries (Conservation and Rational Exploitation) or-

¹⁶ COM (76) 59.

der 1977". That imposed the restriction that vessels larger than 33 metres and with engines larger than 1100 HP were prohibited the access to the Irish fisheries zones covering 56°30, northern latitude, 12° west longitude and 50°30 northern latitude. The conservation requirements were based on scientific advice justified by Irish biologists and based on the premise that the largest vessels with maximum efficiency tend to make the largest inroads into stocks. The implication was that it excluded nearly every Dutch and French vessels fishing off Ireland, whereas only two Irish vessels were excluded from the fishery in the area (of which one has never been operating in the area). Seen from the perspective of the Dutch and French governments, the conservation regulation was interpreted as an attempt to exclude foreign fishing vessels from the Irish fishing areas. The Dutch government opposed against the Irish regulation by taking it before the European Court of Justice¹⁷.

The European Justice of Court decided that Ireland had violated the intentions in the Community legislation. The premise for the decision of the Court was that regulation imposed by Ireland was unequal as between Irish fishermen and other Community fishermen, which had traditionally fished there. The Irish Sea Fisheries regulation was discriminating towards nationality, which contradicts Article 7 of the Treaty of Rome Treaty and Article 2(1) of Regulation 101/76. The Court recognised that Member States' competence to imposed conservation regulations that where not discriminatory.

2.4. The Comprehensive Common Fisheries Policy established in 1983

The settlement of the comprehensive Common Fishery Policy was founded in 1983 by the establishment of the conservation policy, 170/83, which was supplemented by the structural policy, 2908/83, and the control policy, 2057/82.

¹⁷ Case 61/77 European Court reports 1978 page 0417.

The Conservation Policy

By the agreement on the conservation policy, the Community was given the formal competence to govern the conservation policy e.g. by fixing the yearly annual Total Allowable Catches (TAC) to the Member States. In this sense there were found a compromise to the negotiations that were initiated by the Hague resolution in 1976. The agreement is laid down in 170/83¹⁸, which secures the sharing of resources based on the concept of relative stability that gives each Member State a constant relative share of the quotas. This is explicitly addressed in Article 4(1) which states that

'the volume of the catches available to the Community referred to in Article 3 shall be distributed between the Member States in a manner which assures each Member State relative stability of fishing activities for each of the stocks considered'.

In order to take account of the previous disputes of the sharing of resources, the sharing laid down in the relative stability explicitly incorporate the special needs as defined in the Hague resolution¹⁹.

The local and social needs of the fishery dependent regions were also taken in consideration by the maintaining of the 12-mile exclusive fishing zones and by the establishment of the Shetland box. The fisheries in the exclusive zones, stated in Article 6, involve a detailed ruling of the vessels from other Member States having access to single species, and *inter alia* seasonal restrictions within the 12 mile fishing zone of the single Member State. The conditions for fisheries in the Shetland box, stated in Article 7, involve the management with a license system applied for vessels larger than 26 metres, moreover limits are set to the number of vessels that are allowed to operate in the area at the same

¹⁸ O.J. L 24, No. 170/83, 25.1 1983.

¹⁹ The special needs is laid down in Annex VII to the Hague resolution of 3 November 1976.

time²⁰. In this sense, some of the UK reservations to the equal access were implemented as a part of the new conservation policy.

In general 170/83 must be seen as a political compromise between the Member States that safeguard the local and social interests in the Member States. Moreover, it is important to recognise that the agreement of 170/83 lays down for the first time a formal way to handle the resources allocation between the Member States.

Finally, it is noted that 170/83 was in force for a ten years' period. This implied that by December 31, 1991, the Commission should present a report the Council. The report should describe the situation in the fisheries involving the size of the stocks and its expected development, the economic and social development of the coastal regions. Moreover, the relative stability and the provision of fishery dependent areas in 170/83 are in force until 1992. The provision to change the distribution of resources among the Member States stated in Article 4(2) shall be based on the report presented by the Commission, and decided by the Council based on majority voting as stated in Article 43 of the Treaty.

The Structural Policy

In order to supplement the conservation objective, the structural policy 2908/83²¹ was agreed to secure a co-ordination between the development in the resources and the fishing capacity. This is stated in the structural policy by the implementation of the Multi Annual Guidance Programmes (MAGP), which intend to set objectives for the development in the fishing capacity in measures of GRT and kW. The provision for MAGP was made earlier in 2141/70 and 101/76, but it was first by the agreement on 2908/83 that the development obtained a major place in the common fisheries regulation. The objective was clearly defined in Article 3(a):

²⁰ Annex II of 170/83 the limit of access to the to Shetland box is given by 52 French vessels, 62 UK vessels, 12 German vessels and 2 Belgian vessels in the area.

²¹ O.J. L 290, No. 2908/83, 22.10 1983.

'With respect of the fishing sector, a satisfactory balance between the fishing capacity to be deployed by the production facilities cohered by the programmes and the stock which are expected to be available during the period of validity for the programme'.

In general the objective of the 2908/83 was not that of the conservationist view. The general objective was to secure the fishermen a stabile income as stated in the preamble.

'Whereas, in order to set limits to the economic insecurity in which the Community fishermen work, the fleets concerned must be restructured, under a common measure, by renewal and, where necessary economically appropriate expansion in line with actual catch potential, which will ensure optimum productivity in the long term of these production facilities'.

The Community was willing to give financial support to investment projects, purchase or construction of new fishing vessels, and the modernisation or conversion of fishing vessels already in the use. In general, getting the Member States to agree on the structural policy did not cause much trouble, as noted by Holden (1996, 56)

'almost since the inception of the structural and market policy they have caused few problems, essentially because they provide financial support to the fishing industries of all Member States, which facilitate agreements'²²'.

The Control Policy

To secure the compliance of the conservation policy, the Community implemented a control policy, which is stated in 2057/82²³. The control policy contains the means of inspection of the vessels at sea, and inspection of the vessels and their landings in the ports. The competence to undertake the control was given to the Member States, which within their zone of jurisdiction had to in-

²² Mike Holden the chief of DG XIV the Conservation Unit in the Commission in 1986 and Adviser to the Director General until 1990.

spect the vessels from the Member States. Moreover, the Member States had to control that the landed quantities of the vessels in the Member State was not exceeding the Total Allowable Catches of the Member State.

In general the control regulation was giving the main competence to the Member States. On the other hand the Commission was merely having the position of controlling that the Member States fulfilled their obligation to control. In case a Member State did not meet this obligation, the Commission would follow the procedure stated in Article 12(2):

'If the Commission considers that irregularities have occurred in the implementing of this Regulation, it shall inform the Member State or States concerned, which shall then conduct an administrative inquiry in which Commission officials may participate. The Member State or States concerned of the progress and results of the inquiry'.

Article 12(2) clarifies the weak position of the Community institutions in the control policy, the Commission was not allowed to implement sanction against the Member State, but the mean of the Commission was only to take part in an administrative inquiry.

The efficiency of the control policy in the fisheries can be described by the following quote from Holden (1996, 159)

'the reason for which the Council was able to agree (on 2057/82) was because the regulation gave no effective powers to the Commission. The political objective was to establish a system of control and enforcement without conceding any competence to the Commission. That this means that the system would be largely, if not totally ineffective, was almost certainly the objective of most states'.

²³ O.J. L 220, No. 2057/82, 29.7 1982.

2.5. The Entry of Portugal and Spain into the Community

In the conservation policy of 1983, the relative stability was defined as the relative sharing of the quotas between the ten Member States²⁴, and hence the 1983 regulation did not take account of relative shares for prospective new Member States. By the entry of Portugal and Spain in 1986 the Community gained two new Member States, which had significant interest in the fisheries policy, and it was not long before the newcomers challenged the fundament of the Common fisheries policy. Based on what Holden (1996) calls 'a badly drafted Act of Accession for Portugal and Spain', Portugal and Spain raised doubt of the legislation in different ways.

Portugal and Spain had the opinion that the Council based its distribution of quotas between the Member States on a wrong interpretation of the relative stability. The consequence was that Spain and Portugal during 1990 and 1992 brought a number of cases for the European Court of Justice in order to change the quota distribution.

In the cases C-63/90 and C-67/90²⁵, Portugal and Spain against the Council, the two new Member States argued that there was a wrong distribution of the Community fishing rights in the third waters of Greenland, the Faroe Islands, Norway and Sweden. In the example of the fisheries in Greenland's waters, Spain and Portugal have prior to the establishment of the 200-mile EEZ had significant catches in the waters of Greenland. However, by the introduction of the 200-mile EEZ in 1977, the Spanish and Portuguese fishermen lost their fisheries in the waters of Greenland. By Greenland's exit of the Community by January 1, 1985, the Community kept some fishing rights in the Greenland waters, which was accomplished by granting Greenland financial support. The agreement gave Greenland access to a certain level of minimum catch quantity within the fishing zone of Greenland. This had the implication that in case of a

²⁴ Belgium, Denmark, German Federal Republic, Greece, Ireland, Italy, France, Luxembourg, Netherlands and United Kingdom.

²⁵ See e.g. C-63/90 and C-67/90, European Court Reports 1992, page I-5073.

reduction in the availability of resources, the Community's fishing rights were reduced accordingly without reducing the financial support to Greenland. On the other hand in case of an increase in the available resources, the Community's catch rights were increased.

The position of Portugal and Spain was that their catches in the Greenland's fishing zones prior to 1977 should be included in the relative stability, and hence they demanded a dismissal of the Community's 1990 distribution of the quotas in Greenland fishing zones²⁶. They argued that the entry of the new Member States fulfilled the necessary conditions for a reinterpretation of the relative stability of the Community resources in the third countries. Secondly, Spain argued that given that large increases in the Community's quotas in the zones in 1990, the relative stability would not be violated by allowing Portugal and Spain quotas in the Greenland water, because the other Member states in the Community had not utilised the Community quotas.

The European Court of Justice dismissed the cases. The premise for the dismissal was that by Article 2 in the Act of Accession²⁷, Spain and Portugal had accepted the acquis communitaire, which include regulation 170/83 and hence the relative stability. Moreover, there was no provision in the Act of Accession that the relative stability should be altered. Secondly, given the Spanish argument that the Community did not catch its quota, the Court stated that there is doubt about the availability of the allowable catches. I.e. the Community vessels have not been able to catch the allowed quotas could be connected to an overestimation of the predicted catch opportunities. In order to underline the premises the Court specified the concept of the relative stability that is the Member States contained in the relative stability are secured a constant share of the available catches. This means that there is not undertaken a new distribution of relative stability e.g. based on increases in the available quotas. Moreover, it was stated that there was no provision for the fact that actual catches were lower than anticipated catches should form basis for new distribution of the quotas between the Member States. In general the Court recognised that the two

²⁶ O.J. L 389, No. 4054/89, 19.12 1989.

²⁷ O.J. L 302, 15.11 1985.

new Member States had provision to be included in the distribution of new fishing possibilities with non-EC countries and in any eventual review of the distribution system in accordance with Article 4(2) of the EC regulation 170/83.

2.6. The Tendencies in the Historical Development of the Common Fisheries Policy

The historical development of the Common Fishery Policy shows that the Member States have different preferences on whether to maintain a fishery of equal access or to establish a fishery of exclusiveness. The prospects of equal access to the fishing areas in the Community is stated in Article 2(1) of 21417/0, which imply that the Member States are not allowed to impose restrictions that lead to differences in treatment of fishing vessels from other Member States. This is also in line with the principle that prohibits discrimination on ground of nationality, stated in Article 7 of the Rome Treaty. On the other hand, the problems encountered in the fishing sector diverge significantly from the other sectors encountered by the common legislation of the Community, and in the forming of the Common Fishery Policy it was seen to be necessary to use exclusiveness as a tool to overcome the market failures that are specifically related to the fishery. Although, the exclusiveness often involves discrimination towards nationality there are numerous examples of its use in the fishery. This is e.g. seen in the establishment of the 12-mile zone implemented by the Act of Accession for Denmark, Ireland and United Kingdom in 1972, and moreover by the founding of the Shetland box, stated in 170/83.

