CEVIS

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Innovative Solutions in
European Fisheries Management

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1 Introduction

The purpose of this paper is to analyse the legal framework of a number of fisheries management institutions that are innovative in many parts of the world. These include rights-based approaches, effort control, deicsion rule systems, and different forms of participatory governance. The focus lies on legal problems and challenges that these innovations did or might encounter.[1] The CEVIS project uses the term "innovation" to describe approaches to fisheries management which have not been used extensively in Europe. However, these are not new or untested ideas and all of them have been incorporated into modern fisheries management regimes in developed countries. Four ideal types of such innovations are being analyzed: participatory governance; rights-based approaches; effort control; and decision rule systems (cf. Table 1). In addition, there are combinations of participatory governance and rights-based approaches.

Table 1: Characteristics of the Four Regime-level Innovations

General Type	Participatory Governance	Rights-based Approaches	Effort Control	Decision Rule Systems
Main Approaches	Management of particular fisheries through industry groups (co-management)	Individual quotas including ITQs	Direct regulatory control of fishing effort	Harvest control rules reduce the reliance on political processes in making decisions management measures.
	Larger scale management through stakeholder representation (cooperative governance)	Community quotas including locally controlled IQ systems	Marine zoning and area management including marine protected areas (MPAs)	Non-predictive adaptive systems seek to avoid the need to make specific predictions about stock dynamics

Source: based on CEVIS Proposal (IFM).

Hereinafter, the innovative approaches will be described, where possible examples will be given. In the analytical part, legal issues that might or did arise under public international law, European law and, where relevant, national law are explored.

2 Effort Control

Effort control can be exercised in three basic forms. The first is to exclude certain areas from fishing by establishing marine protected areas or marine reserves. The second is to allocate

[1] I would like to thank Rike Krämer, Axel Schwätter and Simone Haffner for support in researching and drafting this paper.

the fishing effort among fishers, for example through assigning fishers days at sea. The third is to reduce the fleet capacity by buybacks. As can be seen infra, none of the three face major legal problems, presumed competency issues are taken into account and the provisions of the United Nations Convention on the Law of the Sea are respected (UNCLOS).

2.1 Marine Protected Areas

Marine protected areas have been defined as areas "within the maritime area for which protective, conservation, restorative or precautionary measures, consistent with international law have been instituted for the purpose of protecting and conserving species, habitats, ecosystems or ecological processes of the marine environment" (OSPAR 2003).

Marine protected areas are not necessarily a fishery management tool but more often a nature protection measure. They do also not automatically require to ban fishing in the area (Hilborn et al. 2004: 198; Dorrien 2005: 116). However, the majority of marine protected areas (MPAs) are so-called no-take zones (Hilborn et al. 2004: 198). Marine protected areas where a certain or all fisheries are prohibited are referred to as "closed areas". No-take zones have been defined as "marine areas in which the extraction of living and non-living resources is permanently prohibited, except as necessary for monitoring or research to evaluate effectiveness" (Jones 2006: 143). As such they are the most restrictive type of marine protected areas (Jones 2006: 143). It is estimated that less than 0.5% of the world's oceans are designated as marine protected areas, of which only a small part are closed areas or no-take zones (Jones 2006: 143).

Closed areas are intended to contribute to the reconstruction of overfished stocks. Also, they are meant to protect important habitats, such as breeding areas or development stages (e.g. juveniles) (Dorrien 2005: 117). The principal aim of a closed area is to increase the abundance and/or size and weight of the individuals.

The advantages of MPAs are possible increases in yield, a buffer against uncertainty, a reduced impact on other species not just the ones targeted by the fishery, a better management of sedentary organisms and multispecies fisheries and finally an improved understanding of the impact of fishing on habitats (Hilborn et al. 2004: 201). But MPAs can also have a number of drawbacks that include the shifts in fishing effort they may cause and hardships to fishing communities. Also, their effectiveness may be limited where highly mobile organisms are concerned that would require very large marine reserves to effectively protect a stock. In some cases better options may be available. Some critics even go as far as questioning their effectiveness altogether, unless they are evaluated in the light of biodiversity, ecosystem and fisheries objectives, the social and intuitional ability to enforce the closures, alternative fisheries management actions and the ability to monitor and evaluate success (Hilborn et al. 2004: 203). One problem of marine protected areas is that fishing often moves to the borders of the marine protected areas (so-called "fishing the edge"). This can result in the MPAs not having a positive effect on the fisheries concerned as it was the case for the cod box in the North Sea (Dorrien 2005: 121). One basic criticism against marine protected areas from a socio-economic perspective is that they are no longer accessible to fisheries (Dorrien 2005:

115). At the same time, the increase of fish outside the protected area does generally not compensate for the loss of fishing areas.

2.1.1 Examples of MPAs in Europe

A number of Marine Protected Areas were established in EU waters for fisheries management reasons. In 2001 the EU closed a large area of the Central and Northern North Sea to cod fishing for about 2 and a half months. This measure was enforced effectively so that fishing was probably reduced by almost 100% (Dorrien 2005: 121). However, there were no positive effects for the cod stocks, due to the short term of the closure (Dorrien 2005: 121).

The *Plaice Box* was established in 1989 in the North Sea to protect undersized, i.e. juvenile, plaice by restricting beam-trawling in 38,000 sqm. It is an area of the North Sea along the Dutch, German and Danish coast. It is only partly closed to fishing. According to Dorrien (2005: 120), the box has not fulfilled its purpose, even though the prohibition of fishing was enforced effectively. , since the by-catch of juvenile plaice has not been reduced. Recruitment did not increase but further decreased (Dorrien 2005: 120). This was due to the fact that the industry fished the area, which is directly adjacent to the Plaice Box as well as to increased illegal fishing in the box (FSBI 2001: 5).

The *Mackerel Box* was established in 1981 off Southern England and Ireland in order to protect juvenile mackerel. The mackerel box covers an area of 67,000 sqm off Southern Western England. In this zone, the directed fishing for mackerel by purse seiners and pelagic trawlers is prohibited. Pelagic fishing is effectively banned by having a maximum 15% by-catch limit of mackerel. Other trawling is permitted. Handliners are the only fishermen allowed to target mackerel.

The *Shetland Box* was created in 1983. The main stocks fished in the Shetland Box and surrounding area include haddock, cod, whiting, saithe and monkfish. Through a licensing system, the access to the Shetland Box is restricted for boats over 26 meters which fish demersal stocks. Fishing licences are granted only to Belgium, France, Germany and the United Kingdom.

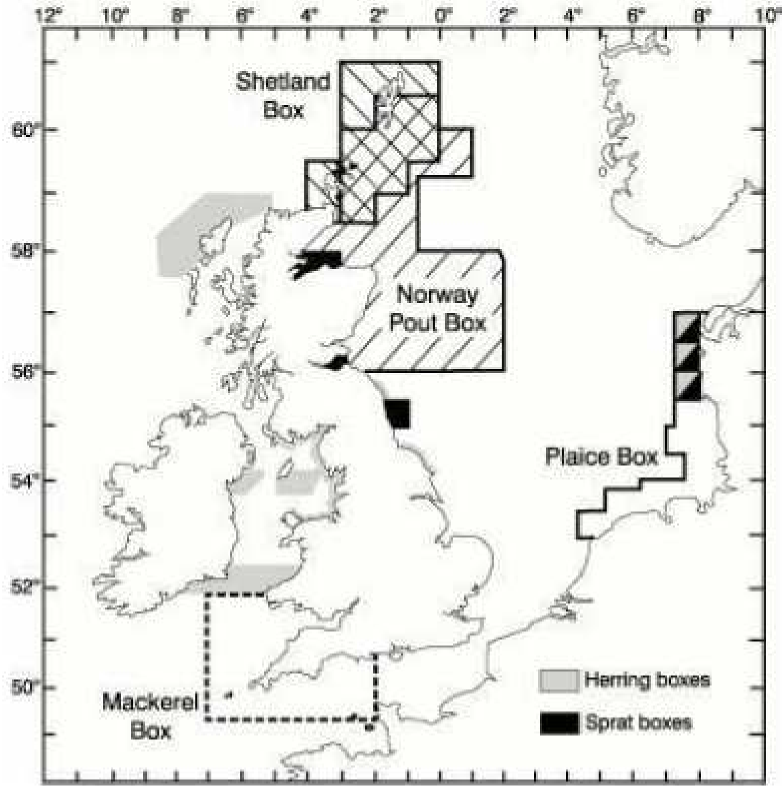
The *Norway Pout Box* was introduced in 1977 in order to reduce by-catches of immature round fish, north-east of Scotland, where fisheries with small meshed trawls were banned. Norway pout is of no importance for human consumption because of its small size, but it is a target species for the industrial fisheries of northern European countries, especially Denmark and Norway. Because dense schools are usually found within a few meters of the seabed, the industrial Norway pout fishery is to a large extent carried out with bottom trawls.

The *Irish Box*, was a 50 mile exclusion zone around the Irish coast, that was traditionally seen as one of the most important spawning and nursery grounds in EU waters. At the time of the accession of Spain and Portugal to the EU, the access of the number of Spanish vessels authorized to operate in the Irish Box was limited to 40 at any time. In addition, they were excluded from the Irish Sea and the Bristol Channel. This was an obviously discriminatory

regulation, which was repealed in 2003.[2] Instead a new effort regime on a non-discriminatory basis and various technical measures of the Irish the south and west coasts was introduced.

The overall experience with MPAs in Europe is mixed. MPAs contribute to the rebuilding and the protection of stocks, however, not in all cases under specific conditions and when combined with other measures (Doerrien 2005: 122).

Figure 1: Chart of European Water showing areas closed to fishing at various times



Source: FSBI 2001

2.1.2 Public International Legal Framework

More than ninety percent of the global fish catch is taken within zones that are under national jurisdiction (Pauly 2002: 693). The majority of MPAs will therefore be instituted in areas under national jurisdiction. Art. 56 of the United Nations Convention on the Law of the Sea (UNCLOS) contains the rights, jurisdiction and duties of the coastal State in the exclusive economic zone (EEZ). According to art. 56 UNCLOS, the coastal State has sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living. The sovereign rights for the purpose of exploring and exploiting the living natural resources refer to all private and public functions regarding the living resources including all activities of the commercial sport fisheries, the exploration of fish

[2] Council Regulation (EC) No 1954/2003 of 4 November 2003 on the management of the fishing effort relating to certain Community fishing areas and resources and modifying Regulation (EC) No 2847/93 and repealing Regulations (EC) No 685/95 and (EC) No 2027/95, Official Journal No. L 289/1, 7.11.2003.

populations, fishing practices, the taking aboard and the processing there, the transport and the landing (Czybulka/Kersandt 2000: 58). The sovereign rights for the purpose of conserving and managing the natural resources comprise the judicious dealing with the resources by measures like the collecting and transferring of information, procedures for the determining of the allowable extend of its use, the co-ordination in respect of time, technique or other restrictions or regulations with regard to the means of the exploration and exploitation of the living resources and the economic aspect of fisheries like investment, state aid, taxes etc. (Czybulka/Kersandt 2000: 58). Art. 61 UNCLOS concerns the conservation of living resources. Art. 61 (1) UNCLOS provides that the coastal State shall determine the allowable catch of the living resources in its EEZ. While art. 61 (2) calls upon coastal States to ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation, the focus of the Convention is on the utilization of the living resources (Jarass 2001: 28) as demonstrated by Art. 62 (1) UNCLOS: "The coastal State shall promote the objective of optimum utilization of the living resources in the exclusive economic zone without prejudice to art. 61." This does not mean that the coastal State cannot restrict the access to the living resources in the EEZ for his or foreign nationals as evidenced by art. 62 (4) UNCLOS, which provides that nationals of other States fishing in the exclusive economic zone shall comply with the conservation measures and with the other terms and conditions established in the laws and regulations of the coastal State. According to art. 62 (4) (b) UNCLOS, these laws and regulations can determine among other things the species which may be caught, fix quotas of catch, whether in relation to particular stocks or groups of stocks or catch per vessel over a period of time or to the catch by nationals of any State during a specified period; and according to art. 62 (4) (c) UNCLOS regulate seasons and areas of fishing, the types, sizes and amount of gear, and the types, sizes and number of fishing vessels that may be used. Since UNCLOS provides that the coastal State can regulate areas of fishing, the coastal State can also regulate areas of "non-fishing", i.e. areas in which fishing is restricted or forbidden (no-take areas). Art. 192 of the United Nations Convention on the Law of the Sea (UNCLOS) obliges the coastal States to protect and preserve the marine environment in their own EEZs). Art. 194 states in section 5 that "the measures taken in accordance with this Part shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life." There are no more disputes as to the basic admissibility of assigning MPAs in the EEZ under international law (Czybulka/Bosecke 2006: 30).

Besides marine protected areas that have the goal to control fishing and fish resources, another category of marine protected areas is increasingly being discussed. These MPAs have the primary goal to protect and preserve the marine environment, as it is the case for example of areas that are protected under the European Habitats Directive[3] or the Bird Directive[4]. For these the provisions on the protection of ecosystems applies e.g. art. 56(1)(b)(iii) UNCLOS.

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[3] Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, OJ L 206/7, 22/07/1992.

[4] Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds, OJ L 103/1, 25/04/1979.

2.1.3 Legal Limitations under International Law

In the EEZ of coastal states, all States enjoy the *freedom of navigation*, subject to the relevant provisions of UNCLOS, art. 58 (1) UNCLOS. In exercising this right States shall have due regard to the rights and duties of the coastal State and shall comply with the laws and regulations adopted by the coastal state, art. 58 (3) UNCLOS. In the EEZ, the coastal State has in particular those functional limited jurisdictional rights granted by art. 56 (1) UNCLOS. Under art. 211 (6) (a) UNCLOS, the coastal State has a restricted option to clearly define after appropriate consultations through the competent international organization areas of their respective EEZ where the adoption of special mandatory measures for the prevention of pollution from vessels is required for recognized technical reasons in relation to the oceanographical and ecological conditions in such areas, as well as their utilization ort the protection of their resources and the particular character of their traffic. A coastal State that identifies such an area will submit the special measures to the International Maritime Organization (IMO) for approval, which exceed existing international rules and standards for such areas. Further rules for the restriction of navigation are contained in global conventions adopted by the IMO relating to maritime safety and marine environmental protection, such as the International Convention for the Safety of Life at Sea from 1974 (SOLAS 1974), which provides for the option of designating areas to be avoided by ships of certain classes of ships. Other relevant conventions include the International Convention Relating to Intervention on the High Seas in the Case of Oil Pollution Casualties, The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention of 1972, the International Convention for the Prevention of Pollution from Ships from 1973 (MARPOL) and its London Protocol from 1978. Thus, if the coastal State wishes to restrict navigation in the MPAs this is admissible under public international law. The restriction of the freedom of navigation is thus allowed, when it is necessary for the protection of ecosystems. If it is not necessary to restrict navigation in the marine protected area to realize the goal of the MPA as a fisheries management tool, it can be assumed that it will not be acceptable under public international law.

According to art. 56 (1) (b) (i) UNCLOS, the coastal State has jurisdiction with regard to the *establishment and use of artificial islands, installations and structures* in its EEZ. This rule is further detailed in art. 60 UNCLOS. According to art. 194 (5) UNCLOS, the coastal State can also prohibit the construction of artificial islands, installations and structures for the purpose of protecting and preserving of ecosystems and habitats for example oil platforms.

In the EEZ all States enjoy the *freedom of laying submarine cables* and pipelines (art. 58 (1) UNCLOS). States that are exercising this right shall comply with the laws and regulations adopted by the coastal State (art. 58 (3) UNCLOS). When States lay submarine cables, they have to respect the requirements of art. 194 (5) UNCLOS, i.e. to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life. Another relevant convention that regulates the question of submarine cables and pipelines is the Convention for the Protection of the Marine Environment of the North-East Atlantic of 1992 (OSPAR Convention).

In sum, there are a number of activities that the coastal State can restrict or forbid in MPAs in its EEZ, such as navigation, the construction of artificial islands, installations and structures as well as the laying of submarine cables and pipelines. This is possible where it contributes to the protection and preservation of ecosystems but has to be assessed on a case to case bas, when an Marine Protected Area is established.

2.1.4 MPAs on the high seas

The United Nations Convention on the Law of the Sea (UNCLOS) also provides the global framework for ocean conservation and management of human activities on the high seas. In areas beyond national jurisdiction, it obliges parties to protect and preserve the marine environment and to cooperate in conserving and managing marine living resources.

According to IUCN, High Seas Marine Protected Areas "represent an opportunity for the global community to cooperate to provide a higher level of protection than prevailing levels, a structure for coordinated decision-making amongst a range of stakeholders (i.e. governments, international and regional organizations, fishing, shipping, marine conservation, etc) and a basis for integrated and ecosystem-based oceans management" (IUCN 2004).

So far no MPAs exist on the high seas. Generally, the regulation of fishing activity on the high seas falls under the mandate of a significant number of arrangements and institutions (Ascencio/Bliss 2003). These include regional fisheries management organisations that cover waters both within and beyond national jurisdiction and that manage mainly straddling fish stocks. The international legal framework for the management of straddling and migratory stocks is provided by the UN Straddling Stocks Agreement.[5] The Straddling Stocks Agreement does not make mention of MPAs for the management of straddling and migratory fish stocks.

For fish stocks that only live on the high seas (as opposed to straddling stocks, which enter and leave areas under national jurisdiction) the general obligations apply that are contained in UNCLOS. Recently, fisheries nations have begun to cooperate to commonly manage fish stocks on the high seas. These management issues so far do not comprise MPAs. In sum, MPAs do not represent a management tool that is used on the high seas – as it is the case with all other fisheries management tools. Legal questions therefore remain largely unanswered so far.

2.1.5 European Community Law

The Treaty establishing the European Community, and in particular art. 37, determines that the European Community exercises its exclusive competence in conservation, management and exploitation of living aquatic resources, the aquaculture, and the processing and marketing of fishery and aquaculture products. With effect from 1 January 1977 the so-called

[5] United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks of 1995, entered into force on 11 December 2001.

Community waters were established, in which the Community acts within the Common Fisheries Policy (CFP). Furthermore art. 102 of the Act of Accession details: “From the sixth year after accession at the latest, the Council, acting on a proposal from the Commission, shall determine conditions for fishing with a view to ensuring protection of the fishing grounds and conservation of the biological resources of the sea.“[6]

Based on this provision, the European Court of Justice (ECJ) decided that the European Community has the full and exclusive competency to adopt measures relating to the conservation of the resources of the sea and that Member States are no longer entitled to exercise any power of their own in the matter of conservation measures in the waters under their jurisdiction.[7] While it is disputed whether Member States still have the competency to establish MPAs for the purpose of protecting the marine environment that at the same time limit fishing in these areas,[8] the competency to regulate fishing, also in the form of no-take zones lies with the Community. All aspects of fishing are covered by the Common Fisheries Policy. The general objective of the CFP is to ensure the exploitation of living aquatic resources that provides sustainable economic, environmental and social conditions (art. 2 (1) of Council Regulation 2371/2002/EC on the conservation and sustainable exploitation of fisheries resources under the Common Fisheries Policy.[9]

For this purpose, the Community shall apply the precautionary approach in taking measures designed to protect and conserve living aquatic resources, to provide for their sustainable exploitation and to minimize the impact of fishing activities in marine eco-systems (art. 2 (2) of Council Regulation 2371/2002/EC). This regulation is the core instrument of the CFP and did replace the regulation 3760/92/EEC after the latest reform of the Common Fisheries Policy.[10] Under Council Regulation 2371/2002/EC, the Council can establish Community measures governing access to waters and resources and the sustainable pursuit of fishing activities (art. 4 (1) Council Regulation 2371/2002/EC). Art. 4 (2) (g) (ii) authorizes the Council to introduce measures for each stock or group of stocks by adopting technical measures, including zones and/or periods in which fishing activities are prohibited or restricted including for the protection of spawning and nursery areas.

2.1.6 National law

Under national law three main legal issues arise in regard to marine protected areas: the authority to create the zone, a possible environmental review required and property-related

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[6] Documents concerning the accession to the European Communities of the Kingdom of Denmark, Ireland, the Kingdon of Norway and the United Kingdom of Great Britain and Northern Ireland, art. 102 Official Journal L 073 , 27/03/1972, p. 35.

[7] Judgment of the European Court of Justice of 5 May 1981, Case 804/79, Commission of the European Communities v United Kingdom of Great Britain and Northern Ireland, European Court reports 1981, p. 1045.

[8] In favor of the right of Member States to introduce such nature protection areas in their EEZ that include limitation to fishing e.g. Bosecke, 2007, p. 147, 168 – 174.

[9] Council Regulation (EC) 2371/2002 on the conservation and sustainable exploitation of fisheries resources under the Common Fisheries Policy, OJ L 358/59 of 31/12/2002.

[10] Council Regulation (EEC) 3760/92 of 20 December 1992 establishing a Community system for fisheries and aquaculture, OJ L 389/1 of 31/12/1992.

challenges (Fletcher 2004:1). In case an MPA is created within the EU, however, all of these issues arise under European law, since the EU has the exclusive competence with regard to MPAs *for fisheries management purposes*. Whether this is the case in regard to MPAs for nature conservation purposes is disputed (*see* Bosecke 2007; Jarass 2002).

Compliance can be a major problem with MPAs (Jones 2006: 151). It is important that there are statutory provisions that require the compliance of potential free-riders, be they locals or non-locals (Jones 2006: 151), and that they are effectively enforced. If a free-riding minority is seen to benefit harvesting fish stocks in a no-take zone, that have been increased through the restraint of the majority, resentment will be fostered and the potential for cooperation with the no-take zone will be critically undermined. Generally, stakeholders, especially fishers should be involved, before the creation and during the operation of a no take zone and where appropriate during the management of the closed area in an open and transparent process (Dorrien 2005: 123).

2.2 Days at sea

"Days at sea" are a concept that is usually employed when defining and regulating fishing activities or fishing effort. In the EU, Basic Regulation 2371/2002/EC authorizes the Council to take different measures to regulate access to waters and resources and the sustainable pursuit of fishing activities. These include the limitation of fishing effort as specified by art. 4 para. 2 lit. f of the Basic Regulation. 'Fishing effort' is defined in art. 2 (h) as "the product of the capacity and the activity of a fishing vessel; for a group of vessels it is the sum of the fishing effort of all vessels in the group.[11] As the European Commission explicates, "fishing activity is defined as the time during which the fishing capacity of a vessel is effectively operating. In Community law, fishing activity refers to the vessel's activity and is measured in days. However, it could be defined more precisely for some fisheries on the basis of the time during which the fishing gear is in operation" (COM 2007c: 9).

Here, big differences exist in practice. The catch by a trawler, for example, depends almost entirely on the time that the gear is towed in the water, whereas a purse seiner spends a greater part of its fishing time searching for, approaching and encircling shoals of fish and hauling the catch on board. The concept of restricting days at sea is used by the European Commission in the form of kilowatt-days particularly in recovery plans, since effort controls are in fact a requirement of recovery plans. Kilowatt-days are being allocated to Member States and can be distributed to and, in principle, transferred among vessels by the Member State

[11] The European Commission has launched a debate on how to best measure fishing capacity and effort in February 2007, see European Commission (2007c), Communication from the Commission to the Council and the European Parliament on improving fishing capacity and effort indicators under the common fisheries policy, COM(2007) 39 final. In practice, a wide range of factors influence the capacity of vessels to catch fish and have thus to be taken into account when defining fishing effort and catch per unit effort. These factors include the behaviour of the target fish as well as the characteristics of the vessel, such as the type, engine power, age, and storage capacity. They also relate to the characteristics of the gear, such as the length or area, mesh size, material, gear-borne instrumentation and the way it is used (fishing practices) as well as the size and skill of the crew and the use of technical aids. Some of these cannot be measured directly and their effects on fishing power and capacity are complex (Garcia/Cochrane).

governments. Art. 5 para 4 of the Basic Regulation 2371/2002/EC specifies that recovery plans may include any measure referred to in points (c) to (h) of art. 4(2) and more specifically shall include limitations on fishing effort unless this is not necessary to achieve the objective of the plan.[12]

2.2.1 Legal aspects

Regarding the international legal framework, the same rules apply for restricting fishing through limiting days at sea as through marine protected areas. As mentioned supra, under the United Nations Convention on the Law of the Sea (UNCLOS) the coastal state has the duty to ensure through proper conservation and management measures that the maintenance of the living resources in the EEZ is not endangered by over-exploitation (art. 61 (2) UNCLOS). These measures can also comprise the restriction of fishing effort through limiting days at sea. The limitations to the coastal state's right were mentioned supra as well, but are less relevant in regard to the regulation of days at sea, because these rules will apply from the outset to fishing vessels flying the coastal state's flag as opposed to specific marine areas and therefore do not concern the freedom of navigation, the establishment of artificial islands, and the freedom of the laying of cables.

The European Court of Justice states, that the "power to adopt, as part of the common fisheries policy, measures relating to the conservation of the resources of the sea has belonged fully and definitively to the Community."[13] Therefore, under Community Law, the Community has the exclusive competence to manage living marine resources that are covered by the CFP. For all fish stocks that are covered by the CFP, the Council can thus adopt rules regarding the number of days at sea.

Emergency measures in regard to the conservation of resources can be adopted by the European Commission under art. 1 (1) of the Basic Regulation2371/2002/EC. This holds also, "if there is evidence of a serious threat to the conservation of living aquatic resources, or to the marine eco-system resulting from fishing activities and requiring immediate action, the Commission, at the substantiated request of a Member State or on its own initiative, may decide on emergency measures which shall last not more than six months. The Commission may take a new decision to extend the emergency measures for no more than six months".

The Member States have to enforce and monitor restrictions such as days at sea. If they want to adopt stricter measures than what is foreseen by EU regulations, they are limited to fish stocks that are managed nationally or restrictions that only apply to their nationals or to fishing vessels flying the flag of the Member State (art. 10 of the Basic Regulation 2371/2002 /EC). Further they can adopt emergency measures, but unlike the European Commission their measures last at least three month (art. 8 2371/2002 EC).

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[12] For example in October 2007 the Council of fisheries ministers decided to reduce the fishing effort and therefore the days at sea in the Baltic sea.

[13] ECJ Case 804/79, paras 17

National law is thus of little relevance here. In cases where Member States have the possibility to adopt rules regarding days at sea, these have to conform to existing national fisheries law. Generally, regulating days at sea can constrain the freedom to exercise one's profession, which is, however, not legally protected to the same extend as the right to choose a profession. In sum, limiting fishing effort through days at sea does not meet legal concerns.

2.3 Buybacks

Buybacks or decommissioning aim to reduce harvesting capacity by reducing the total fleet. The central management authority purchases licenses and vessel units and removes them from the fishery. Mostly, the vessel itself is not bought, but is transferred to other uses such as tourism. Sometimes the vessel is effectively purchased and decommissioned or destroyed. The buybacks can be either industry funded or government funded. The European Union itself can fund buybacks under the European Fishery Fund (EFF) (art. 23 Regulation 1198/2006). The EEF replaced the Financial Instrument for Fisheries Guidance in 2007. The EFF grants financial support for the implementation of the CFP. The EFF will terminate 2013.
European law does not force Member States to carry out buybacks as long as they do not increase their total fishing capacity. Art. 13 of regulation 2371/2002 states, that

> "1. Member States shall manage entries into the fleet and exits from the fleet in such a way that, from1 January 2003:
> (a) the entry of new capacity into the fleet without public aid is compensated by the previous withdrawal without public aid of at least the same amount of capacity,
> (b) the entry of new capacity into the fleet with public aid granted after 1 January 2003 is compensated by the previous withdrawal without public aid of:
>> (i) at least the same amount of capacity, for the entry of new vessels equal or less than 100 GT, or
>> (ii) at least 1,35 times that amount of capacity, for the entry of new vessels of more than 100 GT.
>
> 2. From1 January 2003 until 31 December 2004 each Member State which chooses to enter into new public aid commitments for fleet renewal after 31 December 2002 shall achieve a reduction in the overall capacity of its fleet of 3 % for the whole period in comparison to the reference levels referred to in Article 12".

2.3.1 Legal aspects

The funding of buybacks on through national or European funds does not violate the European subsidy rules of art. 87 of the EC Treaty. Generally, funding can fall into the category of subsidies. But for the permanent cessation of fishing activities through the scrapping of fishing vessels or the reassignment for a non profitable purpose other than fishing art. 10 of the EU regulation 1595/2004 states an exemption, provided that,

> "(a) the aid fulfils the conditions laid down in Article 7 of, and point 1(1) of Annex III to Regulation (EC) No 2792/1999; and

(b) the amount of the aid does not exceed, in subsidy equivalent, the total rate of national and Community subsidies fixed by Annex IV to Regulation (EC) No 2792/1999 or by Council Regulation (EC) No 2370/2002 (1) for such aid".

Within their national law the Member States can not overrule the European regulations. In particular they have to fulfil the requirements for the funding of buybacks otherwise they are in violation of art. 87 EC Treaty on state aid. On the other hand, Member States can oblige their nationals to reduce fleet capacity further. Under national law, such a rule should be designed not to violate the freedom to exercise one's profession (see supra 2.2.1).

3 Rights-based Approaches

3.1 Introduction

Some form of use right, which manifests itself in the right of access to fishery resources in a particular area under certain conditions is part of all fisheries. The "right" may be general (as the right to harvest high seas resources imbedded in UNCLOS) or very specific, e.g. as the right to harvest a certain amount of fish of a particular species in a particular area in a given period of time (Shotton 2007). A right may have a historical foundation (so-called historical rights) or a more formal one (such as the sovereign rights of coastal States on EEZ resources). Furthermore, they may be area-based (e.g. territorial use rights) or resource-based. The right to harvest a certain amount of fish of a particular species, in a designated area, in a given period of time, is usually called a "property right" and is implemented only in EEZs. Property rights in fisheries can be considered to be a new form of property (Shotton 2007).

Property rights exist in different forms in fisheries management. Generally, four access regimes can be distinguished: open access, state property regime, private property rights and common property regimes. Open access is not a property right the legal sense of the term, since it lacks the characteristic of exclusivity. State property regimes give the state the possibility to exercise its ownership of the resource in different ways. Thus, the state can allow free access, chose to exploit it by use of its own agencies or grant licences for individuals to use the resource. Private property systems are best exemplified by individual tradable quotas (ITQs). ITQs assign a proportion of the total allowable catch to an individual. The individual does not have a property in the resource but it has the exclusive right to harvest the resource, the so-called right of usufruct (Stewart 2004: 15). In a common property regime it is not the individual but a community, which receives the right to use the resource. The most noted form of fisheries property rights are Individual Transferable Quotas (ITQs). When introducing ITQs it must be decided, which species will be included and how the quotas will be initially allocated. Hereinafter, individual tradable quotes will be further examined.

According to economic theory, ITQs have four characteristics, which are more or less distinct in the individual system: transferability, exclusivity, security and durability. Transferability means that the right as a whole or in parts can be sold. It is seen as "the key defining feature of most fisheries rights" (Stewart 2004: xvi) and is the quality, which more than any other gives the rights their value. Depending on the system chosen in the respective countries, the right can be transferred freely or only to specific persons or entities or not at all.

Exclusivity refers to the ability to hold and manage the right without outside interference (Stewart 2004: 11). An aspect of exclusivity is the possibility to enforce the right. Duration alludes to the time span of the property right, during which the holder may exercise it. This duration can be a limited period, such as a year, or even be perpetual (Stewart 2004: 11). Finally, security of title refers to its strength as a constitutional or legislated right (Shotton 2007). Generally, the right can may be challenged by other, such as the state or other individuals. These rights are not absolute but are present in different types of rights to varying degrees (Stewart 2004: 12).

Property rights can be considered to be strong rights, when they are durable, i.e. have long tenure; provide exclusivity of use, cannot be arbitrarily removed or diluted; and can be transferred (Shotton 2000). Generally, the strongest property rights are those with the fewest constraints on the operation of markets.

The following table gives some examples of rights-based regimes in different countries.

Country	**Start**	**Description**
Australia		
Southern Blue Fin Tuna	1984	TQs
South East Trawl Fishery W. Australia	1992	ITQs
Lobster fishery	1964	Tradability in licences soon after limited entry introduced; pot licence tradability from early 1970s.
Prawn Northern Fishery	1969	Tradability in vessel licence to which catch rights were assigned (fixed vessel and headline length)
	1983	Tradability extended to 35 fisheries (depending on fishery: either gear units, quota or time & gear limits)
Canada		
Lake Winnipeg	1972	IQ; became transferable in 1986 (Crowley and Palsson 1992)
East Coast Enterprise Allocation System	1982	Allocations to companies in the programme as Transferable Property Rights
Atlantic Herring	1983	ITQ to the vessel
Lake Erie	1984	ITQs
Maritime offshore scallops	1986	Enterprise allocations
Northern Shrimp (Nfld. - Labrador)	1987	Enterprise allocations (IQs) but no limit on number of vessels that may be used.

Pacific Geoduck	1989	ITQs
East Coast (Scotia-Fundy) -groundfish	1990	ITQs for *bona fide* licensed fishermen (who might also be processors).
B.C.[6] Pacific Halibut	1991	IQ
Chile	1992	ITQs were permitted for industrial fishing after stock depletion and recovery management programme and for new previously unexploited fisheries
Iceland	1976	Individual vessel quotas introduced into the herring fishery
	1979	Quotas made transferable
	1981	ITQs introduced into the capelin fishery
	1984	ITQs introduced into the demersal fishery
	1985	Effort quotas introduced
	1986	Vessel quotas made transferable in the capelin fishery
	1988	IVQs in all fisheries
	1990	System made uniform in all fisheries
Netherlands		
Plaice and sole	1976	IQs within the EU national quota allocated to the Netherlands; full transferability introduced in 1985
Cod and whiting	1981	Full transferability introduced in 1994
	1990	System made uniform in all fisheries.
New Zealand	1983	ITQs started with previously unexploited orange roughy, a deepwater resource; the major period of introductions started in 1986. New species are still being added to the QMS.
United States		
Surf Clam/Ocean Quahog	1990	ITQ system
Wreckfish	1992	ITQ programme
Alaska Sablefish and Pacific Halibut	1994	Individual Fishing Quota (IFQ)

Source: Shotton 2000

Concerns with ITQs include the fairness of the initial allocation, effects of ITQs on processors, increased costs for new fishermen to gain entry, consolidation of quota shares (and thus economic power), effects of leasing, confusion of the nature of the privilege involved (whether or not the right constitutes a property right), elimination of vessels and reduction in crew, and the equity of gifting a public resource (Shchegoleva 2006: 26).

In sum, national approaches to ITQs show that the main legal challenges stem from the initial allocation process. They mainly concern the fairness of the allocation, which necessarily has to be based on some abstract rule such as catch history, which needs exemptions to guarantee that individual fisher's conditions are taken into account . The other main question is whether ITQs represent property under national law, an issue that plays a major role in legal decisions and disputes. Considerations that should be taken into account when legislating ITQs are summarised under 3.6.

3.2 National approaches to ITQs

3.2.1 Australia

Fisheries in Australia are managed by the Commonwealth (i.e. federal), state and territorial governments. While the state and territorial governments' jurisdiction extends from the low water mark to three nautical miles, the Commonwealth jurisdiction encompasses the zone between three nautical miles off shore to two hundred nautical miles (Sen/Kaufmann/Geen 2000: 1). The Australian Fisheries Management Authority (AFMA) is responsible for the fisheries management in the latter area. In some cases the jurisdiction of the AFMA is extended by agreement with the state concerned to the low water mark. Since many species inhabit two ore more jurisdictions or migrate between them, the jurisdictional separation is problematic for management (Arnason 2002: 3). For these cases, "joint authority" management is allowed between the governments involved.

In Australia, fisheries management through ITQs was first introduced in the West Australia pearl fishery in 1982. In 1984 followed the ITQ management of Southern bluefin tuna. (Arnason 2002: 3). Currently, at least 20 Australian fisheries are managed through ITQs. In the Commonwealth ITQs have been introduced for tuna, shark, scallop and finfish (Sen/Kaufmann/Geen, 2000: 1). In state managed fisheries ITQs were introduced for a variety of fisheries such as pearl, abalone and rock lobster (Sen/Kaufmann/Geen, 2000: 1).

As a consequence of the different jurisdictions, the design of ITQs in Australia varies widely. They all include individual quantitative harvesting rights but differ in terms of the method of allocation, transferability, duration and others (Anarson 2002: 4).

The allocation of the quota entitlements is primarily based on two criteria: the historical catch rates and the principle of equality i.e. equal distribution (Arnason 2002: 4). Other standards such as prior investment are used sometimes as well. The basic quota entitlement is the ITSQ, "i.e. a share in whatever TAC is adopted by the fisheries authorities every fishing season. This multiplied by the TAC then gives the seasonal quota" (Arnason 2002: 5). For the allocation no fees are charged, but an extensive management cost recovery program exists.

The duration of the ITQ shares varies (Arnason 2002:5), in some cases they are limited one to five years. Mostly, the term of the quota shares are linked to the duration of the fishing license or the management plan. In case that the entitlements are unlimited, they stay valid until cancelled (Arnason 2005:5).