In general, the Common Fishery Policy is seen to be a picture of the political compromises between the Member States, and thereby the policy contains elements that reveal some Member States' (France and the Netherlands) preferences for equal access and other Member States' (Ireland and United Kingdom) preferences to protect their resources. It is emphasised that the trade-off between preferences for equal access and exclusiveness is still present in the current fishery policy, and in this sense the fundament for the discussion of the fishery regulation has not changed since 1970-72. In the following we will go

into a detailed evaluation on the way the present Common Fisheries Policy is dealing with the conflict of resource sharing between the Member States.

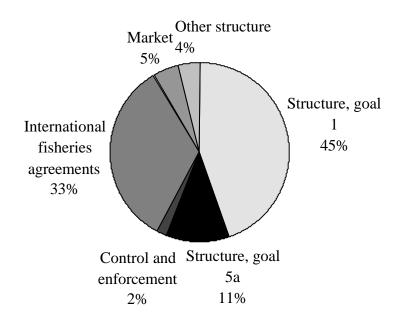
3. The Ruling Regulation of the Fisheries within the European Union

3.1. Introduction

The Common Fisheries Policy is founded on Article 38 of the Treaty, which establishes the legal basis for the competence of the EU within the fishing sector. In practice, the Common Fisheries Policy establishes a general framework, which outlines the competence of the EU's institutions and it applies instruments for the EU to affect the development of the fishing sectors in the Member States. The Common Fisheries Policy consists of the conservation policy, the market policy, the structural policy, the control policy and a policy dealing with negotiations with non-member states. In general, the conservation policy is the spine of the Common Fisheries Policy as it gives the EU the competence to distribute the current quotas between the Member States. Another important element of the policies implemented under the Common Fisheries Policy is that they open for EU funding of the fishing sectors in Member States. The elements of the EU's funding of the fisheries are summarised in Figure 2. In total the EU granted 752.6 Mill ECU to the fisheries sector by 1996, 60% of the grants is given to the structural development of the fishing sectors in the Member States. The structural grants are e.g. based on the goal 1 purpose, which covers subsidies to the least developed regions in the EU. Moreover, grants based on the goal 5a objective are provided with the purpose to support the adjustment of the agricultural and fisheries regions as stated in 2052/88²⁸.

²⁸ O.J. L 185, No. 2052/88, 17.7 1988.

Figure 2. The Grants in the Common Fisheries Policy, 1996



Source: O.J. C 348, 18.11 1997.

Another important element of grants is based on the international fisheries agreements between the EU and third countries, where the EU e.g. gives grants to non-member states with the purpose to get access to the resources within the fishing zones of these countries. Moreover, the EU gives grants according to the market policy, which is e.g. based on the purpose to secure minimum prices in the common market of fish, as stated in 3759/92²⁹. This means e.g. that the EU pulls fish out of the market, when the market price is less than a required "minimum price". Finally, minor grants are provided with the purpose to secure the necessary control and enforcement of the fisheries in the EU.

The purpose in the following sections is to look at the Common Fishery Policy and to monitor the single policy elements designed to affect the consequences of the resource conflicts between the Member States. This means, that the market policy and the policy for agreements with third countries are not explicitly addressed as these policies only indirectly affect the tendencies towards excessive depletion and over-capacity in the fishery of the EU. On the other hand, the

²⁹ O.J. L 388, No. 3759/92, 17.12 1992.

analysis explicitly addresses the conservation policy, the structural policy and the control policy, because these policies are essential in impacting the fishermen's and the Member States' actions in the game of the common fishery. More concretely the analysis covers a discussion of the instruments applied e.g. to conserve the fish stocks and to distribute the resources between the Member States. The resource conflict is also indirectly affected by the EU's subsidies for developing the fishing sectors, the Multi Annual Guidance Programmes (MAGP), and the legislation to prevent state aid to the fishing fleets. The latter refers to aid that distorts the competition and thereby is used by the Member States in an internal conflict over the resources. It is important to recognise that the main part of EU's costs is used for structural purposes. Although, as noted by Karagiannakos (1995), it would be more obvious to reduce the conflict over the resources by increasing the subsidies for control, because this would secure a compliance with the imposed regulation. In this sense, it is crucial to apply the control policy to safeguard that the fishermen are prevented from unrestricted access and use of the resources. Moreover, significant sanctions in the Member States are essential in order to secure compliance in every Member State. Although, the control policy should always be applied based on a cost-benefit analysis, which secures that the cost for control is never higher than the EU loss in wealth from not compliance (Coase, 1960).

3.2. The Conservation Policy

The conservation policy is among the most important items of the Common Fisheries Policy laying down the fundamental premise for the sharing of the resources between the Member States. The principal foundation of the conservation policy is stated in 3760/92³⁰. It is emphasised that the Member States have transferred their competence to make decisions concerning the conservation regulation to the Council. That is, according to Article 4, the Council establishes

'Community measures laying down the conditions of access to waters and resources and of the pursuit of exploitation activities'.

³⁰ O.J. L 389, 31.12 1992.

Moreover, decisions concerning the conservation policy are made in the Council based on qualified majority voting on the proposals presented by the Commission. The Member States have the competence, as stated in Article 10, to take measures for conservation and management of the resources in the waters of their jurisdiction, provided that the measures are more stringent than the measures implemented by the EU. The national measures can only apply for fishermen in the concerned Member State. The latter condition has the implication that the single Member State has the competence to implement a national conservation policy, based on Article 10, but only when the national measures are compatible with the intentions and objectives in the conservation policy of the EU.

The intention of the EU's conservation policy is defined in the preamble of 3760/92,

'the objective should be to provide for rational and responsible exploitation of living aquatic resources and of aquaculture, while recognising the interest of the fisheries sector in its long-term development and its economic and social conditions'.

This implies that the conservation policy has to take explicit consideration of the economic and social condition of the fishing dependent areas. This is also lined out in the principle of regional development where the cardinal point is to maintain restricted access to fish resources within the 12-mile zone of the Member States' coasts. This restriction is maintained until December 31, 2002. In general, the objectives in the conservation policy are defined in Article 2(1):

to protect and conserve available and accessible living marine aquatic resources to provide for rational and responsible exploitation on a sustainable basis, in appropriate economic and social conditions for the sector, taking account of its implication for the marine eco-system, and in particular taking account of the needs of both producers and consumers

The Commission assisted by the Scientific, Technical and Economic Committee for Fisheries (STECF) formulates the measures necessary to achieve these objectives based on the available scientific data. The Committee submits an annual report, outlining the situation regarding the fishing resources, the development in the fishing activity, and the economic implication of the fishery resource situation.

The instruments outlined in the conservation policy lay down the conditions of access to the EU waters and resources and the pursuit of exploitation activities. The concrete instruments applied by the EU for each fishery or group of fisheries are summarised in Table 2. In addition to these instruments a license system is introduced. As noted in the preamble to 3760/92

'the introduction of a general Community system of administrative fishing licences attached to the vessel and issued and managed by Member States may contribute to improve regulation of exploitation and transparency'.

In general, the common instruments employed in the conservation policy, Table 2, can be grouped under four headlines: the *quota instrument*, the use of *protected areas*, *management of fishing effort*, and *technical measures*.

Table 2. The applied Instruments in the Conservation Policy

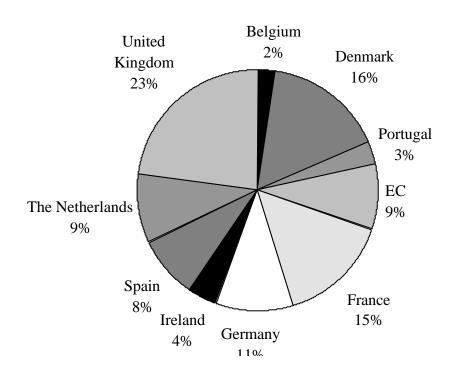
Instruments

- a) Establish zones in which fishing activities are prohibited or restricted
- b) Limit exploitation rates, which refer to the catches of a stock over a given period of time as a proportion of the total stock
- c) Set quantitative limits on catches, e.g. as TACs
- d) Limit time spent at sea taking account, where appropriate, of the remoteness of the fishing waters
- e) Fix the number and type of vessels authorised to fish
- f) Lay down technical measures regarding fishing gear and its method of use
- g) Set a minimum size or weight of each species that may be caught
- h) Establish incentives, including those of economic nature, to promote more selective fishing

Source: Article 4 (2) of 3760/92

The main instrument in the conservation policy is the *quota instrument* that sets quantitative limitations defined by Total Allowable Catch (TAC) for each species on a yearly basis. The procedure in the TAC distribution is that the total number of catches available to the EU is distributed between the Member States, as stated in Article 8(4ii), to assure relative stability of fishing activities for each of the stocks considered. Furthermore, when it becomes necessary to limit the TAC for a stock or group of stocks, the shares should remain fixed each year in order to sustain relative stability, and to safeguard the particular needs of regions with local populations especially dependent on fisheries and related industries. The Member States are allowed to exchange quotas with respect to species, provided that prior notice is given to the Commission. An illustration of the distribution of TACs between the Member States are outlined in Figure 3., the calculated distribution between the Member States is based on the measuring of the different species in cod equivalents. The shares devoted to the EU in the Figure are Union quotas that have not been distributed between the Member States, and hence all vessels in the EU have access to these resources.

Figure 3. The relative Distribution of Quotas between the Member States (in Cod Equivalents)³¹



Source: O.J. L 375, No. 3977/87, 31.12 1987

The TAC policy is fundamentally based on yearly quotas, but the instrument has been broadened by 3760/92 in two ways. First, the Multi Annual TAC (MATAC) has been introduced, having the advantage that it allows the fishermen a longer planning horizon. Second, the multi-species TAC (MSTAC) is applied, which allows the catch limitation to be designed to take account of the technological conditions of the involved vessel gear such as complementary in catch (see Squires, 1987a). Although the introduction of the MATAC and MSTAC as quoted from 3760/92, could

'have important effects on the economic and social development of those regions of the Member States where fishing is an important industry',

³¹ The calculations are founded on the cod equivalents used by the Commission and presented in Annex A.

these new instruments have not been widely used. The implementation of the quotas has mainly been accomplished by use of the traditional TAC, defined for each species on a yearly basis.

The use of *protected areas* in the conservation policy is stated in 3760/92. The intention of the protected areas is to cover areas of particular national interests and areas that are sensible in the biological sense e.g. the Shetland box. First, the zones of national interest are based on a socio-economic objective, giving each Member State authority to maintain restrictions on access to waters under its sovereignty or jurisdiction within a maximum limit of 12 nautical miles. Vessels from other Member States are not prohibited the access to 12-mile zones, but detail rules for access of vessels from other Member States have been declared³². Second, in the sensible fishing area of the Shetland box, special management for the species that are biologically sensitive and have special exploitation characteristics is implemented³³. The special management in the Shetland box is applied for all demersal species, except Norway pout and blue whiting, and the fisheries in this area is managed by a licensing system for all fishing vessels larger than 26 metres. The Commission governs the license system on behalf of the EU.