In general, Australian ITQs are tradable. Unlike other countries the Commonwealth, the states or the territories have not set up mechanisms to facilitate quota trades, so that trade takes place by direct contact between the interested parties (Arnason 2002: 5). Trade is commonly restricted in a way that quotas may only be transferred to licence holders of the particular fishery (Arnason 2005:5). Often quotas can also only be transferred together with the fishing license. Licenses cannot be transferred to foreigners or foreign companies. All transfers require the consent of the fisheries management authority (Sen/Kaufmann/Geen 2000: 2). For many fisheries a minimum and/or maximum of quota holdings is placed.

3.2.1.1 Legal Aspects

In Australia it was discussed widely whether allocated quota shares represent property rights and thus fishers can claim compensation if shares are rearranged or cancelled. Australian legislation for the most part did not explicitly answer that question. However, some Australian legislation provided for compensation to be paid if ITQs were cancelled. Such legal provisions exist in the fisheries legislation of Victoria and in specific legislation of Western Australia (Sen/Kaufmann/Geen 2000:3). As opposed to that the other states and the Commonwealth did not introduce compensation.

In the Commonwealth, fishing rights are termed “statutory fishing rights” (Fisheries Management Act section 21). Section 22 (3) (e) of the Fisheries Management Act states that statutory fishing rights are granted under the condition that “no compensation is payable because the fishing right is cancelled, ceases to have effect or ceases to apply to a fishery”. On the other hand section 167 (a) (1) states that “if apart from this section, the operation of this act would result in the acquisition of property from a person otherwise than on just terms, the Commonwealth is liable to pay reasonable compensation to the person.”

In contrast to this, other states or territories such as the Northern Territory provide for compensation when rights are cancelled (Stewart 2004:46). The main question if ITQs are property in law has not been answered by Australian courts directly. The case law differs. In ‘Harpers vs. Minister for Sea Fisheries and others’ (1989: 168 CLR 314) the court stated that the statutory right to fish is analogous to a *profit-à-prendre*.[14] In ‘Bienke vs. The Minster for Primary Industries and Energy’ (1995: 63 FCR 567) the Federal Court found the statutory right to fish to be “comparable” to a *profit-à-prendre*, but held that these rights were a new type of rights, which depended on the legislation which created them (Sen/Kaufmann/Geen 2000:3) Thus, the nature and extend of the statutory right depended entirely on the terms of legislation (Fitzpatrick, 2000: 4). Therefore, the fishing entitlement would not create an

[14] „A profit-à-prendre is a proprietary right to take the produce or part of the soil from the land of another person (e.g. trees, minerals, clay or soil)” (Fitzpatrick, 2000, 3). “A profit-à-prendre is a right to take part of the soil, minerals natural produce including fish and wild animal. The person does not own the thing gathered whilst it is on the land, but has a right to gather it” (Sen/Kaufmann/Geen 2000:2).

interest based on antecedent property rights. In ‘Minister for Primary Industry and Energy vs. Davey’ (1993; 47 FCR 151) the Australian federal court stated again, that the rights in question were proprietary in nature but always depended on the management plan. “The court found that the amendments of the management plan altered rights that were created by the plan […]” (Sen/Kaufmann/Geen 2000:4). But nevertheless making such amendments was not taking property on unjust terms. In ‘Gasparinatos v. State of Tasmania’ (1995: 5 Tas. R. 301 citing) the Tasmanian Court held that “fishing rights were ´capable´ of being valuable property rights” (Tsamenyi/Mcllgorm, 2000: 2).

The Tasmanian abalone fishery was managed by individual quotas issued though deeds of agreement. Subsequent to the establishment of the deeds of agreement, the authorities temporarily established a new fishery for undersized abalone in a specific area of the state waters. For this new fishery new licenses were issued. The plaintiff (Gasparinatos) stated that by allowing a temporary fishery the total allowable catch of abalone was in effect increased. Not granting him a portion of this increased TAC would be an acquisition of his property because the deed of agreement granted him the right to take a fixed proportion of the abalone existing in the state fishing waters (Sen/Kaufmann/Geen 2000:5). The court held that there was no acquisition as the deed of agreement gave Gasparinatos a proprietary interest in a fixed proportion of the abalone TAC only but not a proprietary interest in all abalone lawfully taken in state waters. The taking of additional abalone above the TAC was thus possible. (Sen/Kaufmann/Geen 2000:5).

Sen/Kaufmann/Geen held that the case law on the legal status of fishing entitlements such as fishing licenses provides “a good indication of the way in which Australian courts would view ITQs” (2000:2). The evaluation of the case law in the literature, however, differs mainly in regard to the question of an entitlement for compensation. Some point out that Australian courts have been willing to view fisheries licenses as property“ (Tsamenyi/Mcllgorm, 2000: 1). Going even further, Arnason says that “quota rights are generally regarded as a property by the Australian courts” (Arnason 2002:5). Since ITQs are property rights, Arnason draws the conclusion that this also implies constitutional protection and that “certain rights to compensation [exist] should the ITQ be revoked” (Arnason 2002:5).

Fitzpatrick estimates that a statutory license represents property only when the license can be sold or transferred (whether subject to approval or not) and when an interest in the license may be created or assigned. A licence that can be terminated upon notice by the minister indicates that it is not proprietary. The same shall apply when the license is personal in nature (Fitzpatrick, 2000: 5).

A more narrow view is hold by Sen, Kaufmann and Geen. They conclude from the case law that even though fishing entitlements could be considered proprietary in nature, it is explicitly recognized by legislation that such entitlements are subject to modification and extinguishment (Sen/Kaufmann/Geen 2000:5). Still, according to them it remains unclear, if compensation has to be paid in case of modification or extinguishment of the entitlements. (Sen/Kaufmann/Geen 2000:5). They come to the conclusion that ITQs do not have stronger property characteristics than other fishing entitlements such as permits. On the contrary, they argue that courts are unlikely to view ITQs any differently unless expressly defined by statute (Sen/Kaufmann/Geen 2000:6). Since ITQs are rights created by the government and governed by the legislation that created them, it is this legislation that defines their legal nature

(Sen/Kaufmann/Geen 2000:5). In sum, it can be said that the main question whether ITQs are property rights and to which extent (compensation or not) remains unclear.

3.2.2 Canada

Fisheries resources in Canada are public resources (OECD 2005b: 7). The Fisheries Act of 1985 authorizes the granting of leases and licences but provides that nothing in the act shall be taken to authorize the granting of fishery leases that "confer an exclusive right to fish in property belonging to a province." Thus, strictly speaking, ITQs in Canada are not property rights but a special form of user rights. In the late 70s and early 80s property rights in fisheries were discussed in Canada and by the end of the 1980s, the individual quota system had been introduced into many of Canada's Atlantic fisheries (Barrow et al. 2001: 33). Federal Canadian law contains very little detail as to the allocation of quotas, thereby permitting a wide range of variation and experimentation (Steward 2004: 75). The first major fishery, which introduced an individual vessel quota program was the 4WX purse sein herring fishery in 1976 (OECD 2005b: 12). In Canada a great variety of different rights based regimes, with differing rules is used. They range from community based management (CBM), in which quotas are allocated to and are managed by individual communities over Enterprise Allocation (AE) to Individual Vessel or Boat Quotas (IVQs or IBQs) and Individual Transferable Quotas (ITQs) (OECD 2005b: 5-7).[15] It seems that they are mostly vessel-based and linked to fishing licences. In addition, mixed systems exist, where a community participates in an EA/IQ system and secures a community quota for their constituents. In some cases quotas are allocated for fleet sectors and fishing within the sector is competitive (e.g. the Newfoundland capelin fishery). Many of Canada's IQ programs were introduced at industry's initiative (Sporer 2001: 275).

Thus, in Canada different systems have been adopted for different fisheries at different times. Therefore common features of the systems will be explained and a number of examples will be given, instead of detailing the ITQ system of every single fishery.

The vast majority of the ITQs systems were introduced in the decade between 1985 and 1995, some in the years 1996-1998. In general, the introduction started with a trial program of 1 to 3 years, after which it appears that the ITQ system was adopted and continued in all cases. Many ITQ programs were limited in time, mostly between 5 and 10 years. Some of the ITQs were allocated permanently after a trial period, as it was the case in 1990 in the sea scallop fishery. In almost all cases the programs were designed in cooperation with industry groups and with the consent of the stakeholders (OECD 2005b).

The allocation of ITQs was in some cases based on catch history (e.g. Scotia-Fundy inshore mobile gear groundfish fleet) but more often the quotas were shared equally among licence holders. Sometimes shares were allocated initially depending on vessel category or length. Sometimes these criteria were combined (e.g. in the Newfoundland capelin fishery). Another example for a mixed system is the snow crab fishery in the Southern Gulf, where in one area 80% of the quotas were shared equally among the fishers and the remaining 20% divided

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[15] Hereinafter all these will be summarised under the term ITQs.

according to the individual catch history of the last 5 years. Generally, there is a maximum ceiling in terms of all ITQs that a quota holder could own. In the sea scallop fishery, for example, no one fishing enterprise may hold more than 50% of the quota for any specific scallop stock.

It appears that in the majority of the Canadian ITQ systems quotas can be transferred temporarily but not permanently (e.g. snow crab fishery in Eastern Nova Scotia), except in special cases, such as the sale of a company. Permanent transfer is subject to approval by the Ministry. Often ITQs are also transferable only for one season (e.g. offshore surf clam). In addition, transferability is often restricted between permanent and temporary fleets and between provinces. According to Steward (2004: 76) about half of the Canadian fisheries have no transferability, while those that that do often have stringent conditions.

In a number of programs problems of high-grading, area misreporting and quota-busting were observed. In order to address misreporting, the ITQ systems are often combined with industry funded Dockside Monitoring Program (e.g. offshore lobster) or sea-observer coverage. Also, electronic monitoring systems are sometimes an element of the ITQ systems (e.g. sablefish fishery). After the snow crab fishery in Atlantic Canada adopted a co-management arrangement with fishers and the Department of Fisheries and Oceans (DFO) to manage the ITQ system, this served as a model for other inshore fisheries.

In some fisheries, a community-based management approach was adopted (e.g. in the Scotia-Fundy fixed gear fleet of vessels less than 45 ft.) The OECD states that "the CBM approach allows for community solutions to problems in fish management and gives industry associations the opportunity to develop conservation harvesting plans that address seasonal fishing patterns and provide most benefit to their own groups. Community boards are permitted to trade quotas on a temporary basis at the community level. These measures have had the result of reducing the utilization of licences in these fleets, with some 700 licences actively engaged in the fishery at present." (OECD 2005b: 11). The low utilization of groundfish licences could be due, however, to more fishers being involved in the high-valued lobster fishery, which could later lead to a capacity problem, should there be a renewed interest in groundfish by holders of unutilized licences.

A special system is used by the roe herring fishery, which does not operate under a rights-based system but on a cooperative scheme that warrants reporting. In 1998 a pooling system was introduced for seiners, where a group of vessels forms a pool, which has its own quota depending on the TAC for the area and the number of licences included in the pool. The net profits of the pool are divided among its members.

In most cases, the ITQ systems resulted in a rationalization of the fleet and reduced operating costs as well as improved prices. Often year-round supply was also an effect of introducing ITQs. Sometimes geographical redistributions of landings were a consequence as well. One positive effect of introducing ITQs in Canada seems to be that in some fisheries, the catches did not exceed TACs any more (Sporer 2001: 284). Furthermore, in some cases it is mentioned, that safety and the quality of the products increased, because those that have the right to fish could concentrate on quality instead race for fish (Sporer 2001: 290).

As in other countries, in some ITQ systems, the initial allocation was helped by an appeal board. For example in the Pacific Coast halibut fishery, the Pacific Region Halibut Quota Review Board (PRHQRB) was established to hear appeals by halibut licence-holders

regarding the allocation of their share (Sporer 201: 270). In the case of the PRHQRB, the Minister of Fisheries and Oceans decided over the appeals that were received. Only nine licence-holders in decided to go to court and finally lost, because the appeal court found that the Minister had absolute discretion in deciding about the allocation of the fisheries resources (Sporer 2001: 271). However, in the majority of the ITQ programs it seems that no appeals process was established.

The Canadian Standing Senate Committee on Fisheries issued a report in 1998 on Quota Licensing in Canada's fisheries (Standing Senate Committee on Fisheries 1998), in which ITQ programs in Canada and in other countries were analyzed. The Committee criticized the unclear definition of ITQs under Canadian law (which left the question, whether or not ITQs represent property open) and the lack of research into the consequences of introducing ITQs in Canada (Standing Senate Committee on Fisheries 1998: Recommendations). It also stated the need to consider long-term economic and social effects of ITQ programs (Standing Senate Committee on Fisheries 1998: Recommendations).

3.2.2.1 Summary and legal issues

The Canadian fisheries quotas programs are rather divers. There exists no federal legislation to regulate essential questions such as the exact legal nature of quotas, their transferability, stability, exclusivity and security. As in other countries, this leads to uncertainties about the exact nature of the rights. And in Canada as elsewhere, the social consequences of introducing ITQs were criticized. Apparently, Canadian ITQs were seldom challenged in the courts, since no major cases could be found.

3.2.3 Chile

The implementation of individual tradable quotas (ITQs) into fishery management in Chile took a long time. Since 1980s ITQs were discussed but it took until 1991 to enact a law which introduced them. The first attempt to implement ITQs was the Merino Law, which was enacted by the Pinochet government in December 1989 and foresaw the use of ITQs for all fisheries under full exploitation. All other fisheries remained under a free access regime. The ITQs were to be allocated according to historical landings of the last three years. However, this law never came into force due to the political change from dictatorship to a democratic state.

The first law on ITQs that was actually implemented was "The Fishing and Aquaculture General Act" (FAGA). It provided only for a small range of application of ITQs, in order to avoid political conflicts, which were feared, if ITQs were introduced on a broad basis by the newly elected democratic government, which tried to achieve consensus on the most relevant societal issues to avoid political conflict (Peña-Torres 1997: 266). Therefore, the act provided for three cases in which ITQs could be introduced. ITQs can be enacted for the whole TAC, firstly, when a fishery is under a stock re-building program because of overexploitation which includes an impending three-year period of total moratorium. If the fishery is re-opened, it can be regulated through assigning ITQs to fishermen. Secondly, ITQs can be introduced, when a previously not exploited fishery is opened. In the third case of an overexploited fishery, ITQs can be introduced on 50 % of the TAC.

The Fishing and Aquaculture General Act defines ITQs as permits for industrial fishing that are transferable, divisible and independent of vessel ownership. The initial allocation of the permits (percentage of the annual TAC) is arranged by open bidding in a public auction. The act did not provide for payments if TACs are reduced. The permits last 10 years, but each year 10 percent of the TAC has to be re-auctioned, therefore the initial permits are reduced successively. A single operator can only bid for 50 percent of the auctioned TAC in each auction and TACs are auctioned in more than one auction (Bernal et al.1999: 134f.).

This act lead to the introduction of ITQs only in four relatively small fisheries: the Chilean sea bass (since 1992), the orange roughy (since 1998), the red prawn fishery (since 1992) and the yellow prawn fishery (since 1997) (Peña-Torres 2002: 3). While the law also foresaw the possibility to enact ITQs in fully exploited fishery, due to lobbying the 50%-option was never used.

In 1999, a legislative proposal to further the use of ITQs in Chilean fisheries failed (Copes/Pàlsson 2000: 4). The Fishing and Aquaculture General Act was amended fundamentally in 2000. The annual TAC is now firstly divided into a TAC for the industrial sector and a TAC for the artisanal sector. The industrial fleet is not allowed to fish in the 5 nautical miles off shore. This area is reserved for artisanal fishing. Secondly, the owners of licensed ships have a right to a certain percentage of the annual TAC, which represents their IQ. The initial allocation of the percentage of the TAC varied slightly among fisheries. For the allocation two basic rules exist, which both depend on historical landings. The first one lays down an allocation of 50% of the quota based on the historical landings between 1997 and 2000, the other half is based on the share of the boat owner in the total tonnage of the whole industrial fleet in order to compensate for the fact that historical landings have been affected by seasonal closures and other restrictions. The second allocation rule is based on landings between 1999 and 2000 (Gòmez-Lobo et al.2007:10f.). The allocated quotas are not directly transferable with two exceptions: independent boat owners can associate among themselves in order to share their quotas. Thus, they can decide not to use all of their ships to catch the quota. However, they have to pay the annual payment of fishing license.

Also, a ship can be permanently excluded from the fishery. By doing so the boat owner receives a document with the history of landings and storage capacity of that ship used to allocate the initial quota by the authority. This history can be transferred to other ships of the same boat owner or sold to another owner (Peña-Torres 2002:3 f.). This second option was hardly used, because the fishing companies noticed the uncertainty about what will happen after the 10 year validity of the permits (Gomez-Lobo et al. 2007: 12). Initially, the allocation was set for 2 years but in 2002 extended to the year 2012 and northern pelagic fishery was incorporated.

3.2.3.1 Summary

While it took a long time to enact an ITQ system in Chile, finally an individual operationally transferable quota system was adopted for the most important industrial fisheries (Gómez-Lobo 2007: 1). The introduction of ITQs had an immense impact on the operation of the industrial fleet. Due to the reform, the number of boats in operation diminished from 148 in 2000 to 65 in 2002. It is assumed by Gómez-Lobo that the implementation of ITQs will result in net benefits by the Chilean southern pelagic fishery of 6 to 19 percent of the total yearly exported value (Gòmez-Lobo et al. 2007: 4, 38).

3.2.3.2 Legal Issues

The first endeavours to implement ITQs in Chile brought fundamental legal issues before the Constitutional Tribunal, i.e. the constitutional question, whether the state has the right to limit access to fisheries and to sell property rights to fish stocks.[16] The Tribunal ruled in December 1990 that the fisheries act was unconstitutional in parts, but which concerned only minor procedural issues. The ruling of the Tribunal was seen as a "legal compromise" and in fact left unresolved the question about the state's right to limit access and to sell ITQs (Peña-Torres 1997: 268).

The fishing industry's opposition against ITQs resulted from the impossibility to change from the overexploited northern fishing grounds to the more abundant southern fishing grounds, unless the industry bought fishing rights from the incumbent firms (Peña-Torres 1997: 266). ITQs could then be introduced without raising constitutional questions, because all fisheries were closed for biological reasons. During this time, the authorities organized Fishing expeditions for in order to assure that the fleet remained active because of their high economic value. These expeditions were called research and were carried out under controlled conditions but in fact these expeditions worked informally as a de facto individual quota system and fishermen were able to see the benefits of such a system. This made it politically possible to introduce ITQs later on (Gómez-Lobo).