The management of the fishing effort is introduced by the Act of Accession of Portugal and Spain³⁴; effort management is used to secure the relative stability in the particular areas³⁵. The procedure and conditions for the effort management entered into force by January 1, 1996, and it is laid down in 685/95³⁶. The general intention of effort management is stated in the preamble to 685/95,

'it is necessary to safeguard existing balances and the acquis communitaire, particular the principle of relative stability; whereas it is necessary to ensure that there is no increase in the overall levels of existing fishing effort

³² Stated in Annex 1 to 3760/92.

³³ Stated in Article 7 and Annex 2 of 3760/92.

³⁴ O.J. L 302, 15.11 1985.

³⁵ The areas are ICES divisions Vb, VI, VII, VIII, IX, X and the CECAF areas 34.1.1, 34.1.2, 34.2.0.

³⁶ O.J. L 71, No. 685/95, 31.3 1995.

within the areas and stocks covered by the Act of accession of Spain and Portugal'.

The management of fishing effort means that only vessels with authorisation are allowed to operate in the fishing areas³⁷. The effort management is practised by a detailed measurement of fishing effort, which is measured by the product of the fishing capacity and the fishing time³⁸. The Member States are responsible to implement necessary conditions to secure that vessels flying the Member State's flag are reporting their entries into, and exits from, these fishing areas. This also implies that the vessels shall announce their entries into, and exits from fishing ports located in these fishing areas.

The conservation policy is also accomplished by the use of *technical measures*, which cover means that *inter alia* affect the fishing vessels' catch composition, which is e.g. applied by use of instruments as mesh sizes, by-catch rates and fish sizes permitted. In general, the detailed rules of the technical measures are stated in 850/98³⁹, and the range of different instruments applied under the regulation of technical measures are summarised in Table 3. The technical measures are applied for eight different regions under the jurisdiction of the Member States, and the technical measures are designed in accordance with specific biological conditions within these different geographical regions.

³⁷ The demersal and pelagic species managed by the effort management is outlined in Annex 1 to 685/95.

³⁸ Fishing effort is defined (in Annex II of 685/95) as the product of capacity and activity (fishing days). The fishing capacity covers the install power expressed in kilowatts for vessels using towed gear. For vessels using fixed gear, the capacity of vessel is expressed in kilowatts (kW) and tonnage.

³⁹ O.J. L 125, 850/98, 30.3 1998.

Table 3. The Different Technical Measures Stated in 850/98

Technical measures	Include
Gear and conditions for use of the gear	conditions of mesh size in dif- ferent regions; by-catch regula- tions in the different fisheries; mesh size and by-catch depend- ing on gear.
Minimum size of species	minimum size of species in different regions.
Special restriction on certain species	restriction on the fisheries in specific fishing areas for certain species e.g. herring, sprat, mackerel, tuna and plaice.
Restriction by use of certain fishing methods	restriction on the use of gear <i>in-ter alia</i> the use of beam trawling, purse seining in certain areas.
Conditions for Skagerrak and Kattegat	specific restriction based on gear and mesh size.
Technical conditions	prohibits the processing of fishmeal, fish oil on fishing vessels.

The changes of the technical measures are applied by presenting a draft of the proposal for change of the technical measures, as summarised in Table 4, for the Advisory Committee for Fishery Management (ACFM). The ACFM consists of representatives from the Member States, under the chairmanship of a Commission representative. The ACFM delivers its opinion of the draft based on the majority laid down in 148(2) of the Treaty. The legislation is implemented by the Commission in case the ACFM accepts the proposed technical measures. However, if the ACFM is not in favour of the proposal, the Council still has the competence to implement the proposal based on majority voting. Moreover, the Member States have the competence to implement supplementing technical measures provided that these measures apply solely to the national

fishermen, who in practice apply for local stocks that are of interest solely to them.

Table 4. Technical Measures

Technical rule for the determination of twine thickness
Technical rules for the determination of mesh size
rules for sampling
lists and technical descriptions of devices that may be attached
to nets
technical rues for measuring engine power
technical rules relating square-meshed netting
technical rules relating to netting materials
amendments to rules for the use of mesh size combinations

Source: Article 48 of 850/98

Finally, the conservation policy as stated in 3760/92 is in force for a ten-year period. This implies that by December 31, 2001, the Commission shall present the Council with a report that describes the situation in the fisheries involving the size of the stocks and expected development, and the economic and social development of the coastal regions, and the implementation of the conservation policy. By January 31, 2002, the Council must decide on the adjustment of the conservation policy, which particularly shall imply a regulation to follow the 12-mile zone of the Member States, and the management of the fisheries in the Shetland box. The decision procedure of Council based, on the report presented by the Commission, is based on majority voting as stated in Article 43 of the Treaty.

3.2.1. Evaluation of the Conservation Policy

An important element in the EU legislation to impact the common fisheries is that the conservation policy transfers the competence to make decisions on the conservation regulation from the Member States to the Council. This means that decisions in the conservation policy are made in the Council based on qualified majority voting, which has the implication that it prevents the Member States from vetoing, which could hinder significant agreements on conservation measures. In this sense the decision making in the EU deviates significantly from the procedure used in previous institutional arrangements e.g. the NEAFC⁴⁰. Here the experience is that countries under an unanimity decision regime are reluctant to impose an effective conservationist regulation, because each country has the right to veto thus blocking any progress in a conservationist view (Driscoll and McKellar, 1979). By giving up the competence the Member States have taken one step towards the sustainable fisheries in the common fisheries.

The relative stability is another important instrument in the EU to solve the conflict of sharing the common resources, which is accomplished by giving each Member State "the right" to a certain share of the EU catches in the current year. Moreover, if all fishermen in the Member States followed the boundary on catches and recommended quotas, there would be no problem of excess depletion of the resources in EU waters. However, it is emphasised that the relative stability is based on a political compromise, and each Member State and its fishermen are interested in increasing their share of the quotas. Thus the sharing of the common resource can be seen as a fixed sum game, where the aim of each participant is to get the largest piece of the resource (Friedman, 1986; Rasmussen, 1995). This is e.g. seen directly in regulation 685/95, which is basically founded on the fact that Ireland wants to protect its fishing interest, by the entry of Portugal and Spain, where notably the latter nation has a large catching potential, by employed the largest fishing fleet in the EU. The Irish Government wants to obstruct an overwhelming access of Spanish fishing vessels, which would deplete the resources. It is the intention to safeguard this by implementing effort management.

An example that shows that the consensus of the relative stability is vulnerable, is the so-called quota hopping. The basis of the relative stability is to secure each Member State a relative share of the quotas in the EU, which implies that the quota of a Member State is reserved to the vessel flying the flag of the Member State. The problem encountered from the quota hopping is that fisher-

⁴⁰ NEAFC stands for the North East Atlantic Fisheries Commission.

men from one Member State buy a vessel in another Member State, and thereby get access to the quotas of that state. In general, the experience is that the Member States are not very fond of the quota hopping arrangements. The reason for this is that "foreign" fishermen often place their landings and thereby the value added of the catches in the "foreign" Member State. I.e. the Member State loses potential economic revenue that could have benefited the local fishing regions. The general consequence of quota hopping is that fishermen have bridged the boundary of nationality implicitly laid down in the relative stability, and in this sense quota hopping gets an element in the conflict of sharing the resources between the Member States.

A direct consequence of quota hopping is seen in the fisheries of the United Kingdom, where 95 fishing vessel with Spanish ownership and crew were operating under the UK flag, and hence utilising the British quotas in the EU. The reaction of the United Kingdom was to challenge quota hopping by adopting a national legislation that should prevent fishermen from other Member States from utilising British quotas. The British Government adopted the Merchant Shipping Act 1988 (the Shipping Act), which created the fundament for the establishment of a new register of vessels. This act restricts the access of foreign fishermen to fly the British flag. This was accomplished in the Shipping Act by demanding that 75% of the vessel owners, and 75% of the crew members, must be British citizens or have permanent residence in United Kingdom for the vessel to enter the register and fly the British flag. The direct consequence of the Shipping Act was that Factortame Ltd. and other companies sued the United Kingdom for the implementation of the legislation that was discriminatory towards rationality. The trial proceeded at the High Court of Justice of England and Wales, and a preliminary ruling at the European Court of Justice was requested.

The European Court of Justice said that the British legislation contradicted the intentions of the Community legislation⁴¹. The Court judgement stated that although the United Kingdom has the competence to lay down conditions for vessels to be registered under the British flag, the applied conditions have be to

compatible with Community legislation. The premise for the decision was that the United Kingdom had been violating the freedom of establishment, as stated in Article 52 of the Rome Treaty, and the freedom of participation in the capital in firms of the Member States stated in Article 221 of the Treaty.

The general conclusion when evaluating the conservation policy is that resource sharing is determined by a political compromise that secures sustainable fisheries by implementing instruments *inter alia* as the use of the relative stability and protected areas. That is, instruments building on the exclusiveness in the fisheries, which for the relative stability is applied by the fishing right to quotas, and in the case of protected areas, the exclusiveness is used in terms of fishing areas. On the other hand, the general intention in EU legislation is based on the principles of no discrimination on grounds of nationality. In this sense the problem in the conservation policy is that it is inconsistent with the general intention of free competition in the common market. The conflict between intentions of exclusiveness and equal access is seen in the quota hopping trial, where there is a weighting of the Member States' right to impose exclusiveness versus the aim of free competition in the market. This is also expressed in Karagiannakos' (1995, 122) comment to the judgement on the quota hopping trial,

'the ruling of July 1991 testifies that the principles of freedom of establishment is superior to "relative stability", on which the whole structure of the quota system is based and which have been accepted by all Member States. Therefore, as the E.C. moves towards a single market, the national quota system seems not only to lose its effectiveness as conservation measure but also becomes somewhat incompatible with Community Law'.

However, in general it is difficult to see how the classical problem of the common fisheries should be managed in the EU without implying the use of exclusiveness. The present conservation policy is running to the end of 2002, and by then a general revision of the conservation policy shall be implemented, which will show how the weighting between the equal access and the exclusiveness will be implemented.

⁴¹ European Court Reports 1991 pp. I-3905.

3.3. The Structural Policy

The general outlines of goal and means for the structural funds are based on 2052/88⁴² and 4253/88⁴³, which describe the overall task of the structural funding and secure co-ordination of their activities with the operating of the European Investment Bank and other existing financial instruments. The structural funding stated in 2052/88 is applicable for fisheries with respect to the realisation of two goals. First the funding after the goal 1 criteria, which provides economic support to under-developed regions in the EU with a GNP of less than 75% of the average GNP in the EU. Second, financial support is provided for agricultural and fisheries regions according to the goal 5 criteria, which supports the adjustment and development of the agricultural and fisheries regions (based on so-called 5a and 5b goals).

The detailed objectives and implementing of the structural funding for the fisheries are outlined in 2080/93⁴⁴, which defines the intentions of the structural policy of the fishery under two main headlines. First, it is intended with reference to Article 39 of the Treaty, to safe the economic development and economic standard of living for the population in the fishing communities, and to increase the supply of fish to the market aimed at increasing the productivity in the sector. The intention of economic development also has a social dimension based on Article 130A of the Treaty, which states that

'in particular, the Community shall aim at reducing disparities between the levels of development of the various regions and the backwardness of the least favoured regions, including rural areas',

it is therefore defined as a particular goal, to create an economic development in the under-developed fishing areas. The second main intention of the structural policy is to supplement the conservation policy to obtain a sustainable development of the resources, stated in 2080/93 by

⁴² O.J. L 185, No. 2052/88, 17.7 1988.

⁴³ O.J. L 374, No. 4253/88, 31.12 1988.

⁴⁴ O.J. L 193, No. 2080/93, 31.7 1993.

'achieving a balance between conservation and the management of resources, on the one hand, and the fishing effort and the stable and rational exploitation of those resource, on the other'. 45

The intentions are mainly realised by the use of financial instruments that is the EU is subsidising projects undertaken in the Member States. This implies that the intention of economic and social development is achieved e.g. by subsidising the development of the aquacultural sector, port facilities, etc. On the other hand, the intention of balancing the fishing effort with the available resources in the EU waters is achieved e.g. by subsidising the scrapping of community vessels, temporary withdrawal of community vessels, or the redeployment of vessels into waters of third countries. This can be done e.g. by joint venture ⁴⁶ arrangements, which aim to reduce the number of active fishing vessels and thereby the fishing effort within EU waters.

The specific criteria and conditions for structural funding of the fisheries are laid down in 3699/93⁴⁷. In general, the structural policy is operated by use of the financial instrument (FIFG), where the Council has the overall competence to define the appropriate objectives of the FIFG interventions, and to implement rules to realise these objectives. The responsibility of the Member States is to manage the structural funding within the limits as defined by the Council. The Member States' mean to get EU funding for fishery is based on submitting sector plans and aid applications to the Commission, which evaluates the sector plans and work out EU programmes for structural funding of the Member States. A summary of the applied financial instruments is presented in Table 5.

⁴⁵ O.J. L 389, No. 3760/92, 31.12 1992.

⁴⁶ The establishment of joint enterprises where EU vessels are transferred to fisheries in the zones of third countries, is supported financially.

⁴⁷ O.J. L 346, No. 3699/93, 31.12. 1993.

Table 5. Applied instruments to the restructuring of the Fishing Fleet in the Community (2980/83; 4028/86; 3944/89; 3699/93)

Pur-	Instru-	Accommodate
pose	ment	
affect-		
ing		
Fish-	Perma-	This includes grants to: i) scrapping vessels, ii) definite transfer
ing	nent	of vessels to third country or iii) definitive assignment of vessels
fleet	with-	to other purposes than fisheries within the EU waters.
	drawal	
	Tempo-	This includes grants to: i) laying up vessels or ii) redeployment
	rary	of the fishing vessel. The premium for laying up is defined as the
	with-	number of days the vessel is taken out of the fisheries, whereas
	drawal	redeployment means that the vessel is transferred temporarily to
		a third country's fishing zone.
	Con-	Financial to construction of new vessel of prepayment to existing
	struction	vessel.
	Mod-	Grants to modernisation of existing vessels are provided.
	ernis a-	
	tion	
	Joint	Financial support is provided for the establishment of joint ven-
	venture	ture where EU vessels are transferred to fisheries in the zone of
		third countries.
	Experi-	Grants to fishing operations with a view of assessing profitability
	mental	in long-term exploitation of fishery resources.
	fishing	
	Mixed	Financial support is given to the establishment of mixed compa-
	compa-	nies where EU vessels are permanently transferred from fisheries
	nies	in EU waters to fisheries in zones of third Countries.
Aqua-		This includes grants for development of the aquacultural sector
culture		e.g. by construction and modernisation of aquacultural produc-
		tion facilities.
Other		This includes grants for processing and marketing fishery and
		aquacultural products; grants for fishing port facilities; grants
		protection and development of marine resources in coastal wa-
		ters, in particular by the installation of fixed or movable facilities
		to enclose protected underwater area; grants for promotion and
		find new markets outlets for fishery and aquacultural products.

One of the EU's main instruments when balancing the fish resource with the fishing effort is to use the instrument of Multi Annual Guidance Programmes (MAGP), and thereby control the restructuring of the fishing fleet in each Member State. In general the MAGP is defined in Article 5(1) to 3699/93 as being

'a series of objectives accompanied by a set of measures for their realisation, allowing for management of fishing effort on a consistent, longer termed basis'.

In practice, the Commission works out the detailed MAGP for the fleet segments in each Member State, based on the general outlines of the Council. The single Member State has the responsibility to manage the MAGP, which involves a task of detail reporting on a monthly basis to the Commission, based on the information (summarised in Table 6 – see 109/94 amended by 493/96)⁴⁸. Additionally, each year by April each Member State must submit an annual report on the development of the MAGP to the Commission. Finally, the Member States have to supply computerised databases with information of registered fishing vessels, which can be used by the Commission in management of fishing effort.

Table 6. The Member States' Reports on the MAGP to the Commission

Information reported monthly				
specify the gear category for each vessel				
the GT-capacity and fishing effort in terms of GT-days				
for each vessel				
the kW effect of engine and fishing effort in kW-days				
for each vessel				
the general changes in the capacity according to con-				
struction of vessels, decommission, modernisation and				
changes in fishing activity of vessels				

Source: Articles 4 and 5 of 109/94 (O.J. L 19, 22.1 1994); Commission regulation (O.J. L 72, 493/96, 21.3 1996)

⁴⁸ O.J. L 19, No. 109/94, 22.1 1994 and O.J. L 72, No. 493/96, 21.3 1996.

If a Member State has not fulfilled its obligation to follow the prescribed MAGP, e.g. by not reducing the fishing capacity, the Commission can retain the grants for construction and modernisation of the fishing fleet, stated in Article 10 of 3699/93. On the other hand, if the Member State has been able to reduce the capacity in a fleet segment more than demanded by the MAGP, it does not allow the Member State to increase the capacity in this segment. The reason is that the intention of the structural policy shall supplement the conservation policy in achieving a sustainable fishery. In order to accommodate this intention, harmonised definitions of the capacity of the fishing vessels are also applied. They make it easy to monitor and prevent a superfluous increase in the fleet capacity. In general the harmonised definitions are applied in terms of a standardised measure of GT of the fishing vessels (see 3259/94)⁴⁹ and a measure of the vessels' engine power in terms of kilo Watts (kW). However, given that there has been some difficulties in applying the harmonised measures in all Member States, it has been necessary for the Commission to allow an approximately measure of GT in certain Member States (97/259)⁵⁰.

Along with the purpose to safeguard a sustainable fishery, limits are set up for Member States' state aid, e.g. for purposes of construction or modernisation of fishing vessels. The limitations on state aid has the implication in the common fisheries, to prevent the Member States' from applying for national aid, which results in a superfluous increase in the fishing capacity. As stated in Article 16(2) of 3699/93, the state aid is allowed as long as it does not intervene with the Articles 92, 93 and 94 of the Treaty, which prohibit state aid that distorts the competition e.g. by benefiting certain firms or productions as long as it affects the trade between the Member States. However, there are some exceptions, which based on socio-economic objectives allow the use of state aid to promote economic development in

'areas where the standard of living is abnormally low or where there is serious underemployment' or to 'facilitate the development of certain economic activities or of certain economic areas'.

⁴⁹ O.J. L 339, No. 3259/94, 29.12 1994.

⁵⁰ O.J. L 104, No. 259/97, 22.4 1997.

Moreover, if the Commission finds that an introduced state aid is not in accordance with the intention of undistorted competition, the Commission suggests that the Member State cancels or changes the state aid. If the Member State refuses, the Commission brings the case for the Council of Justice.

In the fishery the limitations on state aid are expressed more specifically in C100/97⁵¹, where it is stated that financial advantage funded by the national authorities should be prevented along with

'capital transfers, reduced-interest loans, interest subsidies, certain State holdings in the capital of undertakings, aid financed by special levies and aid granted in form of State securities against bank loans or the reduction of or exemption from changes or taxes, including accelerated depreciation and the reduction of social contributions'.

In addition to this 3699/93 (Annex IV) presents some limits for the maximum subsidy with respect to purpose with regard to construction and modernisation. Moreover, it is stated that Member States are obliged not to increase the fishing effort (Article 7(2) of 3966/93), and hence follow the intention of the sustainable utilisation of the resources. Finally, in order to prevent that the Member States use unintended state aid, the Commission can ask the Member States to outline reports on the individual state aid undertaken, thus assuring that the aid has been granted in accordance with intentions in the EU rules (see also 97/c100/05).

3.3.1. Evaluation of the Structural Policy

In general, the Council has the competence to outline the objectives and means in the structural policy; e.g. this is effectuated by the use of the MAGP, where the Council imposes restrictions on the adjustment of the fishing capacity in the Member States. However, one of the main shortcomings in the structural policy to successfully reduce the Member States' rivalry over the resources, is that the structural policy is founded on mutually conflicting objectives. The reason for

⁵¹ O.J. C 100, 97/c 100/05, 27.3 1997.

this is based on the historical development of the structural policy. That is, until 1983⁵², the structural policy mainly aimed at securing the economic standard of living in the fisheries regions based on a social/community paradigm. However, after 1983⁵³ the structural policy is supplemented with the objective to secure a sustainable exploitation of the resources, which follow the conservation and rationalisation paradigms. The inherent conflict in the structural policy is that it is difficult to apply instruments to push to the development of economic growth on the one side (vessel construction, etc.) and apply instruments intending to secure sustainable resource exploitation on the other (e.g. decommissioning schemes). The Commission's proposal in 1993, to completely cancel EU subsidies for vessel construction, can be seen as the Commission's attempt to reduce the inherent inconsistency between the different objectives in the structural policy. However, the Member States were not in favour of eliminating the opportunity to get EU grants for their construction of vessels, and they did not accept the cancellation in the Council (Hatcher, 1998).

One of the important elements to secure a sustainable fishery, as intended in the Common Fishery Policy, is to co-ordinate the structural and conservation policies. The application of the MAGP is an important instrument of the structural policy, to secure the co-ordination, and thereby to achieve the balancing of the fishing effort and the resource abundance. However, in practice there are potential difficulties when applying the MAGP to obtain the sustainable fishery. First of all, what is intended by the MAGP is to reduce the fishing effort with the purpose to reduce the catch of fish (fishing mortality). Scientifically, however, it has been difficult to establish the relationship between fishing effort and fishing mortality, an attempt is the study by Frost *et al.* (1995), where the impact of the decommissioning schemes on fishing mortality is analysed. In general, the study does not show any significant empirical relationship between the fishing effort and the fish mortality, when estimated at fleet level. A possible reason is that there is excess capacity in the fisheries, which implies that the reduction in fleet capacity is insufficient to decrease the fishing mortality. In this sense the

⁵² Cf. regulation 2141/70; 101/76.

⁵³ Cf. regulation 2908/83; 4028/86; 3699/93.

⁵⁴ Statement based on communication with Hans Frost (one of the authors).

problem by implementing the MAGP is that it is difficult to apply psychical limitations on GT or kW fishing days that will actually impact the required reduction of the fishing mortality. A second difficulty in applying the MAGP, to reduce the fishing effort is that there is an ongoing technological development of the fishing vessels, where e.g. Roy and Gates (1991) estimate the technological progress to be 1.5%, and the Commission anticipates an increase in the technological progress of 2%⁵⁵. However, the different estimates of productivity make it difficult to set fix-points targets for fishing capacity, as applied in the MAGP, and to secure a balancing of the fishing effort and the abundance of resource. Third, the application of the MAGP assumes that it is possible to manage the fishing effort, but in general fishing effort comprises a range of different items such as vessel tonnage, engine power, number of fishing days, crew size, etc. Moreover, there is a range of substitution possibilities between the different components of production factors, which the regulator has to predict in order to control effective fishing effort. This is e.g. seen in the study by Dupont (1991), in which she shows that it is more effective to reduce fishing effort by limiting the number of fishing days than by limiting the tonnage of the vessel. The reason is that it is easier for the fishermen to compensate a restriction of tonnage by changing the inputs of gear, crew or fuel, than to compensate a restriction of fishing days. That is, in the Canadian pacific salmon fishery, the regulator should aim at reducing the number of fishing days, if the objective is to reduce the fishing effort. In general, the results of Dupont (1991) are relevant, because they show that the impact of the restrictions implemented by the MAGP depend on the relative substitution possibility between the variable inputs and the elasticity of intensity between the fixed input and variable inputs. Therefore, to work out a proper MAGP, the Commission has to take account of these elasticities, and as there is no reason to believe that the elasticities are equal for all vessels segments, it is necessary for the Commission to undertake estimation of the elasticities for each vessel segment, individually.