3.2.4 Iceland

Iceland was probably the first country that introduced ITQs. From 1975 on, the Icelandic fisheries have increasingly been managed by quota management, in the case of Iceland mostly by so-called individual vessel quotas (IVQs). The first fishery which adopted a quota management system was the herring fishery (OECD 2005a: 11). Until 1979 these quotas were not transferable (Runolfsson/Arnason/Sturlugotu 2001: 25). The Fisheries Management Act of 1990 made the quota system in the herring and capelin fishery part of the general ITQ system as of 1991 (Runolfsson/Arnason/Sturlugotu 2001, 25)). In 1980 individual vessels quotas for capelin were introduced at the request of the industry, which were made transferable in 1986. In 1984 a broader system of individual vessel quotas was instituted through an amendment of the Fisheries Act of 1976, which was extended in the following years.

In parallel, individual fishing effort control that limited the days at sea for each vessel were introduced in 1977 (OECD 2005a: 13). The system of effort restriction had little or no effect towards limiting total catch and the catch capacity of the fishing fleet continued to expand (Matthiasson 2000: 3; Gylfason/Weitzman 2003: 4). Thus, initially a mixed system of vessel catch quotas and effort quotas existed, which was replaced by the Act regarding the Management of Fisheries of 1990 (Steward 2004: 64).

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[16] The Constitutional Tribunal is an institution which discusses and suggests solutions for constitutional controversies.

The Act regarding the Management of Fisheries of 1990 introduced a comprehensive ITQ system (OECD 2005a: 13). The effort quota option was eliminated with the exception of vessels with less than 6 gross registered tons (GRT) that were offered the possibility to stay in an effort management system (Runolfsson/Arnason/Sturlugotu 2001: 25). By force of the 1990 Act the quotas were also made divisible and transferable with certain restrictions.

The initial quota allocation was designed under participation of the vessel owners and the fishermen (Runolfsson/Arnason/Sturlugotu 2001: 29). In most cases it was based on catch history. In the demersal fisheries the initial allocation was equal to the vessel's average share in the total catch during the three years prior to the introduction of the ITQ system in 1984, with exceptions for special circumstances (OECD 2005a: 15). (Different methods had been used before 1984 in the herring, inshore shrimp and the capelin fisheries.) An appeal committee was formed that consisted of the Fisheries Ministry, the Association of Vessel Owners and the Association of Fishermen.

Under the Icelandic ITQ system, the total allowable catch (TAC) is set by the Minister of fisheries and based on the recommendation from the Marine Research Institute (MRI) (Runolfsson/Arnason/Sturlugotu 2001: 26). A fixed quota share of the species is allocated to fishing vessels subject to TAC. The combined quota share for all vessels amounts to 100% of each species (OECD 2005a: 14). Quota proportions are unchanged but the overall quantity depends on the total quantity set for the species and is notified to the boat at the beginning of each fishing season (Steward 2004: 64). The quotas were initially allocated on the basis of catch history prior to the institution of the quota system. The quota share is multiplied by the TAC to add up to the quantity which each vessel is authorized to catch of the species concerned during the fishing year in question. This is referred to as the vessels catch quota. The quotas are permanent, divisible and transferable to other fishing vessels with minor restrictions (Runolfsson/Arnason/Sturlugotu 2001: 26). The allocation of quotas is subject to a fee.

In addition to the TAC shares, annual catch entitlements (ACE) exist. These are a multitude of the TAC for that fishery and the vessel's TAC share. While the TAC share is a percentage, annual catch entitlements are denominated in tons (Runolfsson/Arnason/Sturlugotu 2001: 27). Both TAC shares and ACEs are fairly freely transferable and divisible. In regard to TAC shares, almost no restrictions exist, the transfer of annual catch entitlements is subject to restrictions, which have become more stringent.

Quotas can be transferred on an annual basis by renting the annual quota as well as permanently by selling the quota share. Only 50% of all annual catch entitlements is freely tradable between vessels with different ownership for money (as opposed to exchange of different shares). The upper holding of quota shares for individuals or individual companies range from 12% of the TAC for cod up to 35% for ocean redfish (OECD 2005a: 16). In addition, there is an upper limit as to how large a share of certain fishery's TAC an individual or legal entity can own (directly or indirectly). No individual or entity can hold more than 12 percent of the aggregated TAC for all species measured in cod equivalents (OECD 2005a: 14). Neither ITQ-shares nor annual catch may be handed over to non- Icelanders. ITQs can be traded from large vessels to small vessels (less than 15 GRT) but not vice versa.

Currently, 19 species are subject to ITQs, which account for over 97% of the landed value of the catch (OECD 2005a: 14). In addition, a number of fish stocks, that are shared with other nations and for which international sharing agreements exist, are also part of the ITQ system. In 2002, the Fisheries Management Act was amended to include a fisheries fee, which is imposed on annual quota allocations and is calculated as a proportion of the profits of the fishing industry (OECD 2005a: 17).

3.2.4.1 Summary

From their property characteristics, the Icelandic ITQs are rather strong, since they are permanent, almost freely tradable and divisible. As opposed to New Zealand, the ITQ shares have not explicitly been awarded in perpetuity and could theoretically be abolished without compensation to ITQ shareholders as long as a notice of several years are given (Arnason 2005). However, the ITQs quality as a property right was diminished through the Fisheries Management Act of 1990, which states that the fish stocks of the Icelandic Waters are the common property of the Icelandic people and that the allocation of ITQs to individual firms and vessels does not give them irrevocable property rights in these TAC shares (Runolfsson/Arnason/Sturlugotu 2001: 29; Eythórsson 2000: 16). While this article probably reflected the legal situation, it gave rise to legal uncertainty in regard to the permanence and exclusivity of the right and undermined its economic effectiveness and has since been regretted (Steward 2004: 65). This provision also created problems for tax authorities and banks, e.g. in regard to the question whether a vessel-quota should be regarded as an asset on the firm's books (Runolfsson/Arnason/Sturlugotu 2001: 28).

The Icelandic ITQ system was adopted under the imminent pressure of a complete collapse of the cod stock in 1983 (Matthiasson 2000: 3). Its assessment differs. According to the OECD, the ITQ system has yielded considerable economic benefits, such as reduced investment and a contracted fishing fleet (OECD 2005a: 17). Fishing effort has been reduced. On the other hand, the system was criticized for the fact that fishing quotas have been given out for free and let to an unfair distribution of income (Gylfason/Weitzman 2003: 4, 14; Eythórsson 2000: 19). It was also said that it is inefficient, because it leads to quota busting, discard and high-grading (Gylfason/Weitzman 2003: 6). Therefore it was proposed to change the ITQ system into a system of landing fees or resource depletion charges (Matthiasson 2000, Gylfason/Weitzman 2003). On the other hand, cod stocks have increased steadily since the effective functioning the system in 1992 (Haraldsson 2007: 11).

3.2.4.2 Legal issues

The Icelandic ITQ system was challenged in the courts a number of times. According to Eythórsson this was due to the "paradoxical status of quota shares as public property according to the law but private property for all practical purposes" (Eythórsson 2000: 17). The most noted case was the Supreme Court case of December 1998. It was raised by an Icelander, who was denied a fishing licence and catch quota, because he had not been an owner of a fishing vessel during the relevant years, which counted as reference years for the

quotas. The Supreme Court considered the Icelandic Constitution, which contains equal employment rights for every citizen and provisions against discrimination as well as the Fisheries Management Act of 1990, which declared the fish resources to be public property. The Court found that by introducing ITQs the government had given away permanently the rights to a publicly owned resource to a group of vessel owners. However, the court did not decide that the ITQ system as such unconstitutional but only the permanency of the allocation (Gudmundsdottir 1999: 313). This ruling resulted in an amendment giving Icelandic vessel owners a general right to obtain a fishing licence on demand (Gudmundsdottir 1999: 314). Anyway, this did not change the fact that the newcomers still had to acquire a costly quota to be able to fish. The Supreme Court ruling was later overturned in a decision of 2000 of the Supreme Court, which found the allocation to be constitutional, because the quotas were not formally defined as private property (Eythórsson 2000: 17-18). The court also found that quota shares are only permanent as long as they are not discontinued or amended by law (Gudmundsdottir 2001: 129). The court furthermore mentioned the possibility to charge fees for the use of common property such as fisheries. This let to the proposal to establish a committee to introduce fees for the distribution of quota shares for fish (Gudmundsdottir 2001: 130). The legal challenges demonstrate according to Eythórsson that the system had not been well designed and that the quotas should not have been allocated permanently but rather for a period of 5-10 years.

3.2.5 Netherlands

The Netherlands introduced a vessel quota system for two flatfish species – sole and plaice – in 1976. These flat fish species were the main target species of the biggest sector of the North Sea demersal fleet. The background was that the North East Atlantic Fisheries Conference (NEAFC) had decided in 1975 to introduce management measures in the North Sea demersal fisheries, which included a total TAC and national quotas. Through the vessel quotas, the Netherlands tried to ensure that the national fleet met these quotas (Smit 2001: 3). The system chosen was an individual quota for vessels based on previous landings in 1972, 1973 or 1974, since during these years many enterprises had replaced their vessels. Also, some corrections were allowed to take into account the bigger fishing capacity of the newer vessels based on an average theoretical track-record (Smit 2001: 6). Ultimately, in 1977 a mix of real and theoretical track-records was adopted. A small part of the national quota was kept as a national reserve (Smit 2001: 6).

Initially, individual quotas (IQs) could not be sold, leased, or used as collateral, because it was deemed that quota transfers would cause extra management problems (Smit 2001: 4). Also, it was feared that quotas would be concentrated in "an undesirable way" (Smit 2001: 4). This system, one of the first in the world, was not very successful in the beginning (Arnason 2002: 39). Individual quotas were transferred anyway, e.g. by transfer of vessels including their IQs to other enterprises or by merging or splitting of enterprises or by individuals switching from the one firm to the other, taking IQs with them. In 1985 quotas became officially transferable without a vessel (OECD 2005d).

Innitially, fishermen found ways to circumvent the IQ system (Smit 2001: 8). A flaw of the system was that fishermen had not legal guarantee that they could effectively use their quota, since the fishery was closed early as soon as total landings exceeded the quotas. Non-

compliance of fishers led to a crisis in the Dutch fisheries management and the Minister for Fisheries had to resign on September 1990. As a reaction, the government strived to establish a new management system. Its cornershotes were: 1) distribution of responsibilities between government and fishing industry, and 2) cooperation between fishermen themselves through co-management within the existing Producer Organisations, to improve economic results within the restrictive frame of the existing catch limits (van Hoof et al 2005, Langstraat 1999). In February 1993, eight fishing groups were formed to act as quota management groups. These groups ensure that the national quotas for flatfish (plaice and sole), roundfish (cod and whiting) and pelagics (herring and mackerel) are not exceeded. Group membership is not compulsory but economic incentives for membership exist and participation in the system is high (Hoefnagel and Smit 1995). Fishermen that become members of a ‚Biesheuvel groepen' transfer the right to manage their ITQs to the group's executive board and commit themselves to respect a joint common fishing plan and other rules, accepting that transgressions will be sanctioned by the group. The group has a board that controls the transfers of ITQs between members either on a permanent basis or on a one-year basis, based on agreed transfer prices. As in the UK, in some cases the ownership of quotas has been assumed by the group boards. Since this system works very well, it is the common view that effort regulations (days-at-sea) are not relevant any more (Smit 2001: 4). Legally, fishers remain subject to public law to prevent the overfishing of joint quotas, but the rent or barter of individual quotas within Biesheuvel groups is regulated under private law through contractual arrangements (Venema 2001). Co-operation between groups is organised by the Dutch Fish Commodity Board.

Early on, an appeals process with different steps was installed, through which fishing companies could complain. Furthermore, the right of the government to install an IQ system was challenged fundamentally in the courts by some fishing companies (Smit 2001: 8). A Dutch court held that the national system derived its judicial basis from the European Community and thus the case was referred to the European Court of Justice (Decision of 14 July 1976). The Court found that even though such quantitative measures seemed to be contrary to general principles of free enterprise, free trade and the goal to enhance economic benefits, the importance of ensuring acceptable levels of fish stocks was more important. The European Court of Justice also found that such measures were taken to ensure increased production in the future (see also infra).

3.2.6 New Zealand

New Zealand has pursued a strong policy of property rights implementation and development (Steward 2004: 24). In 1983 a precursor to the Quota Management System (QMS), the Deepwater Allocation System was introduced for seven deepwater fish stocks (Lock/Leslie 2007: 12). In order to receive individual quotas (IQs), the companies had to prove that they had access to the fisheries and possessed the processing investments necessary to process catch. As a result, the IQs were allocated to large fishing companies. Smaller companies did not reach the relevant levels, so often company aggregations were created. The quota allowed companies to harvest in the way they wanted, including the use of foreign chartered vessels. Initially, the transferability was restricted (Straker/Kerr/Hendy 2002: 21). The IQs were granted for ten years. In 1986, the deepwater quotas were confirmed perpetuity and became transferable (Straker/Kerr/Hendy 2002: 22).

For inshore fisheries, quotas were introduced through the Fisheries Act of 1983, amended in 1986. It brought together the quota management system for deepwater and inshore fisheries (Straker/Kerr/Hendy 2002: 22). According to the goal of rationalizing the fishing industry, two groups of fishers were not eligible for quotas: part time fishers and people who were involved in fishing industry, but who did not own boats (Lock/Leslie 2007: 12). These groups were removed without compensation. The requirements to receive quotas were earnings of NZ$10,000 or more from fishing and to earn more than 80% of the income from fishing; or earnings from fishing forming a vital part of the fishers income; or to be a subsistence fisher (Lock/Leslie 2007: 12).

The level of quotas was set by determining vessels catch history in the 1981/82, 1982/83, 1983/84 fishing seasons. The vessels owner had to choose which of the three years would be used to calculate the catch history (Lock/Leslie, 2007: 13).[17] Depending on these, a provisional maximum individual transferable quota (PMITQ) was calculated. Once an individual catch was calculated, the government had to bring these under the TACs and calculate the ITQs.

The PMITQs were generally 10 percent higher than the proposed TACs. To identify the possible range of quotas a vessels owner would receive, they were also informed about their guaranteed minimum individual transferable quota (GMITQ). These "represented the amount of quota that the individual would receive if the reduction in catch required to get from the total PMITQ to the TAC was spread proportionally across all of the assessed catch histories" (Lock/Leslie 2007: 14). The PIMTQ exceeded the TAC for most of the species. According to the Fisheries Act, two options to reduce quota holdings were possible: either to buy back the excess quota or to reduce the total quota pro rata. The government chose the buy back option. So the willing vessels owner would get compensation in return for giving up a specified amount of quota.

The Government bought 25% of the required quota back at considerable cost. "The remaining cuts in PMITQ were then applied on a pro rata basis in the 21 fish stocks whose total PMITQ entitlements were still above TAC […]. While these latter cuts were made without compensation, the individuals who lost quota during this final round had first rights to future quota increases at no cost […]" (Lock/Leslie 2007: 15).

For the quota allocation system based on catch history, an appeal mechanism was introduced, which was used widely. It resulted in over 2000 appeals, which took 3-4 years and sometimes more years to complete and resulted in considerable changes in the quota allocations (Lock/Leslie 2007: 15). Furthermore indigenous fishers obtained a series of injunctions, when new species were supposed to be introduced into the quota management system in 1987.

Originally, the quotas were defined as the right to harvest a fixed tonnage of a particular species. Due to the decrease of stocks as opposed to the anticipated increase, this system was given up in 1990 and changed so that the quota holders instead had a proportion of the TACC

[17] Dissenting, Falloon and Straker et.al state that the calculation was based on the best two out of three years (Fallon, 1993, 47 and Straker, 2002, 43).

(the total allowable commercial catch, i.e. the TAC minus the proportion reserved for recreational fishing etc.).

The 1996 Fisheries Act clearly sets out that quotas are allocated in perpetuity (Sec. 27 of the Act) and details the rules under which new species are added to the QMS. In 2001, the system of annual catch entitlements (ACE) was assigned to quota holders. Before 2001, the quota holders were leasing their quota for a fixed term. That essentially meant that they were leasing the long-term right to fish for a short period. Thus, "by allowing the separation of the current harvesting ability and the long-term ownership of the resource quota, owners were now able to sell their current harvesting entitlement, while retaining their long-term ownership of the fishery" (Lock/Leslie 2007: 18). Several amendments of the legislation in 2004 (Fisheries Amendment Act of 2004) changed again the way that quota was allocated (Lock/Leslie 2007: 19).

Under the NZ system, fishers can sell or lease (since 2001) quotas freely. However, a number of restrictions apply. Thus, only New Zealanders or New Zealand-owned companies are able to own quota, since 1996, however, exemptions are possible. In addition, maximum holding limits were introduced in order to prevent monopolistic structures. Also, minimum limits exist in order insure economic efficiency. Quotas are divisible. Registration of the transfer of quotas is obligatory.

As opposed to initial assumptions, the quota management system led to a consolidation of the industry but not to a reduction of the number of small companies involved in fishing (Lock/Leslie 2007: 25).

3.2.6.1 Summary

In the years since the inception of the QMS, more and more fisheries have been brought under the system. Generally, the New Zealand QMS is seen as being successful (Kerr/Newell/Sanchirico 2003: 19; Bess 2006: 367). The New Zealand QMS is deemed to form a strong property system: ITQs are freely transferable and are granted in perpetuity. According to one assessment, New Zealand was able to establish such a strong system due to its isolated situation as an island nation and its unitary jurisdiction as well as its centralized fisheries management (Steward 2004: 34). The fact that the allocated quota have distinct property features is said to have contributed to the success of the system.

3.2.6.2 Legal issues

The history of the QMS in New Zealand gives one example of an ITQ-system facing major legal challenges at the time of the initial allocation of quotas. In the case of New Zealand, so-called regional catch history review commissions were set up to support the determination of personal catch histories and hear claims that the quota allocation had been incorrect (Lock/Leslie 2007: 13). Even though these could only issue recommendations, they helped to correct wrong allocations. Also, an Appeal Authority was established in1986 to hear appeals from fishers who felt their catch history had been wrongly assessed (Straker/Kerr/Hendy 2002: 45). This led to 1100 appeals that were logged and it took almost ten years to settle all

cases. Further court cases concerned for example the meaning of “commercial fisherman”, which turned out to be not precise enough in the law, which was changed as a result. The decision to reduce the TAC and hence the quotas was also challenged in the courts (Steward 2004: 158).

A number of court cases dealt with the question of indigenous rights, which were not considered in the quota management legislation. In New Zealand, the Maori are guaranteed traditional fishing rights under the Treaty of Waitangi,[18] which were not mentioned in the 1983 Act. These cases resulted in the Maori Fisheries Act 1989 and a further act of 1992, which recognized Maori commercial fisheries interests.[19]

3.2.7 South Africa

In South Africa right-based fisheries management is used since the 1960s. At first quotas were established only for a small number of commercially exploited fisheries. These quotas were largely held by white right holders (Jaffer/Sunde 2006: 20). The introduction of ITQs in South Africa after the apartheid was - unlike in other countries - not aimed to limit over-fishing of the fish stocks[20] but to overcome economic effects of the apartheid regime. ITQs were thus meant mainly to further equality and redistribution and not the sustainable use of resources (Hersoug/Holm 2000b).