As outlined earlier, the Commission in 1993 proposed the cancellation of the EU's funding for vessel construction, this is seen as a necessary step in order to

⁵⁵ Structural Policy to Assist Fisheries and Aquaculture. European Commission, October 1995. XIV/464/95-EN.

change the incentives of the fishermen in a common fisheries in EU waters. However, the cancellation of the funding for vessel construction is in itself not sufficient to prevent the development of over-capacity in the fisheries. Therefore, the structural policy could be supplemented by setting barriers that prevent the Member States from giving national subsidies to increase the capacity of their respective fishing fleets. In the guidelines for state aid in the fisheries, it is intended that

'in more practical terms, aid must provide incentives for development and adaptation which cannot be undertaken under normal market circumstances because of insufficient flexibility in the sector and the limited financial capacity of chose employed in it. It must yield lasting improvement so that the industry can continue to develop solely on the basis of market earnings. Its duration must therefore be limited to the time needed to achieve the desired improvements and adaptations⁵⁶.

In general, the formulation of these intentions in the EU legislation is based on the premise that it is necessary to subsidise e.g. increases in the fishing capacity in order to secure the sufficient production in the sector. However, in general the EU has to take account of the inherent (resource) conflict between the Member States, and it is therefore necessary that the EU prevents subsidies from either the EU or national funds from being used in an internal race over the resource between the Member States. In this sense it should be recognised that an unequal development in the fishing capacity of the Member States could be the first step to claim a revised sharing of the resources in the EU, and thereby undermine the consensus as founded by the relative stability. The fishermen's pressure to achieve more funding from the Governments in the Member can e.g. be seen in the Meuriot (1985, 1986) study of the French fisheries, where the politicians instead of rationalising the fleet engaged in subsidising the fleet in order to prevent mass unemployment. Moreover, there have been a range of trials at the European of Court of Justice (see e.g. the cases, T-68/96,

⁵⁶ O.J. C 100, 97/c 100/05, 27.3 1997.

C-200/94, C-55/90)⁵⁷, where fishermen claim increased EU funding, which indicates the fishermen's eager for funding. In the base situation, the access to funding is a natural weighting of the political objectives of economic development versus sustainable fisheries.

However, leaving the more principal discussions of the structural policy, and going into a more detailed monitoring of the results of the structural policy. We focus on how the actual EC grants have been used, and how they have affected the development in the fleet capacity of the Member States. A summary of the relative distribution of the EU's subsidies between 1986 and 1993 is outlined in Table 7. In general, 60% (1,112 mill ECU) of the EU's structural funding of the fisheries, is used for purposes of the fishing fleet, 15% (286 mill ECU) is used for the modernisation and development of the aquacultural sector, and the remaining 25% (507 mill ECU) is used for other purposes, i.e. mainly for processing/marketing of fish products and a small share is given to investments in port facilities.

⁵⁷ Case T 68/96 European Court reports 198, II-153; Case C-200/European Court reports 1995, II-3709; Case C-55/90, European Court reports 1992, I-2553.

Table 7. Cumulative Structural Subsidies to the Member States Fishing Sectors Based on Regulation 355/77, 2908/83 4028/86 and 4042/89

Coun-	Fleet	Fleet	Fleet	Fleet	Other	Aqua-	Others ³	Total	Total
try	Tem-	Perma-	con-	mod-	Fleet	cul-	%	ALL	millions
	porary	nent	struc-	erni-	related ¹	ture ²		%	(ECU)
	with-	with-	tion	sation	%	%			
	drawal	drawal	%	%					
	%	%							
В	0.0	47.8	3.3	8.5	0.0	0.8	39.6	100.0	19.22
D	11.4	40.3	14.4	4.6	0.5	5.4	23.3	100.0	97.45
DK	0.0	62.7	1.6	5.4	3.6	6.7	19.9	100.0	123.50
Е	7.0	26.0	15.1	8.3	13.6	11.5	18.5	100.0	531.92
F	0.7	12.8	20.7	4.8	8.0	16.1	37.0	100.0	193.00
GR	0.1	32.1	6.1	2.6	10.8	31.4	16.8	100.0	173.20
I	4.6	14.1	10.6	13.7	11.0	20.5	25.5	100.0	292.35
IRL	0.0	5.6	3.4	17.4	2.0	22.6	49.0	100.0	71.96
NL	0.0	69.3	0.0	2.1	1.6	9.3	17.7	100.0	58.47
P	1.4	23.3	16.4	2.6	11.0	10.0	35.2	100.0	250.08
UK	0.0	8.0	10.9	12.4	0.7	21.3	46.8	100.0	96.27
EUR12	3.5	26.0	12.2	7.5	9.2	15.1	26.6	100.0	1907.42

Source: Structural Policy to Assist Fisheries and aquaculture. European Commission, October 1995. XIV/464/95-EN

In essence, the difference in the EU funding of the single Member State is based on differences in the intended policies of the national governments, and their willingness to supply the national share of the funding that is required to receive EU funding, and the willingness of the national government to submit aid applications to the EU. The figures in Table 7 represent the accommodated restructuring policies in the single Member States. Belgium (B), the Netherlands (NL) and Ireland (IRL) have followed a strategy that applies for a relatively modest EU funding of the national fishing sectors, whereas Spain (E), Italy (I), and Portugal (P) have followed a more ambitious path by using significant EU funds in the restructuring of the fishing sector, which is mainly

Includes: joint ventures, small-scale fishing, experimental fishing and redeployment operation.

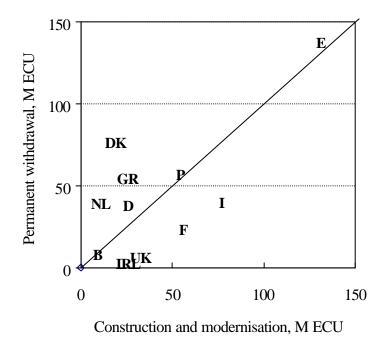
² Construction, modernisation and extension.

Artificial reefs, port facilities, processing/marketing, prospecting for new markets, specific measures and guarantee fund.

based on the goal 1 funding that supports regions which a GNP of is less than 75% of the average in the EU. In Denmark (DK) and the Netherlands (NL) the grants have primarily been used to implement a strategy of permanently withdrawing vessels from the national fishing fleet, whereas France (F) and Italy (I) have followed a strategy of funding modernisation and construction of vessels, which would actually increase the fishing capacity in these Member States.

The Member States' trade off between the intention of economic development and the intention to secure a sustainable fishery with respect to the fishing fleet is indicated in Figure 4. That is, to what extent have the Member States applied for EU funding with the purpose to increase or decrease the nominal fleet capacity. The 45° line in Figure 4 shows the equilibrium where sum of subsidies for construction plus modernisation of vessels are equal to subsidies permanent withdrawal of vessels.

Figure 4. Relative Grants for Construction, Modernisation/Permanent Withdrawal Received by the Member States between 1986-1993 due to 2980/83; 4028/83; 3944/89



The Member States placed on the left-hand side of the 45° receive the most subsidies for permanent withdrawal. It is noted that Spain (E), Portugal (P), and Italy (I) have in absolute terms received the majority of the subsidies for restructuring, whereas Italy (I) and France (F) have received considerable amounts for construction and modernisation. On the other hand, Denmark (DK), the Netherlands (NL) and Greece (GR) have followed the objective to reduce the fishing capacity in the fleet.

An alternative way to analyse the development in the capacity of the fishing fleet in the Member States is to look directly at the achievements of the MAGP plan. A summary of the average realisation of goals between 1991 and 1996 is presented in Table 8. In general MAGP between 1991-1996, has been successful in obtaining to reduce the over-capacity in the EC fishing fleet in the sense that fleet capacity has been reduced with 300,000 GRT and 790,000 kW, that is by 15% and 9.5%, respectively. The total capacity of the EC was 11% under the objective with respect to GRT and 5% under the objective of kW.

Table 8. The Member States' Goal Performance with Respect to the MAGP, 1991-1996

Country	% Global situa	tion/global goal	No. of segments for which the goals were fulfilled/total no. of segments		
	GRT	KW	GRT	KW	
В	96	94	1/2	1/2	
D	79	87	8/9	9/9	
DK	77	81	5/5	5/5	
Е	76	85	5/5	5/5	
F	99	104	4/6	2/6	
GR	96	100	2/3	2/3	
I*	(98)	(104)	NA	NA	
IRL	94	99	2/3	2/3	
NL	148	109	0/3	0/3	
P	64	76	9/9	9/9	
S	97	97	3/5	5/5	
SF	96	98	6/6	5/6	
UK	104	102	4/10	6/10	

^{*} based on the report's data submitted by Italy

Source: Com (97) 352 Final, 11.7 1997

In general, the majority of the Member States have been able to follow the goals of the MAGP, which is seen in the first two columns of Table 8, where only the Netherlands and United Kingdom are not yet ready to meet the obligations of the total fleet with respect to GRT and kW. On the other hand, the two colons to the right show that only Denmark, Portugal and Spain meet the requirements of GRT and kW for all fleet segments. That is, although the total reduction in the fleet capacity has been achieved, there is still a need for reductions in the majority of vessel segments in the Member States. The EU's to reaction to the Member States not in compliance with the goals in the MAGP is to withhold subsidies for construction and modernisation of vessels.

In general, the structural policy is designed to take account of two mutually conflicting objectives, that is, on the one hand securing economic development of the fishing fleet and on the other to securing a sustainable fisheries by pulling vessels out from the fisheries in the EU waters. The underlying problem in reducing the rivalry of the resources is that the structural policy should be designed to prevent the Member States from finding themselves in a noncooperative n-player game (Ruseski, 1998). The aim of the individual Member State is to increase its individual share of EU resources, by using the structural grants to increase their fishing capacity and obtain a favourable position in the political negotiations over the EU resource. One of the important instruments, to prevent this armament of the Member States' fishing capacity, is to implement effective barriers that e.g. forbid national subsidies, which increase the fishing effort. This example includes direct subsides of the fishing effort (e.g. for modernisation and construction of vessels) and indirect subsidies in form of interest subsidies, favourable depreciation, tax legislation, etc. Therefore, in the managing of the structural policy, the EU has to take account of the inherent (resource) conflict and the welfare loss that will result from an internal race in fishing effort between the Member States. It is therefore necessary to prevent subsidies from either EU or national funds to be used in a strategic game between the Member States. This could e.g. be hindered by restricting the access to national subsidising in the rules of the structural policy, and give the Commission instruments to handle inadequate national subsidising in the Member States.

3.4. The Control Policy

In order to prevent the rivalry of the common resource in the EU it is important that the control regulation defines the means that secure a reliable enforcement and imposes penalties that are deterring, in sense of obtaining compliance with the regulation. The control regulation covers all aspects of the Common Fishery Policy including elements in the overall conservation, structural and market regulations.

The control regulation, stated in 2847/93⁵⁸ and later amendments, lay down the general guidelines for regulation and place the competence to monitor the mtional authorities with the Member States. An important principle in the control regulation is to prevent that actions of enforcement differ significantly between the Member States. That is, inequality in the application of control from one Member State to another may cause the fishermen to feel unfairly treated and moreover dissuasive sanctions that reduce the effectiveness of controls should be prevented. In addition, it is intended that the Member States

'should take all the necessary non-discriminatory measures to guard against and prosecute irregularities, particularly by establishing a roster of sanctions which effectively deprive the wrong-doers of the commercial gain resulting form their infringements'.

In this sense the control regulation is seen to have a significant role to play, aiming to secure the necessary compliance and hence the objectives in the Common Fishery Policy.

The specific objectives, as stated in 2847/93, are that the control regulation is based on monitoring

'the management of fishery resources, which is based in particular on total allowable catches (TAC) and quotas and technical measures, is to be sup-

⁵⁸ O.J. L 261, 20.10 1993.

plemented by management of the fishing effort, which involves monitoring fishing activities and capacities'.

In general, the competence to undertake monitoring and inspection of the fishing vessels and landing ports is placed with the Member States, which have the responsibility to undertake the necessary arrangements. This, as stated in Article 1 to 2847/93, implies that the Member State

'shall place sufficient means at the disposal of its competent authorities to enable them to perform their tasks of inspection and control'.

The role of the Commission on the other hand is to ensure that the Member States monitor and prevent infringements in an equitable manner. This is achieved, first by the establishment of a force of EU-inspectors that carry out necessary verification of the Member States' application of the control regulation. This means that representatives from the Commission, along with the mational authorities, establish a mutually acceptable inspection programme, where representatives from the Commission make on-the-spot visits and are present at the national authorities' current control of the fisheries. In addition, the Member States shall secure that the EU-inspectors have on-the-spot access to available information, which is specified in databases. Based on these on-the-spot visits, the EU-inspectors work out evaluation reports and if appropriate, recommend control measures that can improve the application of the control in the Member States. If the EU-inspectors find that the applied control arrangement is not effective, they inform the Member State, which will then conduct an administrative inquiry (if necessary with representatives from the Commission present).

According to the control regulation, Member States have the obligation within the area of their sovereignty or jurisdiction, to monitor the fishing activities of both EU and non-EU vessels. Moreover, the single Member State is responsible of monitoring the vessels flying the Member State's flag within the waters of third countries. In general, the Member States are responsible of inspecting the operating vessels at sea including activities with regard to landing, sale, trans-

port, storage of fish, etc. A summary of the variety in the assignment of the rational inspectors according to the control regulation is outlined in Table 9.

Table 9. Elements That the Member States Have to Control According to the Common Fisheries Policy (2347/93)

Policy	Specific control of					
Conserva- tion ¹	the fishing vessels and all activities of catch, including information on gear used and catch of species, including catch quantity, weight, size and catching area.					
	- in addition a specific control of the fishing effort in the 'Irish Box' is introduced ⁴⁾ .					
Structural ²	in the following areas:					
	i) restructuring, renewal and modernisation of the fishing fleet;					
	ii) adaptation of fishing capacity by means of temporary or definitive cessation;					
	iii) restriction of the activity of certain vessels;					
	iv) restriction of the design and numbers of fishing gear and of the method in which it is used;					
	v) development of the aquaculture and coastal areas.					
Market ³	technical aspects of applying:					
	i) the marketing standards, and in particular minimum sizes;					
	ii) the price arrangements, in particular;					
	withdrawal of products form markets for purposes other than human consumption;					
	storage and/or processing of products withdrawn from the market.					

- 1) Article 2 (2847/93)
- 2) Article 24 in 2847/93
- 3) Article 28 in 2847/93
- 4) The Irish Box is the area, South of latitude 56°30; North east of longitude 12° West and North of latitude 50°30, North. O.J. L301 2870/95, 14/12 1995

In practise, the national inspection is mainly focused on the fishing activities of the operating vessels off sea and on the inspection of the landings in the port. The inspections imply that both the master of the fishing vessels and the fishing auctions bring forward detailed information on the catch of different species, based on the principles listed in Table 10.

Table 10. Elements that should be reported to the competent National Authorities

Reported by	Information to be reported				
The masters of fishing vessels 1)	- shall keep a logbook ^{a)} of their operations, indicating the quantities of each species caught and kept on board, the date and location (ICES statistical rectangle) of such catches and the type of gear used				
	- shall within 48 hours of landing submit a declaration (containing information on quantities of landings distributed on species and catch area) to the competent authorities of the Member State where the landing takes place				
Auctions or bod-	shall submit a sales note that contain information on:				
ies responsible for the first mar-	- for all species, where appropriate, the individual size and weight, grade presentation and freshness				
keting ²⁾	- the price and quantity at first sale for each species, and, where appropriate, on an individual size or weight, presentation and freshness basis.				
	- where appropriate, the destination of products withdrawn from the market (by products, human consumption, carry-over)				
	- the name of the seller and the buyer				
	- the place and the date of the sale				
	- the external identification and the name of the fishing vessels which landed the products				
	- the name of the vessel's owner or the master				
	- the port and date of landing				

- 1) Article 6, 8 (2847/93)
- 2) Article 9 (2847/93)
- a) Fishing vessels less than 10 metres are released from the obligation to keep logbook

The crosschecking of the logbook data and sales notes has traditionally played the main role of the inspectors' monitoring of the fishing activities. However, in the later years the traditional instruments have been supplemented with the possibility of satellite monitoring. The principles of the satellite-based vessels monitoring system, called VMS, is that it shall enable a fishing vessel to communicate its geographical position by satellite to the flag and the coastal Member States⁵⁹. In general, the VMS by the 30 June 1998 shall be applied on all EU vessels exceeding 20 metres between perpendiculars or 24 metres overall length⁶⁰. The Member States are obliged on establish fisheries monitoring centres, which are responsible for the use of the VMS on the fishing vessels flying the Member States' flag regardless of the waters in which they operate, or the port they are staying in (EU or third country). In addition, the Member State is responsible for the monitoring of the fishing vessels of other Member States as long as the vessels operate in the waters under the sovereignty or the jurisdiction of the Member State.

Given that the Member State inspections show that the Common Fishery Policy has not been respected, the national authorities shall take the appropriate measures in form of national administrative actions or criminal proceedings based on the national law. The proceedings that are initiated at Member State level shall either confiscate the economic gains or use appropriate restrictions, which are proportionate to the seriousness of infringements, and in this way effectively discourage further offences of the same kind implemented by the sanctions presented Table 11.

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⁵⁹ O.J. L 102, No. 686/97, 19.4 1997.

⁶⁰ Until 1 January 2000 the VMS covers: a) vessels operating in high seas, except in the Mediterranean Sea; b) vessels operating in waters of third countries, provided that provisions have been made in agreements with the relevant third country for the application of a VMS to the vessels of such a country operating in the waters of the EU; c) vessels catching fish for reduction to meal and oil.

Table 11. Sanctions implemented as a Result of the Criminal Proceedings based on the Offence of the Common Fisheries Policy

Sanctions
- fines
- confiscation of prohibited fishing gear and catches
- confiscation of the vessel
- temporary immobilisation of the vessel
- suspension of the licence
- withdrawal of the license

Source: Article 31 in 2847/93

The Member States shall notify the Commission of any laws, regulations or administrative provisions adopted by the national authority to prevent and prosecute irregularities. Moreover, the Commission shall be notified the results of the national inspections or monitoring, and the number and type of infringement discovered and the action taken.

Moreover, the Member States are obliged periodically to report to the Commission, this covers a monthly reporting of the catch on location and quantities landed by the Member States' vessels operating in the EU and third countries' fishing waters. The Commission shall also be informed on the anticipated quota consumption forecast indicating the date of exhaustion for species, which have reached an exhaustion of 70% of the Member State's quota. In the general perspective, the Member States shall moreover work out a yearly report containing information on assessment of the technical and human resources used to apply the control function, and measures which may help to alleviate any shortcomings discovered.

Finally, in order to secure a detailed level of knowledge and improve the capability of the on-the-spot visits of EU-inspectors in the Member States, the Member States are accountable for the establishment of computer readable files on the detailed monitoring of the fishing activities, as summarised in Table 12. Further, the Commission shall have access to the recorded computer files at request.

Table 12. The Member States are obliged to register the following Information of Fishing Activities in a Computer readable Form

Information to be registered in computer readable form

- the information from the VMS (Article 3)
- the logbook information (Article 6)
- information of the vessel's landings (Article 8)
- information of the sales notes (Article 9)
- logbook and landing information on third countries operating the in EU fishing waters (Article 10)
- all sales notes within the Member State (Article 14)
- information of the Member State's fishing activities in the waters of third countries (logbooks, landings on transhipment) (Article 17)

3.4.1. Evaluation of the Control Policy

At first hand the control regulation seems effective in specifying a range of detailed information requirements of the sector that forms the necessary basis which the national authorities can monitor, in order to obtain the objectives in the Common fisheries policy. In general it is, however, an important shortcoming that the main responsibility of control is placed at the level of the national authorities. The reason for this is that the Member States have conflicting interests when controlling the vessels flying their own flag, as the imposing of strict enforcement on its own vessels would reduce the competitiveness of the national vessel compared to vessels in other Member States with a weak control. In this sense a strict enforcement policy would in the short run have a negative impact on the economic standard of living in the fishery depending areas of the Member State. The core problem is that the common resources problem is still present in the community's fisheries, that is, the Member States are technically sharing a restricted common resource. Each Member State has incentives to increase catches, which will happen at the expense of the other states in the EU. Therefore, each Member State would have incentives to implement a laissez faire enforcement policy, which ignores when national fishermen try to increase their income by breaking the regulation of e.g. technical measures. With account to this, the Member State could have simple financial motives aiming at

low national costs of enforcement, which would be in accordance with the *lais-sez faire* control policy.

The ambiguous interests, the Member States have in controlling their own fishing fleet can for example be seen in the case of the Commission's trial against the French government at the European Court of Justices⁶¹. The position of the Commission was that the French government did not meet the responsibility of enforcing (at sea as well as on shore) the technical measures in accordance with the community regulation stated in 171/83 and 3094/86. The Commission based its standpoint of infringement of the Treaty, on reports based on on-the-spotvisits by the EU-inspectors, which concluded that the French authorities did not take the necessary legal or administrative actions, in cases where the legislation had been violated. Moreover, the EU-inspectors found that the national authorities did not control the regulation of by-catches and minimum size limits on fish in the Bay of Biscay. The position of the French government was that it could not reject that there had been irregularities in the control. The French government, however, was of the opinion that the on-the-spot visits by the EUinspectors could not be used as evidence to conclude in general that the French government had been violating the intentions of the Treaty.

The European Court decided that the French government had violated the intention of the Treaty. The premise for the Court's decision was based on the EU-inspectors' reports that were put forward in the court. The Court reached the conclusion that there had been something lacking in the national authority's handling of the control function. This means according to writ that the Member State that does not meet the responsibility to control breaks the solidarity between Member States and the equal treatment of the fishermen and hence the foundation demanded for, according to the common conservation regulation stated in 170/83. In specific, it was concluded that the French authority had violated its obligation to control the minimum size of meshes, by-catch regulations and regulations on minimum size limits on fish. In addition, the French government had neglected to take any administrative or legal sanctions as a consequence of the disregarded regulations.