During an initial 4 year period a committee was established to draft the new fishery policy and an access right panel was appointed to review the access right options. Subsequently, a new Marine Living Resource Act was enacted in 1998 (Hersoug/Holm 2000b). Later on it was stated clearly that the fishing resource was to remain common property and should not be “privatised”. Therefore fishing rights can only be leased from the state.

Section 21 (1) the Marine Living Resource Act states: “A commercial fishing right may be leased, divided or otherwise transferred”. The duration of the lease is regulated in section 18 (6): “the period shall not exceed 15 years, whereafter it shall automatically terminate and revert back to the state”. This rule aimed to make sure that firms controlled by white South Africans could not buy out new holders (Stewart 2004: 82).

The responsible minister determines the TAC annually with advice from the newly established Consultative Advisory Forum for Marine Living Resources. The minister determines “the portions of the total allowable catch, the total applied effort, or a combination thereof, to be allocated in any year to subsistence, recreational, local commercial and foreign fishing”. He can also specify the TAC to a particular area or gear type. Further “if the allowable commercial catch in respect of which commercial fishing rights exist, increases, the mass of the increase shall be available for allocation by the Minister”. Initially, this increased

[18] http://www.treatyofwaitangi.govt.nz

[19] For more information on the settlement regarding the fishing rights of the Maori, see Straker/Kerr/Hendy 2002, p.47-52.

[20] The former management of the most important hake stocks, the anchovy and the pilchard had been a success. Only the West Coast Rock lobster was under pressure (Hersoug/Holm 2000a: 225).

TAC was to be allocated in a way to further equality and redistribution according to criteria under section 9 (2) of the constitution[21],but this provision failed in Parliament

The method of allocation is not laid down in the act but delegated to the minister ("the Minister may prescribe the method of allocation"). The minister decided that only South Africans or companies, in which the beneficial interests were held by South African Citizens, were entitled to receive IQs. The criteria for the application of IQs can be summarised as follows:

> "i. establishment, or enhancement of employment opportunities (including five sub-criteria)
>
> ii. historical involvement and performance (with eight sub-criteria)
>
> iii. product enhancement (two sub-criteria)
>
> iv. resource and nature conservation (three sub-criteria)
>
> v. transformation (two sub-criteria) and
>
> vi. economic viability of the venture (three sub-criteria)" (Japp 2001: 131).

The first allocation took place in 2001/2002 and was for a period until at least until 31 December 2005. The allocations in 2005/2006 are for periods ranging between 8 years and 15 years. This application process is to take into account the following policy:

> "• Broad based black economic empowerment: Applicants were evaluated on their empowerment or transformation credentials. Specific criteria included measuring black ownership and control, representivity of blacks and women at all levels of the organisation, ownership of equity by workers, corporate social investment, affirmative procurement and compliance with employment equity and skills legislation;
>
> • Biological considerations: The allocation of fishing rights occurred within a biologically determined and sustainable management framework;
>
> • Ecological considerations: South Africa, together with all other fishing nations are bound by the Johannesburg Plan of Implementation adopted at the World Summit on Sustainable Development to measure the impacts of fishing on marine ecosystems and to mitigate against such impacts; and
>
> • Socio-economic considerations: There are two important components to this consideration. The first component is premised on the recognition that sustainable fisheries management must ensure that the manner of management must sustain an environment that is conducive to growth and investment. The second component is premised on the recognition that fisheries must play a crucial role in fulfilling the socio-economic objectives of job creation, poverty elimination and empowerment along the coast" (FEIKE).

3.2.7.1 Summary

Although the fishing sector in South Africa contributes less than 2 % to the country's gross domestic product, it is an important sector from a political point of view and thus the allocation of fishing rights has been an emotional and hard fought issue (Japp 2001: 118) The

[21] Section 9 (2) of the constitution provided "Equality includes the full and equal enjoyment of all rights and freedoms. To promote the achievement of equality, legislative and other means designed to protect or advance persons , or categories of persons, disadvantaged by unfair legislation may be taken".

Marine Living Resource Act allows for an individual quota as a right which is exclusive and determined as a portion of the TAC in the form of a lease. Furthermore, it is secure and has a limited durability of up to 15 years and is transferable (Bailey 2000). The evaluation of the outcome of the new fishery act differs. Hersoug and Holm see a positive outcome in regard to redistribution issues (Hersoug/Holm 2000b). However, economical benefits or increased sustainability are judged negatively by Japp (2001: 133f.).

3.2.7.2 Legal Aspects

Allocation was the main issue of legal challenges, as far as possible to judge by the available literature. The first allocation of fishing rights challenged the state's administrative capacity. The results of this allocation and the satisfaction differed in the fishery sectors. For example in the deep-sea trawl sector only 28 out of 52 fishing enterprises managed to enter the new system. Under the threat of legal action the sector was reviewed, which resulted in all 52 fishing enterprises remaining in place. However, only a few new entrants were accepted (Japp 2001: 131).

The Marine Living Resource Act further provided for the opportunity to appeal directly to the minister, a possibility that was used widely, mostly by existing fishing enterprises, which appealed against allocations to new entrants. Some of the criteria which were different for new entrants and old right holders were overruled by the Supreme Court (Hersoug/Holm2000b; Japp 2001, 133).

In the second allocation round the question of redistribution was brought up. Application forms for this allocation were only provided in English, which many artisanal fishermen do not speak. To receive a permit in the commercial fishery artisanal fishermen had to form companies. In the end out of 4,700 applicants only 813 received a lease. The artisanal fishermen challenged this allocation with different arguments. According to them, the Minister violated the freedom of one's choice of profession, the right of access to sufficient food as well as the right to use the language of their choice as opposed to English (which exist under South African law). It was also claimed that the allocation treated the artisanal fishery unequally and therefore infringed the principle of equal treatment.

3.2.8 Spain

In Spain, the cooperative management of coastal fisheries of anchovy and hake stocks in the Western Waters through the so-called cofradías has resulted in the establishment of an informal system of allocation of property rights (Franquesa 2004: 4). This system of Territorial Use Rights in Fisheries (TURFs) consists of allocating a fishing permit for a specific area of the ocean and the corresponding seabed (Franquesa 2004: 5). The system is used even though the anchovy and hake stocks are not sedentary and thus cannot found exclusively in a defined zone of the sea.

For the system the degree of association of the cofradías it is crucial, since TURFs can be used effectively only by one owner (Franquesa 2004: 5). The collective use of a TURF right by several vessel owners often turns in fact into an open access scheme (Franquesa 2004: 5).

Furthermore, an informal ITQ system has been established in relation to the restructuring of the Spanish fleet. Since the fleet is being reduced from year to year under EU policies, fishermen have started buying licences from exiting vessels in order to reach or to upgrade the

capacity of their own fishing boats. This system has also spilled over to the industrial fleet where vessel owners are able to extract quite considerable economic advantages from the trade of quotas (Franquesa 2004: 4). The allocation of fishing rights by fishermen's guilds is not legally regulated. The Spanish administration tolerates the practice because it helps settle conflicts that would otherwise demand political intervention.[22]

According to Laxe (2005), the Spanish legislation has been progressively moving towards the implementation of ITQ in the industrial sector, while coastal fishing stays under the traditional TURF access regime.

3.2.9 UK

The UK is a member of the European Union and its marine fisheries are therefore managed within the framework of the Common Fisheries Policy (CFP). National quotas are allocated to UK-registered vessels through a licensing system (Hatcher/Read 2001: 3). Licences are specific to the type of vessel and the species targeted and are issued annually by the Fisheries Department. Different categories of licences exist, depending on vessel length and species targeted (and whether these are subject to quotas or not). Since 1993, no new licences have been issued but licences are fairly easily transferable (Hatcher/Read 2001: 3).

The quota management system is linked to the licencing scheme. The so-called Fixed Quota Allocations (FQAs) are assigned mainly to groups of vessels, some to individual vessels (Hatcher/Read 2001: 5). Initially quotas were allocated based on recorded landings of the previous three years, but due to fraud this system was replaced by one of fixed quota allocation in 1999. Aggregated quotas are assigned to Producer Organisations (POs) (for the over 10m fleet), of which 20 different ones exist in the UK. The rest of the quotas is distributed to the so-called "non-sector", i.e. vessels that are not members of Producer Organisations.

Producer Organisations have been empowered to manage the quota, which their members receive and are allowed to determine their own internal quota allocation methods. Some operate a common quota pool and set monthly landing limits which apply to all members. If quota allocation is "ring fenced" in a common quota pool mechanism by Producer Organisations, they can be seen as a form of common property rights (Valatin 2000: 9). The system thus represents a combination of a rights-based system and a system of participatory management. Other Producer Organisations allocate individual quotas to member vessels on the basis of each vessel's FQA. Some Producer Organisations have implemented a mixed system, combining a common quota pool for certain stocks and individual quotas for other stocks.

There is no written legal basis for the notional individual quota allocations which are used to calculate group allocations, they are merely an administrative tool used by the Government Fisheries Departments in the exercise of the Government's discretionary right to issue licences in order to regulate sea fishing.

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[22] E.g. if the administration tried to reduce fishing time, the acceptance level among the affected fishermen would probably be very low. If the measure is adopted by themselves by means of a cofradía decision acceptance tends to be a lot higher because they have had the possibility to participate in the decision-making process.

The licences were originally distributed for free. The quotas that they represent are considered to be a national asset. However, it has to be taken into account that lately quota management is devolved to the Producer Organisations and this flexibility has been used to develop a trade in the fishing opportunities associated with FQA units. Accordingly, while the FQA units stay with the licence, the fishing opportunities can (and do) move around the industry. Because of this, the only argument in law for a fisherman's right to quota might derive from the notion of "legitimate expectations" in common law (Hatcher/Read 2001: 8).

Currently, this management system is evolving into a *de facto* ITQ system (Hatcher/Read 2001: 5). There are plans to introduce an official ITQ system, because the present system is deemed "confused and confusing" (UK Prime Minister's Strategy Unit 2004: 105). The main criticism is that the UK government insists that licence holders have no title to the FQAs attached to the licence, even though the licence owners have a quasi-ownership and can trade the fishing opportunity associated with the FQAs (UK Prime Minister's Strategy Unit 2004: 105). Therefore, the Prime Minister's Strategy Unit holds, "the current FQA system gives neither clarity of ownership, and accompanying rights and responsibilities, nor a liquid and transparent market in fishing opportunities which would promote the efficiency necessary for the UK fleet to compete in world markets" (UK Prime Minister's Strategy Unit 2004: 105). A "UK Quota Management Change Programme" has been set up.

3.2.9.1 Legal issues

The UK FQA system was challenged in a number of cases before the European Court of Justice (ECJ). The rulings addressed not the FQA system as such but the restrictions that the UK had introduced in order to limit the transferability of the fishing rights to nationals from other Members States. Since FQAs are linked to licences and thus to vessel ownership, mainly Spanish vessel owners re-flagged their fishing vessels in order to fish against UK quotas, the so-called "quota hopping".

The UK government first sought to counteract quota-hopping and protect the British industry by imposing conditions on the granting of licences to fish against UK quotas. In 1983, the British Fishing Boat Act was passed requiring UK-registered vessels fishing in UK waters and landings into UK ports to have crews of which 75 % were EC citizens. But this first attempt became ineffective when Spain became part of the European Union in 1986 (Liebert 1995: 40).

Instead, the UK government introduced a registration requirement (Merchant Shipping Act of 1988 and the Merchant Shipping (Registration of Fishing Vessels) Regulations of 1988). In order to be registered, vessels had to be 75% owned by resident UK nationals, or, in the case of a company owner, 75% of the shares of the company had to be owned by resident UK nationals and 75% of the directors had to be UK nationals. As a consequence most of the Anglo-Spanish vessels and five of the eight Anglo-Dutch vessels were de-registered. A Spanish company launched a case against the UK government. In 1989 the European Commission initiated an action against the UK Government for the same reason.

An interim ruling by the European Court of Justice[23] in the same year required the UK Government to suspend the residency condition. This resulted in approximately ten Anglo-Spanish vessels being allowed back onto the register. Final rulings by the European Court were made in 1991 and went against the UK Government.

The Government insisted that all the de-registered vessels would have to formally reapply for registration and for licences. As a result, some of the vessels were not re-registered until 1991. In the same year, revised "economic link'"-licencing conditions were introduced by the Fisheries Ministry, which required all UK fishing vessels either to make at least 50% of their landings into UK ports or to make at least four visits of at least 8 h duration (separated by at least 10 days) to UK ports every six months.

Subsequent rulings[24] of the European Court of Justice against the UK Government held that the provisions of the Treaty of Rome on non-discrimination between EC nationals, the right of establishment and the freedom of movement of capital and labour applied to fisheries just as they did to any other sector of the economy. As a consequence, the UK provisions were discontinued.

3.2.10 USA

Market-like fisheries management systems that are in use in the US are termed "dedicated access privilege programs" or DAPPS, or more generally fishery "rationalization". There are three types that are used in the US: individual quotas (South Atlantic wreckfish, Atlantic purse seine bluefin tuna, Alaska halibut and sablefish, Atlantic surfclam and ocean quahog), 25 community quotas (Western Alaska community development quota program) and fishing cooperatives (Bering Sea pollock, Bering Sea/Aleutian Islands crab, Bering Sea/Aleutian Islands non-pollock catcher processors, Central Gulf of Alaska rockfish, Pacific whiting, Georges Bank cod hook sector) (OECD 2005c: 1). The first IQ program was established for the bluefin tuna purse sein fishery in 1982. In 1996 Congress adopted a moratorium on the introduction of new individual quotas in fisheries management, which led to a movement towards fishing cooperatives (OECD 2005c: 2). All US IQ programs were adopted by one of the US' eight regional fisheries management councils, with the exception of the bluefin tuna IQ, which was introduced directly by the National Marine Fisheries Service, since it is a minor part of a large international fishery. In the following, we will describe selected cases of individual quota systems, community quota systems and cooperatives in the US.

[23] European Court Interim Ruling 10.10.1989 No 246/89R.

[24] Judgment of the European Court of Justice of 14. December 1989 Case 216/87 The Queen v Ministry of Agriculture, Fisheries and Food;

Judgment of the European Court of Justice of 17. November 1989 Case 279/89 ; Commission of the European Communities v United Kingdom of Great Britain.

Judgment of the European Court of Justice of 04. October 1991 Case 246/89 Commission of the European Communities v United Kingdom of Great Britain.

[25] An ITQ-type rationalization programmes under development concerns the Gulf of Alaska groundfish fisheries .

3.2.10.1 Individual quota systems

As examples we will portray the Atlantic surfclam and ocean quahog IQ program, the South Atlantic wreckfish IQs, the Alaska halibut and sablefish IFQs and the Bering Sea and Aleutian Islands crab fisheries rationalization.

The Atlantic surfclam and ocean quahog IQ program was established in 1988. The objective was to install a system that could provide the conservation and the rebuilding of the Atlantic surf clam and ocean quahog resources. The initial allocation of ITQ entitlements was based on historical catch records. The relevant years were 1986-1989 for surf clams and the years 1979-1989 for ocean quahog (Aranson 2002: 54). With the ITQs the harvesting right was associated with the ownership or lease of rights to shares with the TAC (McCay 2001: 86). The ITQ has two components: "(a) the quota share, expressed in percentages of the TAC, which can be transferred permanently and (b) the allocation permit, which takes the physical form in a set of tags that are allocated in the beginning of each calendar year to the ITQ holders" (McCay 2001: 86). The ITQ went to the owner of a vessel. So it was irrelevant for the historical catch who owned the vessel in past. The shares were freely tradable. Any person who met the requirements for owning a fishing vessel could purchase or lease ITQs (McCay 2001, 87). For the allocation, there was no formal appeal process. So "politicians and law courts became major arenas for appeal"(McCay 2001. 88).

Another example for an individual quota system is the IQs for South Atlantic wreckfish. These were introduced in 1992 due to risks of overfishing. The wreckfish fishery collapsed from 1988 to 1991[26], a fact that was considered not to be directly linked to the ITQ regime (Gauvin 2001: 92). Before ITQs were introduced in the wreckfish fishery an "emergency" management plan including a fishing year from April to April, a TAC (two million pound a year), the prohibition of the use of bottom long line gear for Wreckfish and a vessel catch per trip limit were established (Gauvin 2001: 91). In spite of these plans, the TAC was exceeded during 1990- 1991. The 1991 management plan recommended an ITQ System, which became effective in 1992. The initial allocation was based on two positions. Half of the initial shares were based on the historical catch from 1987- 1990 (Gauvin 2001: 94). The other half was divided equally to all that had participated on the fishery (Arnason 2002: 53). These "qualified" participants were those, who were able to document any landings on wreckfish from 1989 to 1990. The fishermen total initial allocations were the sum of the shares received based on the two sets of criteria (Gauvin 2001: 94). Also, a maximum allocation was set: no single individual or business entity could receive an initial share of 10% of or more of the total available shares (Gauvin 2001: 94). The shares were freely tradable within the management area. As a minor restriction, the annual shares could only be leased between other wreckfish fishermen (Gauvin 2001: 93).

A further example is the Alaska halibut and sablefish IQ. Before the implementation of the new rights-based fisheries management system, the Halibut and Sablefish fisheries in Alaska were subject to a common property regime using TAC limits and seasonal limitations (Hartley/Fina 2001: 256). After several rounds of analysis and public comments and

[26] While 1988 about five vessels were included into wreckfish fishery, the number increased rapidly to 40 vessels 1990 (Gauvin 2001: 91)

collecting applications for initial allocation in 1994, the Individual Fishing Quota (IFQ) Program for Alaska began with the opening of the 1995 season of March 1995 (Hartley/ Fina 2001: 257). The system created an enduring, if not permanent, fishing access privilege (Buck 1995). A received quota gives a fisher the right to harvest a predetermined fraction of the TAC (Hartley/ Fina 2001: 259). In case the program will be discontinued, there are no compensations for the share holders (Pautzke/ Oliver 1997).27 The individual quota shares are assigned to owners or leaseholders of vessels that made legal landings of halibut or sablefish in 1988, 1989 or 1990 (Pautzke/ Oliver 1997). The period of three years was chosen because a fisher might have been precluded from fishing for one or two years, e. g. because of a vessel sinking, sickness or the Exxon Valdez oil spill. The levels of the quotas were based on the total landing of each individual from 1984 to 1990 (halibut) or the best 5 out of the 6 years from 1985 to 1990 (sablefish). The calculation took place by first finding the percentage of everyone's quota shares based on the best five or six years, and then multiplying that percentage times the annual harvest limit set for the sablefish or halibut fishery (Pautzke/ Oliver 1997). The share is calculated in pounds at the beginning of each season (Dawson 2006: 341) and cannot be retained for a future year. Over-harvesting up to 10% of an IFQ is addressed to a next years quota reduce in the same amount without penalty. Above 10% sanctions are be made (Hartley/ Fina 2001: 259). The placed quotas are tradable. They can be transferred, sold or leased (ELAW Case Summaries, Alliance Against IFQs v. Brown). However, trade is restricted: ITQs only can be traded within a specific management area, within the same vessel size category, and there are restrictions on the total amount and quota held (Arnason 2002: 55)

Another somewhat special ITQ example is the so called "two pie system" in Alaska, which is used in the Bering Sea and Aleutian Islands crab fisheries. This ITQ system provides quota shares not only to the fishermen but processors receive individual quota shares as well. The reason for this was the fear of processes that the introduction of ITQs would reduce their price leverage and competitive position. The program allocates 90 percent of harvest shares for delivery to holders of processing shares. As a special clause, communities are protected through a requirement that a certain portion of the catch be landed and processed in designated regions (Fina 2005: 314). The quotas allocated are transferable but the total shares one can receive through allocation or buying is restricted.

3.2.10.2 Community quotas

Community quotas are used in the Western Alaska Community Development Program. Due to a high level of poverty in some of Alaska's communities. in particular the ones with a high amount of native citizens (Ginter 1995: 151), the Alaska CDQ program was created by the NPFMC in 1992. Initially, the western Alaska Community Development Quota (CDQ) program consisted of an allocation of 7.5 percent of the annual pollock TAC in the Bering

27 Magnuson-Stevens Fishery Conservation and Management act, Sec. 303(d)(2)(A), "No provision of law shall be construed to limit the authority of a Council to submit and the Secretary to approve the termination or limitation, without compensation to holders of any limited access system permits, of a fishery management plan, plan amendment, or regulation that provides for a limited access system, including an individual fishing quota program."

Sea. This allocation, known as the CDQ reserve, was allocated among eligible western Alaska communities by the North Pacific Fishery Management Council (NOAA Fisheries 2004: F-8-10). The other 92,5% of Bering Sea Pollock are left for "normal" fishing. Over the years, the program was extended to other fish species and areas.

Each community can harvest its allocation itself or lease it to others, above all fishing companies (which partly operate from Washington rather than Alaska). The fishing must be done in compliance with the law but CDQ fishing may also occur after the open access quota has been caught and that fishery is closed (Ginter 1995: 148).

3.2.10.3 Cooperatives

An example for an allocation to cooperatives are the Bearing Sea Pollock cooperatives. The pollock cooperatives emerged as a result of long-lived conflicts between the inshore and offshore sectors harvesting Pollock off Alaska. The inshore sector consists of Catcher Vessels (CVs) that deliver to shore-side processing plants, while the offshore sector includes Catcher/Processor Vessels (C/Ps) (i.e. large 'factory trawlers') on the one hand and the Mothership sector (MS) on the other. Motherships do not themselves harvest fish but process the Pollock a fleet of CVs delivers to them (Hauge/Wolff 2007).[28] Since 1993, the overall Pollock quota had been split between the inshore and off-shore sector, with the inshore quota increasing over the years at the cost of the off-shore sector. To make up for their losses, the C/Ps envisaged the creation of harvesting cooperatives which had been successfully introduced among C/Ps in the State of Washington Pacific Whiting fishery in 1997 (Sullivan 2000).The possibility to establish such coops was created through the American Fishery Act. The introduction of cooperatives allowed circumventing the US moratorium on introducing new Individual Transferable Quota (ITQ) systems in the mid-1990s.[29] The AFA as it was passed in 1998 facilitates the creation of cooperatives in the Bering Sea Pollock fishery by establishing a separate and permanent allocation of Pollock for both the C/P, mothership[30] and CV sectors. It also determines the eligibility criteria for vessels to participate based on a catch history (1995-1997), and actually lists the eligible vessels. While not providing for a legal framework governing the coop formation in the case of the C/Ps – i.e. formation of the offshore cooperatives is subject only to private contract law –, the AFA does lay down criteria for the formation of cooperatives among the inshore catcher vessels, [31] the owners of whom had in the meantime become interested in the idea of coops as well. Key to the complicated regulation of inshore coops is that these cooperatives are plant-specific. They form on an annual basis around an affiliated shoreside processor to which they agree to deliver at least 90% of their pollock catch allocation. Within each cooperative, each member company is

[28] The following text is largely based on Hauge/Wolff (2007).

[29] The Sustainable Fisheries Act of 1996 stipulated a four-year moratorium. This was triggered by distributional and fairness concerns resulting from experiences with ITQ programmes such as for the Sablefish and Halibut fisheries off Alaska.

[30] Note that most of the catcher vessels that deliver to the three motherships are qualified for fishing in the inshore sector of the BSAI pollock fishery.

[31] AFA, Section 210.

contractually allocated a percentage share of the total cooperative allocation based on its historical catch (or processing) levels. In practice, the cooperative system is similar to an IFQ system. However, the distribution of fishing privileges and the system for trading, selling or enforcing them is decided by the members of the separate cooperatives. Both leasing and sale of harvesting privileges among members of the cooperative are allowed. The leasing and sale of harvesting privileges to an outside party are allowed only if the buyer agrees to abide by the rules set forth in the cooperative's contract. The buyer must also harvest and process the quota with one of the vessels already permitted or a replacement vessel that meets specified criteria (NOAA Fisheries 2004b, p.F-8-11). Summing up, the cooperatives fulfil three functions which they partly developed in self-governance: allocation of quota shares and of bycatch-limits ('sideboards'), bycatch reduction, as well as the respective monitoring and enforcement.

3.2.10.4 Legal issues

Because of the number of different ITQ systems legal challenges to only some of them will be detailled further. In regard to the Alaskan sablefish and halibut ITQ system any vessel owner who disagreed with the initial allocation of quota shares had the possibility to file an appeal. The NOAA´s hearing officer was in charge for the appeals. An owner dissatisfied with the hearing officer's decision was entitled to appeal to the federal court system within 30 days of the decision (Hartley/Fina 2001: 262).

Further Alaskan ITQs were challenged in the courts in a number of cases. An example is 'Alliance Against IFQs vs. Brown', a case heard by a US court of appeals in 1996, which concerned a legal challenge of the transferable quota program in the Alaskan halibut and sablefish fisheries. The challenged program required any fishing vessel fishing commercially for halibut or sablefish in the Gulf of Alaska, the Bering Sea or the waters of the Aleutian Islands to have an IFQ permit. The IFQs could be bought, sold and transferred. Initial allocation was made based on past participation in the halibut and sablefish fisheries in the years 1988 to 1990. Quotas were distributed only to vessel owners or lessees but not to fishermen working on the boats without owning them. The plaintiff challenged the allocation based on these specific years as well as the limitation to vessel owners and lessees (Black 1997: 738-742).

The arguments against the IFQ system mainly concerned the negative redistributive effects that the program had. The appeal court recognized those effects but found that the design of the IFQ program was not arbitrary or in violation of the Fisheries Act. Since any initial allocation of quotas had to benefit some, while harming others, the reasons for choosing a specific mode of allocation had to be based on a "rational connection between the facts found and the choices made." But was not against the law (Black 1997: 739).

Another appeal against the ITQ allocation system was 'Foss v. National Marine Fisheries Service' in 1998. The plaintiff was a commercial fisherman whose permit application was rejected because it was submitted forty days after the regulatory deadline (ELAW Case Summaries, Foss v. National Marine Fisheries Service). The Court stated that the NMFS had not violated the applicant's procedural rights by adopting a 180-day regulatory application

period without actual notice. But it also stated that all applicants who had previously fished for sablefish or halibut during specific years, were automatically entitled to quota shares, provided that they complied with the program's process requirements.

The relevant question before the court was whether Mr. Foss had a protected property interest in acquiring an IFQ permit. The court found that there was only a constitutionally protected property interest in obtaining the specific IFQ permit, but not a property right in the fish itself as a resource. Therefore the court stated that "there can be no doubt that the IFQ permit is property. It is subject to sale, transfer, lease, inheritance (…). The property right in obtaining this specific permit is, of course, distinguishable from a claim of owning the fish themselves, which the supreme court has termed `pure fantasy´" (U.S. 9th Circuit Court of Appeals, 1998, Macinko/Bromley 2004: 628).

The introduction of cooperatives also raised issues of antitrust law. Antitrust law is laid down in the Sherman Act. The general rule in section 1 states, that all arrangements, which restrain trade or commerce, are in violation of antitrust law. The courts have generally divided the arrangements in question into two categories. The first category includes arrangements such as "naked" price fixing, which are to have an anti-competitive effect and are therefore characterized as "per se" violation. Other agreements are assesseed under the a "rule of reason", i.e. the court examines if the agreement in question harms competition rules (e g. leads to higher price, reduces output or quality, service or innovation more than would have been the case without the agreement). In order to give cooperatives the security that their agreement does not violate antitrust law, they can undergo a "Business Review Procedure" (regulation 28 C.F.R. § 50.6). Department of Justice (DOI)´s Antitrust Division reviews the arrangement and affirms that it is is consistent with antitrust law (Sullivan 2000: 2).

For the "Whiting Conservation Cooperative" this Business Review poved no problem. The DOI's Antitrust Divison stated that the cooperative agreement did not harm competition rules. In fact the agreement resulted in more products being produced at lower costs, as fishing became more efficient. The DOI considered the rationalization of the fishery to be in the interest of consumers (Sullivan 2000: 5).

3.3 ITQs under national law

A number of conclusions can be drawn from the national ITQ systems described and the legal challenges that they faced in regard to the introduction of rights-based fisheries management systems. It is obvious that ITQ regimes worldwide vary widely. Steward (2004: 86) describes the gradual development of property rights in fisheries management along typical lines. The development often moves from open access (i.e. anyone can fish) to a licensing system in which still anyone can obtain a licence to the limited granting of licences, where licences can be limited by who the holder may be, limitations on vessel or gear types and capacity, fishing seasons etc. In the next step, catch limitations or quotas are applied to licences. The TAC for a fish stock is divided into shares and allocated among a limited number of individuals, vessels or other units. Also, they may be made transferable (although that is not necessarily the case, as the example of Canada shows, where only about half of the IQs are transferable). In the final step, quotas are unlinked from licences and become a form of tradable property.

However, the unlinking is rarely complete. This is of course a theoretical model and in reality the development may not be so linear. Variations are often caused by geographical, political, social and economical conditions and considerations (Steward 2004: 88).

Legal issues play a role in the choices that different countries make. The two countries with the probably strongest property rights in fisheries are New Zealand and Iceland. They both have similar conditions, which is an isolated location and a unitary parliamentary system, which does not have to deal with the question of separation between federal and state legislatures.

In regard to the property characteristics of ITQs, a wide range of options exist. In the US, the legal characterisation of quotas is as revocable privileges, in Australia, so-called statutory fishing rights were created[32] and in New Zealand, explicit property rights language is used for ITQs. The property characteristics of the rights-based systems can thus be more or less strong. The basic question whether ITQs can represent property at all is hotly disputed in most countries. This question can be approached from an economic or from a legal point of view. The latter might diverge considerably between different jurisdictions and different models exist.[33] From a legal perspective there is thus not one answer to this question, but only an answer within the framework of the relevant jurisdiction.

Whether the property characteristics of the rights-based systems are strong or not, in legal terms it is advisable to clearly define the attributes of the right. This is shown by the example of Iceland, where on the one hand it was stated in the legislation that ITQs were not meant to constitute property rights, while on the other hand the ITQs had strong property characteristics, which led to legal problems. Interestingly, courts have come to different conclusions when asked whether the ITQ in question constituted property, depending on whether the adjustment of rights between private persons was in question or rights against the state. Furthermore, different jurisdictions have also come to different conclusion when the premises were similar due to differing basic doctrines and constitutional provisions (Steward 2004: 89).

Macinko/Bromley hold that generally ITQs are not property rights at all, because they are not enforceable vis-à-vis other fishers. They maintain furthermore that fisheries do not need to be turned into rights-based systems, because fish resources are already governed by a rights-based regime, due to the fact that they are owned by the state. Instead Macinko/Bromley recommend to discuss royalty leasing (Macinko/Bromley 2004). This approach is supported by legislation in different countries, including the US and Iceland, which states that ITQs there are not be considered property. Whether or not one chooses to categorize ITQs as property (right), it remains important to clearly define the nature of the right that is bestowed on private individuals or groups in order to minimize legal challenges.

Another legal aspect that is discussed in the countries that have introduced ITQs is the question whether the state has the right to introduce individual rights in fisheries (Steward 2004: 89). This is sometimes negated, because of legal traditions that grant the public the right

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[32] For a discussion of the legal nature of Australian Fishing Licences, see McFarlane 2000 and Fitzpatrick 1999.

[33] For an analysis of the different discourses in regard to ITQs as property, see Connor 1999.

to fishing. Mostly, courts have not followed this line of argument but held that the state can abrogate this rule through statutes in order to conserve the fishery. "The right of the states to legislate in respect of this fishing is based on sovereignty, not ownership, of the resource, and limited-access fisheries rights are appropriately established and regulated by statute. It is therefore for the statute in question (and that statute is not necessarily the governing Act, but may be Regulations as in the US halibut and sablefish fishery, or a Management Plan under the Tasmanian Act) in each case to determine the legal nature of its creation" (Steward 2004: 90).

ITQs are challenged in the courts mainly when the quotas are allocated. In general, it is the process of allocation that brings up legal concerns. Mostly, three issues come up in this context: national rules of non-discrimination (equal treatment), the right to a free choice of occupation and the protection against deprivation of property. These are basic rights, which can be found in almost all democratic constitutions and human rights declarations.

The accusation that ITQ regimes are discriminating stems from the fact that they always permit some and exclude others. The stronger the quota's property characteristics such as exclusion and security are, the more probable it is that the rights exclude others. Since one of the purposes of a quota system is to reduce the number of participants in the fishery to increase efficiency, the exclusion of some is an automatic effect (even though it is the most contentious one). However, courts have generally not found that ITQ regimes were discriminating, because the criteria upon which the quota were allocated were usually based on good reasons (e.g. in the case Alliance Against IFQs vs. Brown).

The exception was the Icelandic Supreme Court, which in a first decision in 1999 came to the conclusion that the law allocating the quotas was in violation of the clause of equal treatment and the right to a free choice of occupation. Article 65 of the Icelandic Constitution states that everyone shall be equal before the law and enjoy human rights without regard to sex, religion, opinion, national origin, race, colour, property, family or other circumstances. The Supreme Court admitted that the legislature was allowed to limit access to fisheries to prevent the danger of over-fishing. Previously, however, fishing rights had been allocated for time periods of 2-3 years, which changed under the ITQ legislation. Regarding the latter, the Court did not see the necessity to transfer the rights indefinitely. This reasoning was not only applied to the equal treatment clause but also to the restriction of the right to a free choice of occupation. Interestingly, the Icelandic quota allocation system was not changed in reaction to the decision. Instead, the access to fishing licences was broadened.

In a second decision in 2001, the Supreme Court overruled its decision of 1999 and found the ITQ regime to be in conformity with the Icelandic Constitution. The Court ruled that the limitation of access rights was based on objective criteria. In particular, the Court said that "considering the interest of employment and capital investment that are tied to the fishing industry, and to the experience and knowledge that goes with it, it has to be concluded that it was in conformity with the principle of equality to distribute the limited total catch among vessels which at that time were actively fishing for these stocks, even though the legislature had other options to choose from." (cited after Gudmundsdottir 2001: 128). This later decision is in line with the judicature in most other countries. Case law found inequalities that resulted from an ITQ allocation processes to be justified, if the allocation was based on rational

criteria that were applied uniformly and if the introduction of ITQs served the overall goal of sustaining the fish resources.

The right against deprivation of property can be a legal issue if the country that introduces fishing quotas has a constitutional provision that no person shall be unjustly deprived of his property without fair compensation (Steward 2004: 92). Here two aspects have to be distinguished. The first question is whether the introduction of quotas can constitute a deprivation of property. The second question is whether quotas once allocated become property so that their extinction or diminishment could represent a deprivation of property.

In regard to the first aspect, generally the access to a fishery as such, whether or not linked to a licence scheme, does not constitute property but creates only the expectation to earn profits. The introduction of quotas will therefore not be considered a deprivation of property. Whether the allocation of fishing quotas creates property that can be detracted unconstitutionally under certain conditions depends on the exact nature of the right under national legislation. If fishing rights qualified as private property, a diminishment or extinction can theoretically become an acquisition of property by the state, which can then be liable to pay compensation. This is the reason why the Australian Commonwealth legislation has explicitly stated that what is created is a right to fish but not property (Steward 2004: 92). Similarly, in the legislation of the US and Canada is it either affirmed that the fishing rights are privileges or that fisheries resources are public resources.

3.4 ITQs and European law

The European Union decides on TACs under its Common Fisheries Policy (CFP) and applies the principle of relative stability to these TACs. The rules that Member States apply to the domestic allocation of national fishing possibilities remain the basic responsibility and competence of Member States, albeit they have to be in conformity with Community law and the CFP rules (Nordmann 2000). These national allocation rules differ greatly from one Member State to another as Nordmann (2000) points out: This is “not only because of the variety of fishing traditions and patterns but also because of the different political and socio-economic options which are not subject to common rules.”

Under European law, any ITQ regime has to fit into the existing Common Fisheries Policy and to respect all existing EC law. Measures should be assessed in the light of their contribution to the objective of the CFP, especially the “exploitation of living aquatic resources that provides sustainable economic, environmental and social conditions (art. 2, Council Regulation EC No 2371/2002), as noted by the European Commission (European Commission 2007: 4). Furthermore, a national ITQ system has to respect the fundamental freedoms of the EC Treaty and non-discrimination rules. In addition, the design of an ITQ system shall be such as not to contravene EC state aid and competition law. We will elaborate these issues in the following.

3.4.1 Compatibility of ITQs and the CFP

National ITQs could contravene the EC principle of relative stability, because the introduction of ITQs could fundamentally change the institutional structure with regard to fisheries

(Frost/Lindebo 2003: 14). According to this reasoning, freely tradable quotas could lead to the situation that the resources are no longer captured by the nationals of the Member State that introduced the ITQs but by the fishing fleets of other Member States or even those from outside the borders of the EU. It is therefore feared that the EU fishery policy will no longer function properly. However, these fears might be exaggerated. Currently, introducing ITQs lies in the competence of the Member States and this will continue to be the case. If ITQs are introduced within the Member States, these have the right to limit the transferability of quotas, without infringing on the EC Treaty. However, the Member State might have to deal with cases of "quota-hopping" (see infra at 3.4.3), which it can eliminate only to a certain degree. Therefore, ITQ systems will endanger the principle of relative stability to a certain degree. As long as the decision whether or not to introduce ITQs rests with the Member States, however, the choice to give up the stability also rests with the Member State.