The important implication of the trial is that it underlines the use of EU-inspectors' reports as evidence in the European Court, which strengthens the Commission's position to monitor the Member States' application of the control regulation. In more general terms, the trials on the Member States' control of the fisheries regulation (see also the cases C-244/89, C-258/89) reinforces the Commission's judgement that some countries accomplish *laissez faire* enforcement of the control regulation, as stated in the Commission's report⁶² on the control in the fisheries. Moreover, it is stated that there are significant differences between the Member States: in some states the control is well-organised and based on inspection of highly skilled human resources, but in others it is insufficient or exclusively directed towards 'foreign' fishermen. Plus, the Commission states, due to the fact that some national authorities fail to control the technical restrictions, the fishermen anticipate that the regulations only apply for 'foreign' fishermen.

One of the main ways to avoid the classical common pool problem would be to let the independent EU-inspectors play a more significant role in the control regulation. This in fact was the intention in the Commission's proposal to the latest revision of the control regulation as stated by Holden (1996). The Commission based its proposal on the principle that the EU-inspectors should have increased competence e.g. by guaranteeing them the right to intervene without prior notice. Further, it was an opening for the definition of the most appropriate levels for inspection tasks, which could open for an increased monitoring competence to EU-inspectors. The Commission based its proposition with the interpretation that the national authorities might have conflicting interests in the application of a strict enforcement policy. Additionally, it is noted that Holden (1996, 160) argues that 'the major political objective (by the Member States in the setting of the control policy) has obviously been to avoid transferring any effective powers for control, monitoring and enforcement from the Member States to the Commission'. Thus he ads that the control policy is the Achilles

⁶¹ Case C-64/88, European Court Reports, 1991, pp. I-2727.

⁶² Report on Monitoring Implementation of the Common Fisheries Policy: Commission document SEC (92) 394 final.

heal in the Common Fishery Policy. This position is also followed by Karagiannakos (1995, 249) in his statement on the control policy:

'an important component necessary to substantiate the monitoring system is the determination of national governments. However, the existing fisheries management system provides little incentive to fishermen and governments to empower a reliable and comprehensive monitoring system for fishing activities. Therefore, under the existing CFP a more centralised monitoring system is needed which could invest more powers in EU inspectors than the national authorities. However, such a system is unlikely to be applied since again the fishermen and Member States are not committed to this policy'.

However, leaving the discussion about distribution of the competence to control between Member States and the Commission, the success of the applied control regulation will also depend on; i) the strictness of enforcement, i.e. the risk of being detected; and ii) the level of the penalties (see e.g. Becker (1968), Sutinen and Andersen (1985)). In order to get a picture of the Member States' eagerness in the control policy it is essential to go into a more detailed monitoring of the Member States' attitudes. In general, the strictness of enforcement can be tested by inspecting the single elements in the Member States' enforcement, to this end a summary of the human and technical resources dedicated to the control and enforcement in the Member States is presented in Table 13.

Table 13. Summary of Resource Devoted to Control and Enforcement by Member States in 1990

Member	Full-time	Vessels	Days at sea	D/V	Aircraft
State	land-based staff	(V)	(D)		
В	1	4	48	12	0
DK	145	7	466	67	0
F	(a)	8	1041	130	(b)+
D	47	11	1065	97	0
IRL	7	5	921	184	+
NL	180	12	1346	112	0
P	12	26	2365	91	(c)2
E	17	25	252	101	0
UK	180	21	3190	152	(d)3

Source: Report on Monitoring Implementation of the Common Fisheries Policy: Commission document SEC (92) 394 final

- (a) Control and enforcement is the responsibility of the Secretariat of State for the Sea whose staff carries out a wide range of activities connected with maritime affairs
- (b) Approximately 5,000 hours per year
- (c) Approximately 200 hours per year
- (d) Dedicated to control and enforcement
- + Numbers not specified

In general, there are large differences in the human and technical resources that the Member States devote to control purposes. It is difficult to compare effort engaged in the Member States because the personal in several states has a variety of different tasks and they are therefore not only devoted to control the fisheries but may have other tasks e.g. rescuing purposes. In the land-based monitoring, the Netherlands, United Kingdom and Denmark in general devote many resources by utilising a number of inspectors in each port, whereas in Spain, Ireland and France one inspector is engaged and he monitors several ports. In the control at sea, there is a general shortcoming in all Member States so only a few resources are devoted to aircraft monitoring, which much be seen as an effective and powerful monitoring instrument. The emerging of the satellite monitoring system generally increases the efficiency of the monitoring at sea, it is a cost efficient instrument, one advantage is monitoring with respect to protected fishing zones, or e.g. the inspection of the effort regulation in the Irish

Box. However, the satellite monitoring does not solve the problem of misreported landings or the use of small mesh size, or the catch of undersized fish, therefore it is still necessary that the Member States continue their inspection of the operating fishing vessels and the inspections in the ports.

In general, the Member States performed 20,539 inspections of fishing vessels in 1990, the inspectors found offences in 12% of the inspections. A summary of the most important offences in the Member States is presented in Table 14. The major part of the disregards are found in the neglecting of the technical instruments such as forbidden gear, fisheries in forbidden area, fisheries without a license and lack of logbook reporting of catches. At the inspection in the ports 1,456 disregards were discovered mainly with respect to missing the reporting of catches and the catch of undersized fish. In general, out of a total of 3,937 detected offences at sea/ports, 37% of these resulted in criminal proceedings at the national Courts. There are large differences between the number of inspections and the number of detected offences in the Member States. Portugal, France, the Netherlands and Spain have a number of inspections above average, whereas it is remarkable that within the large jurisdiction of Irish waters, only 253 fishing vessels were inspected in 1990. In general, the rate of offences is quite high; Spain and Portugal have unusual high rates of respectively 22% and 15% of the inspected vessels.

Table 14. The Offences in the Different Member States Inspected at Sea and in the Ports in 1990

	Country of vessel registration									
	В	D	DK	Е	F	IRL	NL	P	UK	OTH
Total no. of inspected ves-	644	446	839	2459	2976	253	2902	7349	2285	386
sels										
Total no. of vessels that	45	49	50	541	318	17	93	1172	95	13
have committed violations										
At sea:	•		•	•	•		•	•	•	•
- logbook and or landing	14	5	10	73	28	4	16	9	58	0
statement										
- forbidden gear	18	18	12	39	82	1	35	111	13	0
- fishing banned for the										
following reasons:										
* forbidden area	2	12	9	49	110	0	19	49	4	0
* too great machine power	2	0	5	1	0	0	10	0	5	0
or tonnage										
- illegal catches for the fol-										
lowing reasons:										
* direct fishing	3	0	10	2	0	5	2	1	0	0
* by-catches	0	0	5	4	0	0	0	0	1	0
* undersized fish	7	5	0	24	50	4	13	10	15	0
- unlawful fishing	0	2	3	108	1	4	0	227	10	13
- tagging arrangements	0	2	0	25	19	2	1	387	1	0
- tagging and identification	4	0	4	28	5	2	1	60	3	0
of the vessel										
- other	6	1	9	226	30	2	1	315	19	0
In port:										
logbook and or landing	27	35	280	64	18	0	529	3	346	4
statement										
- forbidden gear	1	5	5	5	22	0	46	94	5	1
fishing banned for the fol-										
lowing reasons:										
* forbidden area	2	0	6	5	24	0	0	104	0	0
* too great machine power	0	0	0	0	2	0	2	5	0	0
or tonnage										
- illegal catches for the fol-										
lowing reasons:										
* direct fishing	1	0	9	0	0	0	99	2	1	0
* by-catches	1	0	40	11	0	0	0	0	0	0
* undersized fish	7	18	38	4	113	0	81	22	128	0
- unlawful fishing	0	6	5	23	0	2	11	69	0	0
- tagging arrangements	0	1	8	6	54	0	0	6	0	9
- tagging and identification	10	0	0	3	30	0	10	6	0	0
of the vessel										
- other	25	2	0	52	18	0	0	274	0	0
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Source: Report on Monitoring Implementation of the Common Fisheries Policy: Commission document SEC (92) 394 final.

In order to take account of the deterrence of the applied enforcement systems, it is essential to note that there are also large differences in the sanctions applied by the Member States to secure compliance with the fisheries policy. In the Netherlands and France 75-92% of the offending vessels are brought to the national Courts, whereas in Portugal the major part of offences are handled by official warnings and less than 1% of the offences are brought to the national Court. In addition to criminal proceedings it important to secure that the sanctions and deterrence are proportional to the seriousness of the offence. A summary of the implemented maximum fines in the Member States is outlined in Table 15.

Table 15. The Size of Fines in the Single Member States in 1990

Member State	Maximum penalty in ECU	Fines imposed in ECU
B (a)	75,644	236 to 1,418
DK (b)	3,167	127 to 30% (b)
F(a)	716 to 71,642	716 to 71,642
D	72,963	2,432 to 17,025
IRL (a)	130,141	50,755 to 171,136 (c)
NL (a)	10,792	4,317
P (d)	1,393 to 27,860	1,393 to 27,860
Е	31,397 to 78,493	7,849 to 78,493
UK (e)	2,867 to 71,679	717 to 64,511

Source: Holden (1996)

(a) Gear and catches may be seized for the following offences:

unauthorised fishing (no quota)

unauthorised fishing (no licence)

fishing with unauthorised gear

keeping undersized fish on board

- (b) Danish legislation provides for fines to be levied proportionally, up to 30% of the market value of the landing to which the offence is related
- (c) Includes value of gear and catches confiscated
- (d) As (a) but immediate seizure of illicit gear when convicted of fishing with unauthorised gear.
- (e) As (d) except no provision of seizure of gear when fishing without a licence

In general, it is noted that Ireland by far receives the highest penalties in the EU. To this end it should be noted that Ireland also has the lowest effort of in-

spection in the EU, and the high penalties decided by the Irish Courts have been given to Spanish fishing vessels. According to reports by the Commission, the opinion is that the penalties in general are too low in the Member States. In general, the penalties are low in the EU, and it should be secured that the penalties should be deterring in the sense that the fine should not be less than the economic gain of the infringement.

First of all, the general conclusion is that the control regulation in order to secure compliance with the fisheries regulations, needs a more efficient monitoring, this could be accomplished by increasing the competence and number of the EU-inspectors in the EU. However, in order to improve the effectiveness of the monitoring, it is necessary to have a close collaboration between the EUinspectors and the national inspectors, as national inspectors often have a better knowledge of the local conditions in the particular area, which may increase the efficiency of the monitoring. In order to reduce the number of offences in the fisheries it is essential to increase the fishermen transparency to the regulation. This can be done as proposed by the Commission by the introduction of campaigns that explain the reason why the fisheries regulation is a necessity in the EU and to secure transparency in accordance with the objectives in the Common Fishery Policy⁶³. Another way to increase the transparency of the fishermen is to increase the use of co-management. In the Treaty this is based on the subsidiarity principle, which means that the legislation shall be conducted at the lowest possible level, that is, the fishermen shall be involved in the management of the fisheries which will increase compliance (see Raakjær Nielsen (1995), Sandberg (1995)). However, in general the question is whether the comanaged system has any application in e.g. the North Sea cod or herring fisheries, where a range of different States have their interests. The core problem of the common property resource⁶⁴ is that the users are not able to settle any sustainable utilisation, which will probably also lead to compliance problems within the co-management system. Second, there is a need for further strictness

⁶³ Report on Monitoring Implementation of the Common Fisheries Policy: Commission document SEC (92) 394 final.

⁶⁴ The common property resource is defined as a resource that is property of a group of fishermen (see Berkes and Farvar, 1992).

with respect to the penalties of infringement of the regulations, and harmonisation of the penalties through the harmonisation of the fines at a higher level and so that offences are giving a equal punishment in all Member States. To this should be added that the fines in all States must be increased at a level where it is secured that the punishment stands in relation to the economic gain resulting from the offence. Moreover, more indirect kinds of financial restrictions could be implemented e.g. so that the latent grants to the Member State's restructuring of the fishing sector could be denied, if the Member State has practised an insufficient or *laissez faire* enforcement policy. The indirect financial instruments could also be used with respect to single vessel owners in the Member State, which has violated the regulations; in this case the master/owner of the vessel could be denied future structural grants from the EU.