In regard to the basic features of the Common Fisheries Policy, the European Court of Justice (ECJ) ruled in 1976 that a Member State does not jeopardize the Common Fisheries Policy (as far as it already existed then) if it adopts measures involving a limitation of fishing activities with a view to conserving the resources of the sea.[34] In the case, Dutch courts had asked the ECJ for a preliminary ruling about the question whether the Netherlands had the right to introduce a quota system for their sole and plaice fisheries by fixing catch quotas. The ECJ found that the measures adopted by the Netherlands did not run counter to the objectives established by the Regulations EEC/2141/70[35] and EEC/2142/70[36], and the EC Treaty as "measures having an effect equivalent to that of a quantitative restriction". Especially in Council Regulation 811/76[37], which was adopted after the questions had been referred to the Court and repealed by it at the end of 1976, the Council expressly authorized Member States to limit catches of their fishing fleet. The Court points out that the Member States have an obligation under the Common Organisation of the Market to keep effects on the functioning of the market through catch limitation to a minimum. This does not preclude them, however, to adopt a quota system.

An ITQ system should not contravene other CFP rules. A case, which also concerned the Netherlands pertained to an aid scheme, which providing for the buying out of reserved licences, which the Commission found to contravene rules on fleet capacity targets and threatened to endanger the implementation of the CFP (European Commission 2007b).

The Court also found that quota systems do not infringe upon the prohibition of quantitative restrictions on trade contained in the Treaty. The Court found the prohibition of quantitative restrictions in the Treaty not be applicable to the restrictions on catches, because the restrictions relate to different stages of the economic process, i.e. production and marketing respectively. Early on, the ECJ thus answered the question whether in general the allocation of national fishing quotas could be an infringement to the basic freedoms of the internal market in the negative.

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[34] Judgment of the Court of 14 July 1976, Joined Cases 3,4 and 6-76, Cornelis Kramer and others.

[35] Regulation (EEC) No 2141/70 of the Council of 20 October 1970 laying down a common structural policy for the fishing industry, OJ L 236, 27.10.1970, p. 1.

[36] Regulation (EEC) No 2142/70 of the Council of 20 October 1970 on the common organisation of the market in fishery products, OJ L 236, 27.10.1970, p. 5.

[37] Regulation Official (EEC) No 811/76 Journal L 094 , 09/04/1976, p. 1.

The basic Council Regulation (EC) No 2371/2002 of 20 December 2002[38] contains a rule in art. 10 equivalent to the one which was contained in Council Regulation 811/76. It states that Member States can take measures for the conservation and management of stocks in waters under their sovereignty or jurisdiction if these apply only to fishing vessels flying the flag of the Member State and are compatible with the objectives of the CFP and are no less stringent than existing Community legislation. It can thus be concluded that it is generally admissible to introduce fishing quotas on a national level under the rules of the Common Fishery Policy, provided that the concrete design of the quota system does not infringe on EC law.

3.4.2 Quota systems and the basic freedoms of the EC Treaty

The national ITQ system should be designed in a way not to infringe upon European law due to its specific characteristics. Generally, the Member States are free to organise the distribution of their national quotas according to their concepts. "The Community fisheries sector is characterised by a multiplicity of management instruments and mechanisms. Fairly comparable situations are dealt with in sometimes very different ways depending on the Member State, the region or the fisheries concerned" (European Commission 2007a: 4). In particular, national authorities distribute and manage licences, quotas and effort at the national and regional level (European Commission 2007a: 4). According to the European Commission, it is perfectly legitimate for each Member State to opt for a system that is sub-optimal in economic terms, because it contains barriers to the trade of rights (European Commission 2007a: 5). The European Commission explicitly refers to the protection of small-scale fisheries, which could be protected against more capital-intensive competitors as a political priority (European Commission 2007a: 5). However, the European Commission points out that any mechanism designed to this end has to be compatible with Community single market and competition rules (European Commission 2007a: 5).

This was not the case in some of rules that the UK adopted (see supra) in order to prevent foreign fishers to fish against their national quotas (so called 'quota-hopping'). The European Court of Justice (ECJ) held in a judgment of 1989 that Community law does not preclude a Member State to adopt conditions for the issuing of licences to vessels authorizing it to fish against national quotas.[39] These conditions can be designed to ensure that the vessel has a real economic link with that State. However, the link has to concern the relations between the vessels' fishing operations and the fisheries dependent populations and related industries or the fact that the vessel is to operate from national ports. The ECJ went on to detail that the Member State concerned is entitled to consider a vessel to operate from a national port, if it lands a proportion of its catches there or is periodically present in the national port, provided that the frequency with which the vessel is required to be present in those ports does not impose, directly or indirectly, an obligation to land the vessels' catches in national ports or hinder normal fishing operations.

In a further ruling, the ECJ decided that the then art. 7 (non discrimination), 52 (freedom of establishment) and 221 (national treatment in regard to the acquisition of shares in companies) of the Treaty, (now art. 12, 43, 294), precludes a Member State from adopting legislation

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[38] Council Regulation (EC) No 2371/2002 of 20 December 2002 on the conservation and sustainable exploitation of fisheries resources under the Common Fisheries Policy, OJ L 358, 31.12.2002, p. 59.

[39] Judgment of the Court of 14 December 1989, Case 216/87, The Queen v Ministry of Agriculture, Fisheries and Food.

laying down as conditions for the registration of a fishing vessel in their national registers the requirement that the owners, charterers and operators of the vessel be nationals of that Member State or companies incorporated in that State and that, in the latter case, at least 75% of the capital in any such company be held by nationals of that Member State or by companies fulfilling the same conditions and that 75% of the directors of every such company be nationals of that Member State.[40]

In a case decided a year later, the ECJ also prohibited Member States from connecting a licence to the nationality of the crew members whether they are self-employed or employed.[41] The ECJ found that this infringed upon art. 48, 52 and 59 of the then EEC-Treaty (now art. 39, 43, 49). The same was held for the requirement that at least 75% of the crew of a fishing vessel flying its flag had to reside ashore on its territory, because it constituted discrimination on grounds of nationality against nationals of other Member States.

3.4.3 State aid

According to art. 36 of the EC Treaty and art. 19(1) of Council Regulation (EC) No 2792/1999 laying down detailed rules and arrangements for Community structural assistance in the fisheries sector, state aid rules apply to the production of and trade in fisheries products. A block exemption regulation exists for certain types of aid which no longer have to be notified to and approved by the Commission.[42] In addition, under the "de minimis" regulation for fisheries and agriculture aid of a limited amount (3000€ per enterprise over three years) does not have to be notified to the Commission, provided that the cumulative sum of the aid remains under 0,3% of the turnover of the fisheries sector of the Member State concerned.[43] Aid not covered by the block exemption regulation or the "de minimis" regulation will be assessed by the Commission in line with the new Guidelines for the examination of State aid to fisheries and aquaculture.[44] The EC state aid rules do not explicitly state that the prohibition of state aid does not pertain to national quota systems.

In regard to state aid, two questions are relevant: firstly, the allocation of individual quotas for free e.g. based on historical catch could constitute state aid. Secondly, when introducing a quota system, the government may decide to support those that can enter the fishery only by buying or leasing.

The first question is thus whether introducing fishing quotas as such represents state aid. In order to represent forbidden state aid under art. 87 EC Treaty, a number of criteria have to be fulfilled: the measure has to confer an advantage to the beneficiaries, in has to represent state

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[40] Judgment of the Court of 4 October 1991, Case 246/89, Commission of the European Communities v United Kingdom of Great Britain.

[41] Judgment of the Court of 17 November 1992, Commission of the European Communities v United Kingdom, Case C-279/89.

[42] Community Regulation on the application of art. 87 and 88 of the EC Treaty to State aid to small and medium-sized enterprises active in the production, processing and marketing of fisheries products, OJ L 291, 14.9.2004, p. 3.

[43] Commision Regulation (EC) No 875/2007 of 24 July 2007 on the application of art. 87 and 88 of the EC Treaty to de minimis aid in the fisheries sector and amending Regulation (EC) No 1860/2004, OJ L 193 of 25.7.2007, p. 6.

[44] Guideline for the examination of state aid to fisheries and aquaculture, 2004/C229/03, OJ C 229, 14.9.2004, p. 5.

resource and distortion or threat to distort competition, which impacts on trade between Member States and is not compatible with Common Market rules.

Does the measure confer an advantage to the beneficiaries? In the case of the transfer of quotas to fishing enterprises, it could be argued that these quotas are generally allocated based on catch history and that thus the recipients of the quotas did not receive an advantage. That would ignore the fact, however, that before the introduction of the quotas system fishing enterprises had to compete with all other enterprises that wished to enter the market (provided the latter did manage to get a fishing licence) in the ‘race for fish’. As opposed to that, after the introduction of the quota system, the fishing enterprise holding a quota has a guaranteed share of the catch. Thus, the allocation of quotas to individual quota holders can be seen to represent an advantage to the beneficiaries.

Furthermore, to be unacceptable under art. 87, the fishing quotas that are allocated without payment have to represent a state resource. It is questionable whether the resource ‚fish’ can be deemed to represent a state resource, a question which might depend on the national definition of aquatic resources. However, it is not the fish as such that is allocated but only the fishing rights. These rights can only be conferred by the state, since only the state as legislator is able to create a quota system. This system would have to favour a certain industry or enterprise. Fishing quota systems favour the recipients of the quotas before those that do not receive any quotas. The allocation of quotas would have to constitute a distortion or threat to distort competition. The consequence of allocating fishing quotas is that only those enterprises that receive them can continue to fish, whereas before all enterprises (that had a fishing licence) could compete. It can thus be inferred that the introduction of fishing quotas distorts competition.

However, it is questionable whether a system of fishing quotas has an impact on the trade between Member States. This seems not to be the case. Under the CFP a Member State can only allocate its national quotas. These quotas will be fished by his nationals. The way in which the Member States’ quotas are allocated within the Member State will however not affect the trade between the Member States.

Firstly, it can therefore be concluded that the adoption of a system of national fishing quotas and the allocation of the quotas does not represent state aid under art. 87 EC Treaty.

An example of a system that was designed to protect certain fishers would be the Alaskan low-interest loan program of for new entrants and fishermen fishing from small boats in the halibut and sablefish fisheries.

Within the EC, governments might decide to protect vulnerable fishing communities through a quota system which can infringe upon EC state aid rules. The European Commission pointed out that it appears that Member States are encountering problems and are “envisaging state aid measures or other types of public intervention to rectify unwanted effects of transferable rights” (European Commission 2007b: 21). This was the case in the Shetland Islands, where the UK government aimed to guard dependent fishing communities. In addition, it was difficult under the FQA for new and young fishermen without prior track record to enter and progress in fishing industry. In response, the UK government introduced Community Quota Schemes (CQS) in certain ‘fishery dependent’ areas to try and sustain local fishing fleets and safeguard fishing opportunities for future generations. A CQS is essentially a scheme implemented by local communities to purchase and distribute fish quota in a way that benefits local fishermen. There are currently four CQS operating in the UK. The most established and largest scheme operated in the Shetland Isles. Significant quota holdings were

purchased from other areas of the UK and Shetland fishermen were given preferential access to this quota at a nominal price. The objective of this schemes was to (keep in the community ("to ringfence") track records giving entitlements to annual fish quotas for the benefit of the local fleets. They were set up because local fishermen were finding it difficult to obtain financial backing to purchase quotas (European Commission 2001).

Bodies included in this scheme were:

- The Shetland Islands Council (SIC);
- Shetland Development Trust (SDT), which is a discretionary trust. SDT was set up to foster economic development in Shetland and is operated with funding from the SIC. The principal source of funds is the Reserve Fund, established and operated by SIC; the Reserve Fund is funded from the surplus revenues of the Council's harbour undertaking;
- Shetland Leasing and Property Ltd (SLAP), which is a commercial limited company operated for profit. The company's shares are wholly owned by the Shetland Islands Council Charitable Trust (SICCT), the trustees of which also are the councillors of the SIC plus two other persons. The funds of this trust originate from oil companies;
- Shetland Fish Producers' Organisation Ltd (SFPO), which is a Producers' Organisation as defined in Community Legislation.

The quota purchasing scheme operated in the following manner. To assist SLAP in the purchase of track records, SDT procured, in 1998, a loan of GBP 2 million for SLAP at a rate of interest equal to the return required by SLAP from SFPO for the lease of quotas to fishermen (on average 9 %). The purchases were made during the years 1998 and 1999. The track records acquired cost a total of GBP 2 million. Due to a treaty between SLAP and SFPO, SFPO acted on behalf of SLAP for the acquisition and rental of track records. When SFPO leased track records, it had to observe an order of priority in entering into Rental Agreements. Preference shall be given to persons, partnerships or companies newly established and actively operating in the fishing industry in Shetland over persons or partnerships already established in the fishing industry in Shetland. Persons, partnerships or companies who owned and were actively operating fishing vessels registered with a port letter in Shetland have priority and persons, partnerships or companies already established and actively operating in the fishing industry in Shetland shall be given preference to POs'.

In 2001, the European Commission (EC) received complaints about the Shetland CQS from sources within the UK fishing industry. Subsequent investigations into the Shetland CQS by the EC confirmed that the scheme did indeed constitute unlawful state aid under art. 87 (1) of the EC Treaty. The Commission considered that the renting of quotas to vessels which are in the membership of SFPO is not compatible with the common market.[45]

Advantage to beneficiaries

The existence of two separate charging systems did lead to preferential conditions for fishermen that were members of the SFPO. The EC found that fishermen that were members of the SFPO had to pay GBP 106.800, for leasing quota as opposed to fishermen that were members of the SFPO, who paid only GBP 19.250.

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[45] Commissin Decision of 3 June 2003 on loans for the purchase of fishing quotas in the Shetland Islands (United Kingdom) 2003/612/EC, OJ L 211, 21.8.2003, p. 63.

Fishermen who benefited from the scheme were fishermen who were not able to borrow money to buy track records. It enabled them to fish against quotas to which they would not otherwise have had access. (The Scottish Fishermen's Organisation noted that banks would give loans only against collateral. And quotas are not seen as collateral, because the fishermen are not entitled to receive them). The received quota enabled them to increase their production, something that would not have been possible without the preferential scheme of the government. The scheme, which was selective in character, thus conferred an advantage on those fishermen.

State Resource

In order to represent a case of state aid, the origin of the resources transferred has to be from state funds. The scheme was set up after the SDT procured a loan of GBP 2 million for SLAP. The SDT was funded by the Reserve Fund established by Shetland Islands Council (SIC). This Reserve Fund itself was funded from an agreement concluded on 12 July 1974 between the SIC and oil companies using the harbour facilities of Sullom Voe. According to the European Commission, the SIC acted in the general interests of the population and not as a private company under normal market conditions. Therefore the money that it received from the oil companies was public money. It had to be regarded as a State resources for the purpose of art. 87 of the EC Treaty.

Distortion or threat to distort competition

The quotas from which the fishing enterprises benefited under the scheme reinforced their position with regard to other fishing enterprises, whether registered in the UK or in the other Member States. They have been enabled to land and sell more products than they could have done if they had not benefited from those quotas. The implementation of the scheme has therefore affected competition conditions. It has given rights to fish for products which are sold on the Community market. The Scottish Fishermen's Organisation pointed out that it was the intervention of the Shetland authorities in setting up the scheme that triggered the escalation of the cost of quotas.

Impact on trade between Member States

The impact on trade had to be assessed with regard not just to fishing opportunities but also with regard to the effect on trade in the products concerned. As the scheme reinforced the position of the beneficiary fishing enterprises by comparison to that of other fishing enterprises, the latter must be regarded as having been affected by it. The scheme allowed the beneficiary fishing enterprises to maintain a share of the market that competitors would otherwise have seized. Thus, trade between the Shetland fleet and producers from other Member States was affected.

Compatibility with the common market

The scheme does not fall under the block exemption for certain types of aid (linked to restructuring plan as defined in the Block Exemption Regulation.[46] Therefore it could not be considered compatible with the common market.

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[46] Community Regulation on the application of art. 87 and 88 of the EC Treaty to State aid to small and medium-sized enterprises active in the production, processing and marketing of fisheries products, OJ L 291, 14.9.2004, p. 3.

After the EC ruling quota from the CQ pool could only be leased at current market rates and was equally accessible to fishermen outside Shetland. The scheme therefore ceased to fulfil its aims. Only the aim, that young vessel owners can still become members of the PO without any quota, could be achieved through the quota pool.

The European Commission concludes that a system of transferable rights in fisheries may be advantageous from a certain point of view, "such a system can over time also be the cause of serious difficulties and put Community law at risk" (European Commission 2007b: 21).

3.4.4 Competition law

Legal questions of competition law pose themselves in quota management systems mainly when the resource is managed commonly by Producer Organisations or other groups of fishers. They are therefore discussed in Section 4 on participatory management.

3.5 WTO law

As there are no special WTO provisions relating to fisheries subsidies, these subsidies are disciplined only by the general subsidies rules found in the current WTO Subsidies Agreement (SCM Agreement) (Benitah 2004).[47] In the Doha round WTO Members agreed in November 2000 to launch negotiations with the aim to "clarify and improve WTO disciplines on fisheries subsidies, taking into account the importance of this sector to developing countries."48 As Benitah (2004) remarks, the issue of fisheries subsidies has been pursued in the WTO Committee on Trade and Environment (CTE) for several years with no results. After the Ministerial Conference in Doha, negotiations on fisheries subsidies took place in the WTO Negotiating Group on Rules, which is under the authority of the WTO Trade Negotiations Committee.

End of 2007, a draft text on fisheries subsidies was circulated to WTO Members. This draft text took the form of an Annex (Annex VIII), which is inserted in the Agreement on Subsidies and Countervailing Measures, the so-called SCM Agreement. This Annex is considered as an integral part of the SCM. The draft reflects a mix between the so-called "traffic lights" approach and the "special and differential treatment" approach. However, it is currently more than questionable that the actual round will be finalised with an agreement.

3.6 Considerations when legislating ITQs

At the outset of designing rights-based fishing regimes, a legislative approach has to be selected (Steward 2004: 98). Different countries have opted for different solutions in this regard. For example New Zealand has chosen to address all issue in an act of Parliament. The drawback of this approach is rigidity (Steward 2004: 99), because legislation is more difficult

[47] Marc Benitah "Ongoing WTO negotiations on fisheries subsidies", The American Society of International Law, June 2004. http://www.asil.org/insights/insigh136.htm.