3.5. Conclusion

In general the outlining of the Common Fishery Policy is based on major controversies between the Member States. This has had the result that it has been difficult to establish the comprehensive fisheries policy. Moreover, the different interests of the Member States have had the consequence that the fishery policy is based on a mixture of the social, the rationalisation and the conservation paradigms. This embodies the risk of inconsistency between the applied instruments, and the implementation of policies, which have mutually conflicting objectives. This is seen, for example, in the simultaneous funding of modernisation and construction of vessels, and the funding of decommission schemes within the Member States. In this sense it is emphasised that although extensive regulation of fishery has been implemented, there are still some shortcomings that need to be dealt with in order to prevent the distortions emerging in the EU fishery. First of all, it is important to recognise that there is inconsistency between the implemented conservation policy and the general intention to prohibit discrimination on ground of nationality in the legislation of the EU. This controversy has to be settled once and for all, because there is the risk that the principle of equal access will eventually undermine the consensus of the relative stability in the conservation policy. And a loosening of the conservation policy will inevitable increase the distortion of overfishing in the EU. In addition, the

quota hopping indicates that there is an ongoing rivalry over the access to the resources between the Member States.

The structural policy is another example that indicates that the mis-management in the fishery has not been completely eliminated. That is, the structural policy maintains the subsidies for construction of fishing vessels, although the Commission has suggested cancelling these subsidies. Moreover, it is difficult for the authorities to restrict the effective fishing effort, because only vague restrictions on the fishing effort have been imposed, and the regulations do not take account of the substitution possibility between the different elements of the fishing effort. The structural policy does not implement effective barriers to restrict the Member States from supplying subsidies to their fishing fleets. The latter could be used strategically by the Member States to maintain a high level of national fishing effort, and thereby politically undermine the consensus of the relative stability.

Finally, it is important to recognise that by placing the competence to control in the Member States. This means that the Member States are not prevented from applying a *laissez faire* control policy that practices a vague control of national vessels and thereby is used as a mean that gain the fishing vessel of the Member State in an internal rivalry over the resources in the EU. Therefore, the competence to control should be transferred from the Member State to the EU authorities. This would suggest that significant financial support should be given to the authorities. This would achieve the result that the risk of detection and the applied penalty are reliable in the sense that deter the fishermen from potential offence.

Annex A. Cod Equivalents applied by the Commission

Species	Factor	Comment
Cod	1	
Haddock	1	
Saithe	0,77	
Whiting	1,86	
Ling, Blue Ling	1	
Plaice	1	
Sole	6,4	Relative value in NL 1978
American Plaice	0,7	UK statistics 1977
Witch	0,7	UK statistics 1977
Mackerel	0,3	
Sprat	0,125	
Hake	3	EC reference price 1 st half of 1980
Blue Whiting	0,125	
Sandeel	0,1	
Norway Pout	0,1	
Capelin	0,1	
Horse Mackerel	0,1	
Redfish	0,87	
Halibut	3,8	Relative price in D 1978
Greenland Halibut	0,7	
Scrimp	3,0	Applied value during negotiations with Norway
Herring	0,8	
Catfish	1,1	
Salmon	8	Irish statistics
Tusk	0,7	
Anchovies	0,5	French statistics
Cuttlefish, Squid	2	Catches from ICES IV, VII and VIII
Squid	1,5	Catches from NAFO 3-4
Flounder	1	
"Flatfish"	0,8	
Anglerfish	1	
Lobster	3	
Pollad	0,5	
Spurdog	0,5	
Dark Saithe	0,77	
Other Species	0,5	Incl. Silver Hake + Red Hake

References

- [1] Arnason, R. (1989) Minimum information management in fisheries. *Canadian Journal of Economics* XXIII: 630-653.
- [2] Becker, G. S. (1968) Crime and punishment: An economic approach, Journal of Political Economy 76: 169-217.
- [3] Berkes, F. and M. T. Farvar (1992) "Introduction and overview". In: *Common Property Resources: Ecology and Community-Based Sustainable Development*. Eds. F. Berkes. London: Belhaven Press.
- [4] Bromley, D. W. (1991) Testing for Common versus Private Property: Comment, *Journal of Environmental Economics and Management* 21: 92-96.
- [5] Charles, A. T. (1988) Fishery Socioeconomics: A Survey, *Land Economics* 64: 276-295.
- [6] Charles, A. T. (1992) Fishery Conflicts: A Unified Framework, *Marine Policy* 16: 379-393.
- [7] Coase, R. H. (1960) The Problem of Social Cost, *Journal of Law and Economics* 3: 1-44.
- [8] Driscoll, D. J. and N. McKellar (1979) "The Changing Regime of North Sea Fisheries". In: *The Effective Management of Resources*. Ed. C. M. Mason: 125-167. London: Francis Pinter.
- [9] Dupont, D. P. (1991) Testing for input Substitution in a Regulated Fishery, *American Journal of Agricultural Economics* 73: 155-164.

- [10] Feeny D., S. Hanna and A. F. McEvoy (1996) Questioning the Assumptions of the "Tragedy of the Commons" Model of Fisheries, *Land Economics* 72: 187-205.
- [11] Friedman, J. W. (1986) *Game Theory with Applications to Economics*. Oxford: Oxford University Press.
- [12] Frost, H. and J. Løkkegaard (1981) *Den danske fiskerisektors udvikling*. Esbjerg: South Jutland University Press.
- [13] Frost, H., R. Lanters, J. Smit and P. Sparre (1995) An appraisal of the Effects of the Decommissioning Scheme in the Case of Denmark and the Netherlands. Danish Institute of Fisheries Economics Research, WP 16/95. Esbjerg: South Jutland University Press.
- [14] Gordon, H. Scott (1954) The Economic Theory of a Common-Property Resource: The Fishery, *Journal of Political Economy* 62: 124-142.
- [15] Grafton, R. Q., D. Squires and J. Kirkley (1996) Private Property Rights and Crisis in world Fisheries Turning the Tide?, *Contemporary Economic Policy* 14: 90-99.
- [16] Grima, A. P. and F. Berkes (1989) Natural Resources: Access, Rights-to-Use and Management. In *Common Property Resources. Ecology and Community-Based Sustainable Development*. Eds.: F. Berkes. London: Belhaven Press.
- [17] Gundelach, F. O. (1977) Gundelach i Europa-Parlamentet: EF-fiskernes legitime interesser kan kun sikres af Fællesskaberne, *Europa* 3: 3-8.
- [18] Hardin, G. (1968) The Tragedy of the Commons, Science 162: 1243-48.
- [19] Hatcher, A. (1998) The European Community's structural policy for the fishing industry. Presented at the *workshop for Over-capacity, Overcapi-*

- talisation and Subsidies in European Fisheries, 28-30 October 1998, Portsmouth UK.
- [20] Holden, M. (1996) *The Common Fisheries Policy: Origin, Evaluation and Future*. Oxford: Fishing News Books.
- [21] Holland, D., E. Gudmundsson and J. Gates (1999) Do fishing vessels buyback programs work: A survey of the evidence, *Marine Policy* 23: 47-69.
- [22] Homans, F. R. and J. E. Wilen (1997) A Model of Regulated Open Access Resource Use, *Journal of Environmental Economics and Management* 32: 1-21.
- [23] Karaginnakos, A. (1995) Fisheries Management in the European Union. Avebury: Ashgate Publishing Limited.
- [24] Kirkley, J. E. and I. E. Strand (1988) The technology and management of multi-species fisheries, *Applied Economics* 20: 1279-1292.
- [25] Lassen, H., H. P. Jørgensen, H. Frost, J. Raakjær Nielsen, A. K. Nordmann and T. Vedsman (1997) Indsatsforvaltning med henblik på anvendelse i dansk fiskeri. Rapport fra indsatsforvaltningsprojektet.
- [26] Libecap, G. D. (1989) *Contracting for Property Rights*. Cambridge: Cambridge University Press.
- [27] Mckelvey, R. (1985) Decentralized Regulation of a Common Property Renewable Resource Industry with Irreversible Investment. *Journal of Environmental Economics and Management* 12: 287-307.
- [28] Meuriot, E. (1985) La Flote de Peche Française de 1945 a 1983: Politiques et Réalités. Brest: IFREMER.

- [29] Meuriot, E. (1986) Fishing fleet replacement: The French policy from 1945 to 1983. *Marine Policy* 10: 294-309.
- [30] Munro, G. (1986) Management of Shared Fishery Resource, *Marine Resource Economics* 3: 271-296.
- [31] Munro, G. (1990) The Optimal Management of Transboundary Fisheries: Game Theoretic Considerations, *Natural Resource Modelling* 4: 403-426.
- [32] Munro, G. R. and A. D. Scott (1985) "The Economics of Fisheries Management". In: *Handbook of Natural Resource and Energy Economics*, vol. II. Eds.: A. V. Kneese and J. L. Sweeney: 623-676. New York: Elsevier Science Publishers.
- [33] Ostrom, E. (1986) Issues of definition and theory: some conclusions and hypotheses. In *Proceedings of the Conference on Common Property Resource Management*, National Academy Press, Washington, DC, pp- 597-615.
- [34] Ostrom, E. (1990) Governing the Commons. The evolution of institutions for collective action. Cambridge: Cambridge University Press.
- [35] Rasmussen, E. (1995) An introduction to Game Theory. Oxford: Blackwell.
- [36] Roy, N. and J. M. Gates (1991) Supply modelling: a synthesis. In: *Econometric Modelling of the World Trade in Groundfish*. Eds.: William E. Scharnk and Noel Roy: 107-121. Dordecht: Kluwer Academic Publishers.
- [37] Ruseski, G. (1998) International Fish Wars: The Strategic Roles for Fleet Licensing and Effort subsidies, *Journal of Environmental and Economic Management* 36, 70-88.

- [38] Raakjær Nielsen, J. (1992) Structural problems in the Danish fishing industry, *Marine Policy* 16: 349-359.
- [39] Raakjær Nielsen, J. (1994) Participation in fishery management policy making. National and EC regulation of Danish fishermen, *Marine Policy* 18: 29-40.
- [40] Sandberg, A. (1996) Community Fish or Fishing Communities? In: *Fisheries Management in Crisis*. Eds.: K. Crean and D. Symes. Cambridge Mass.: Fishing News Books.
- [41] Scott, D. (1955) The fishery: The objectives of sole ownership. *Journal of Political Economy* 63:116-124.
- [41] Shackleton, M. (1983) Fishing for a Policy? The Common Fisheries. Policy of the Community. In: *Policy-Making in the European Community*. Eds.: H. Wallace, W. Wallace and C. Webb: 349-371. New York: Wiley.
- [42] Squires, D. (1987) Public regulation and the structure of production in multiproduct industries: and application to the New England otter trawls industry, *RAND journal of Economics* 18: 234-247.
- [43] Sutinen, J. G. and P. Andersen (1985) The Economics of Fisheries Law enforcement, *Land Economics*, 61: 387-397.
- [44] Warming, J. (1911) On Rent of Fishing Grounds, *Nationaløkonomisk Tidsskrift* 49: 499-505. Translated by P. Andersen (1983) *History of Political Economy* 15: 391-396.
- [45] Young, S. Z. (1973) Terms of Entry. London: Heinemann.

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