[48] Paragraph 28 of the Doha Declaration , "Ministerial Declaration at Ministerial Conference", Fourth Session, Doha, 9-14 November 2001, WTI MIN(OI)/DECIW/I, adopted on 14 November 2001.

to change that regulations or guidelines. Also such an approach might not be possible where a number of different systems will be introduced based on the legislation, which have different characteristics, as for example in Canada. The other extreme is to leave the decision about the nature and characteristics of the system completely to subordinate legislation or management plans and simply to ensure that the governing statue enables or at least does not prevent the implementation of fisheries rights as it was done in Canada (Steward 2004: 99). An intermediate approach would be to adjucate the essential matters in the governing statue and leave details to regulations or management plans (Steward 2004: 99). Also, account must be taken of the existing legislation, such as fisheries law, jurisdictional issues and constitutional matters (Steward 2004: 101). The advantage of the last approach would be to ensure a stable legislative framework that can address basic issues such as the nature of the right, the transferability etc., without overloading the legislation with details.

In the literature a number of points are being discussed that should be addressed when designing a rights-based management program. These include the nature of the property right, management units, determination of total allowable catch, monitoring and enforcement, need for other regulations, rent extraction and cost recovery and initial allocation (Anderson 2000: 38). Regarding the first point, it can be questioned whether it is necessary to clearly define the nature of the property right through legislation.

This might prove difficult also, since the quota might have some aspects that closely resemble a property right whereas others are too weak to qualify the right as such. Thus, it seems advisable to define the characteristics of the right, while it might not be necessary or even prudent to define it as property. On the other hand, statutes that declare the fishing rights not to be property gave rise to problems as well, especially when in fact the quotas have characteristics that are very close to property. This was the case in Iceland, where it resulted in a certain amount of uncertainty, how to handle certain questions.

Different approaches exist to the question whether or not ITQs should be defined as property through regulation. The right can be recognised as a permanent property (e.g. New Zealand). The right can also be designed as a special property right that has clearly defined and limited characteristics, while the right to the resource remains explicitly with the state. For example it can be specified that no compensation will be paid, when the right is revoked. Finally, they can also class them as revocable privileges that are not property rights as in the US. In many instances, the legislation did not explain the exact nature of the rights and left it to the courts, to define the nature of the right, as it was the case in Australia. As Steward (2004: 127-128) points out, if the purpose is to ensure that ITQs will be considered as property, it is important to strengthen their property characteristics, i.e. transferability, durability, security, and exclusivity (see infra). In sum, it is more important to have a clear concept regarding these four features of ITQs than to declare a right to be property or not, while one of the characteristics is very weak or very strong.

It might not be necessary to draft new legislation to introduce rights-based regimes but sufficient to amend existing law, especially when the law is not supposed to contain details on the system. One basic question is the issue of territorial jurisdiction in federal legal systems, i.e. whether the federal or the state legislature has the competence to regulate fisheries

management. This certainly is an issue in many European countries.[49] If new legislation is written, it should also refer to conservation and management principles, which can be used to interpret the statutes (Steward 2004: 104).[50]

Basic legislation or rules have to contain provisions on fisheries management planning. The first crucial question is which unit takes responsibility for planning. That can be regional fishery management councils (as in the US), the Regional Advisory Councils in the European Union which however at present have an advisory function only, a central management authority (like the Australian Fisheries Management Authority), a supranational authority (like the Directorate General for Fisheries and Aquaculture in the European Union) or the responsibility can remain with the government (as in New Zealand, where no provisions for management plans exist and where the Minister issues quota management rules). Mostly, planning is based on the division of the fisheries in areas, fish stocks or vessel types. Lawyers recommend to give management plans legal effect in the governing statute or formalised by regulation and that they include the process of determining Total Allowable Catch, which should not be left to subordinate legislation. However, in the framework of the CFP, TACs for most commercially exploited species are determined by the Council. This aspect is thus not relevant for EC fisheries. They also point to the importance of public consultation of management plans (Steward 2004: 107-112).

A fundamental decision in drafting a fisheries rights system is the definition of the holders of the rights. Usually fishing licences are issued in respect of vessels. If the system to be introduced is based on the issuing of fishing rights to legal or natural persons, these two approaches have to be reviewed for possible conflicts (which might not exist where fishing rights are distributed to vessels as it is the case in the UK and in some fisheries in Canada).[51] Besides individuals and vessels, communities or traditional right-holders are potential recipients of quotas. As Steward explains community-based fishery management is taking place word-wide in many different forms. They are usually characterised by the "relative weakness of the legal basis" (Steward 2004: 115-116). In each case, internal management procedures have to be design, if they do not exist already, in which case the existing ones have to be taken into consideration.[52]

Important aspects in the design of fisheries legislation are exclusionary factors, because they are a common subject of law suits. The most important exclusionary factor is citizenship. This criterion has to be used carefully, taking into account bilateral, multilateral, regional and international fishing agreements. As discussed at length supra, in the European Community it is not possible to exclude fishing companies from other EU countries, but restricting access to vessel ownership to prevent "quota-hopping" is restricted through the EC Treaty. Often the total holding of quotas is limited, e.g. through a cap on the amount of quotas one company or

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[49] For a discussion of potential conflicts with different concepts in non-Western legal systems, see Steward 2004, p. 103.

[50] Steward also cites examples of legislation in different countries regarding this and other characteristics of fisheries legisaltion on property rights discussed.

[51] As detailled above, issuing IVQs might have negative side effetcs as „quota-hopping", see 3.2.7.1..

[52] For further aspects of creating legislation on community-based fisheries management, see Steward 2004, p. 116- 118.

individual can hold. Sometimes, fishing rights are separated from processing rights. It is advised to include any restrictions or limitations on the acquisition of quotas in the governing statute (Steward 2004: 118). Quotas not only can be attached to natural or legal persons but also to vessels, which should be reflected in the act as well.

Allocation methods are "highly contentious" (Steward 2004: 119) as proven by the many court proceedings and appeal processes that followed the allocation of quotas in almost all countries. At the centre of court proceedings were in most cases the "fundamental legal principles underlying the property nature of fisheries rights" (Steward 2004: 119). The more value is placed on fisheries rights as property (transferability etc.), the more contentious the proceedings were. From the many different ways to allocate fisheries rights (catch history, vessel/gear specifications, distribution of equal shares, lottery, tenders, investments), most allocations are based on catch history. As well as vessel/gear specifications allocations based on catch history privilege those that are already in the industry. Generally, the allocation method will be selected according to the general set-up of the fisheries. If fleet reduction is necessary and there are already to many operators in the sector, lottery or tenders can be used. Where the sector is rather small, equal shares can be distributed. If allocation is based on catch history, precaution has to be paid to the possible building up of fleet effort in order to qualify for allocation. Special attention has to be paid to the drafting of exceptions in cases where an operator was prevented from fishing, because of exceptional circumstances. If exceptions are not foreseen in the legislation, it might be a reason for court challenges. In order to facilitate allocation, special appeal mechanisms such as the appeal authority in New Zealand can be established. Since these appeals took many years in some countries, it is important to place time limits on appeal processes (Nielander/Sullivan 2000: 69). Generally, Nielander/Sullivan say that "there is no doubt that every effort should be made during the legislative and regulatory drafting stages to minimize possible litigation exposure. Unfortunately, ITQs are, at times, so valuable that individuals risk litigation costs for the possibility of obtaining initial or additional quota" (Nielander/Sullivan 2000). They therefore recommend to minimize the scope for successful legal challenges, by meticulously documenting the allocative decisions, and allow in the allocation formula and resulting process for some discretion to address gross examples of unfairness.

Transferability is the most important defining characteristic of property rights in quotas (Steward 2004: 128). Quotas gain value through the possibility to transfer and accumulate them. The fact that quotas are generally transferred, whether or not that is foreseen in the legislation also shows that transferability is an important aspect that should be clarified in legislation. There are many variations of transferability in ITQs, from fully and partially transferable to leasing only. Usually, some limitations are included in legislation, such as the very common one that the transferee must already hold a fishing permit or vessel licence. All restrictions should be made in clear in legislation, regulations or management plans. Since some limitation generally exists, a mechanism has to be foreseen to ensure the compliance with these rules, such as prior approval. An upper limit or cap on the number of quotas held by one person or entity has to be enforced as well. These kinds of restrictions therefore require a management authority that enforces them.

Regarding durability, quotas can be designed to be issued for a year or season only or longer, even in perpetuity. In economic theory, quotas that are issued infinitely better serve their purpose, because the rights holder will be more interested in conserving the resource. Any legislation should be based on a clear concept of the durability of the quotas. That also concerns the question whether compensation will be paid in case of withdrawal of quotas. Provisions exist in some jurisdictions, such as Australia. Generally, the possibility should be foreseen that the right to catch fish based on the quota can be reduced or suspended if the Total Allowable Catch is reduced, as it is the case in New Zealand, where quotas were allocated in perpetuity.

Security can be achieved through a register of the quotas and their holders. Some quota registers have special features. Registers can be combined with the already existing registers of licences and permits. In order to increase the value of the right, it can be made possible to register mortgages, liens etc. in the register.

Exclusivity is defined as the factor that assures “the fisher much the same control over their resource as a farmer has over his land and its produce” (Steward 2004: 146). Whether that is in fact possible might be questioned. On the one hand, a quota holder has more possibilities to fish without outside interference than a mere licence holder. On the other hand, other quota holders can also fish and the fish will only become the property of the fishermen, when they are on board of their vessel. In addition, in many instances after the introduction if quotas an increase in quota-busting, misreporting etc. was described (e.g. in the Netherland and in New Zealand). That shows that the exclusivity of the right might also depend on effective enforcement measures. Also, it has to be pointed out that the exclusive nature of fisheries rights does not mean that the state cannot interfere, since he might suspend or cancel the right e.g. for fisheries management reasons (Steward 2004: 147). Also, the quotas can be linked to the holding of fishing licences, with the consequence that they will end if the licence is terminated.

Legislation for property rights in fisheries should also take into account administrative questions, such as the preparation and management of plans, quota registers, and transfers of quotas, data collection, enforcement and monitoring. As mentioned before different approaches were chosen in different regions of the world, which range from regional fisheries councils to centralised government management authorities. Finally, an issue to tackle is whether fees and charges will be levied.

It is important to ensure sufficient flexibility to be able to amend and adjust existing rules, since often ITQ systems develop over time. However, as Steward (2004: 153) points out, “it must be recalled that any major overhaul to a fisheries rights system carries with it the possibility of undermining the security and predictability associated with the system. The more the fisheries right is being capable of being viewed as property, the more guarantee of security will be required.”

4 Participatory Governance

Different forms of participatory government exist in fisheries management. When the focus is on participation by fishers one usually talks about “co-management”, which is generally

considered to make management more effective (Wilson et al. 2003). However, "co-management" can also lead to a problem of legitimacy, because while industry is included in management decisions, other stakeholders (e.g. nature conservation groups) might not. This was for example the case in the US Regional Fisheries Management Councils, which initially did not take into account conservation groups to the extend realised later.

The idea of co-management is to come to joint decisions on how the responsibilities of management are to be allocated between the central authority and the local institutions, reached on the basis of negotiation between government and the industry. Co-management requires cooperation and consultation based on equality between the partners. Such equality may be threatened by inequity of resources (Symes 1995: 43).

From a legal point of view, the relevant question will generally be whether in a system of participatory governance stakeholders have only an advisory function, as it is the case of the new Regional Advisory Councils (RACs) that resulted of the CFP reform, or whether they have decision and implementation powers, i.e. exercise a form of co-management. In the latter case, issues of competition law become relevant. Hereinafter, only the relevant forms of participatory governance that can be found within the EU will be presented and analysed.

4.1 Producer Organisations

Producer Organisations (POs) are examples of participatory governance in two respects: 'downstream' they allow producers to adapt production to market demand. 'Upstream' they have also become an instrument of industry's quota self-management in some countries such as the UK and the Netherlands ('Biesheuvel system') (Symes 2000, van Ginkel 2005). The second function was described in Chapters 3.2.9 and 3.2.5; the first one will be elaborated below in the context of PO's legal setting.

The institution of producer organisations was introduced by the EU. The Member States have to recognise the individual organisations.[53] They are composed of fishermen or fish farmers that form an association, which originally only had the function to take measures to further marketing conditions for their products. As mentioned above, however, in some countries POs mostly exercise other fiunctions, such as quota management.

According to the European Commission, POs are a fundamental feature of the market organisation in fishery products, since through them the industry itself seeks to organise and stabilise the market. In order to be recognised they must represent a minimum level of economic activity in the area they propose to cover. They are not allowed to discriminate against potential members and must meet the necessary legal requirements in the Member State concerned. POs have to include in their membership at least a certain percentage of vessels operating in their area or they must ensure that a minimum amount of its members' production is sold in that area. POs can receive financial compensation for market measures (withdrawal of fish from the market). Membership in a PO is not compulsory, but only PO

[53] Commission Regulation (EC) No 2318/2001 of 29 November 2001 laying down detailed rules for the application of Council Regulation (EC) No 104/2000 as regards the recognition of producer organisations in the fishery and aquaculture sector, OJ L 313, 30.11.2001, p. 9; Commission Regulation (EC) No 1767/2004 of 13 October 2004 amending Regulation (EC) No 2318/2001 as regards the recognition of producer organisations in the fishery and aquaculture sector, OJ L 315 14.10.2004, p. 28.

members can receive financial compensation. It is further possible to create a PO with members of different Member States (Regulation 1767/2004). Other measures include carry-over operations which involve processing and storing some species under specified conditions. POs also have right to introduce restrictions that also apply to non-members. The role of POs has been further strengthened by the reform of the Commission adopted in 1999.[54] According to the Commission, „making POs taking greater responsibility for self-regulation in management of available resources thus helps ensure that market requirements are better met and that stocks are under less fishing pressure“ (European Commission 2005).

4.1.1 European law

Below, we sketch out the major legal framework conditions with regard to the marketing function of POs; those relating to their quota self-management function (in the UK) are covered in Chapter 3.2.9.1 and 3.2.5.

4.1.1.1 Competition law

Art. 81 of the EC Treaty prohibits all „agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the common market, […]“. Especially forbidden are agreements that

„(a) directly or indirectly fix purchase or selling prices or any other trading conditions;
(b) limit or control production, markets, […];
(c) share markets or sources of supply;
[…]”

In art. 36 of the EC Treaty it is laid down that the competition rules in art. 81 apply only for the extent for production of and trade in agricultural products determined by the council. Agricultural products include the fishery products (Annex 1). The Council has determined in Council Regulation no 1184/2006 the extent to which competition law applies to agricultural products. However, this regulation does not apply for producer organizations in the fishery sector.

Regulation 104/2000 concerning the producer organisations lays down in art. 14, notwithstanding art. 1 of regulation no. 2655 that art. 81(1) of the Treaty shall not apply to the agreements, decisions and concerted practices of recognised interbranch organisations, whose aim it is to implement the measures referred to in art. 13 (1)(d) of this Regulation and which, without prejudice to measures taken by interbranch organisations under specific provisions of Community law, do not:

(a) entail an obligation to apply a fixed price;

(b) lead to the partitioning of markets in any form within the Community;

(c) apply dissimilar conditions to equivalent transactions with other trading partners, thereby placing them at a competitive disadvantage;

[54] Council Regulation (EC) No 104/2000 of 17 December 1999 on the common organisation of the markets in fishery and aquaculture products,

[55] The regulation No 26 as mentioned in this art. is substituted by regulation no. 1184/2006.

> (d) eliminate competition in respect of a substantial proportion of the products in question;
>
> (e) otherwise restrict competition in ways which are not essential to achieving the goals of the common fisheries policy as pursued by interbranch activity.

Consequently the competition restrictions laid down in Regulation no. 1184/2006 do not apply to the fishery sector.

But in regard to competition law the POs do not have a carte blanche. The above cited art. 14 of Regulation 104/2000 constitutes the framework in which the POs can operate. For example agreements about fixed prices would violate European law.

Furthermore the Producer Organisations can receive state aid for their formation and their implementation measures. This does not fall under the European state aid restriction in art. 87 EC. art. 4 of the EU regulation 1595/2004 states an exemption provided that,

> „a) the aid fulfils the conditions of Article 13 of, and points 2 and 2(1) of Annex III to Regulation (EC) No 2792/1999;
> (b) the amount of the aid does not exceed, in subsidy
> equivalent, the total rate of national and Community
> subsidies fixed by Annex IV to Regulation (EC) No 2792/1999 for such aid".

The legal problem with POs is their inherent potential to stress the exemption of competition law too much. The experience with similar cooperations in the United States fishery management shows that most cases dealing with cooperatives were due to competition law violation. The power, such a cooperative has, was used to fix prices or to close the market and not allow others to access (Kitts/Steven 2003).

Also in the European Union a case of competition violation occurred in 2003. The Netherlands Competition Authority ("NMa") imposed fines on four Dutch producer organisations, three German (associations of) producer organisations, one Danish producer organisation and three wholesale trading companies in the fishery sector, who were found to have violated both art. 6 of the Dutch Competition Act and art. 81 EC. All parties where part of so called trilateral consultations on limitations of catches and minimum prices for North Sea shrimps (crangon crangon) during 1998-2000. The European Commission declared this behaviour as violation of competition law.[56] Further the Dutch POs were involved in boycott actions to prevent a new trading company from buying North Sea shrimps at the Dutch fish auctions in autumn 1999.

4.2 Regional Advisory Councils

Regional Advisory Councils are a new feature of the CFP. They were foreseen under the CFP in order to enable the CFP "to benefit from the concerns of other stakeholders and to take the diverse conditions throughout Community waters into account."[57] They aim to increase the

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[56] "The involvement of Dutch multinational trading companies and Dutch, German and Danish producer organisations in the Trilateral Consultations (both covering a big share in demand and supply of North Sea shrimps) together with the hard core nature of the agreements (catch quota and price fixing) establish a sure case of effect on trade" (European Commission 2004: 41).

[57] Council Regulation (EC) No 2371/2002 of 20 December 2002 on the conservation and sustainable exploitation of fisheries resources under the Common Fisheries Policy (Official Journal L 358 , 31/12/2002 P. 0059 – 0080)

participation of those affected by the CFP and to achieve more regionally focused fisheries management. The RACs are led by fishermen and include stakeholders and other interest groups from EU Member States. However, they have only an advisory role to play.

The CFP, just as it is defined and passed in Brussels, can be defined as a management system that is centralised and a form of public intervention. But thus does not alter the fact, that fishermen and other stakeholders may take part in its implementation (Malvido 2002: 409). Under the definition given by Symes supra, RACs cannot be considered as institutions of co-management, since they are not vested with responsibility for the management of the resources. RACs only give recommendations to the EC, which may or may not influence the EC decisions. The influence fishermen have through Regional Advisory Committees is thus limited, due to the fact that participation in the committee is just consultative (Malvido et al 2002: 409). Since no real co-management takes place, legal issues do not play an important role.

4.2.1 European Law

The legal base for the RACs is the Council Decision of 19 July 2004 (2004/585/EC). According to art. 3 of the decision RACs are not established by the Member States or the council. They are established by request of the concerned interest groups. The request has to contain,

> "(a) a statement of objectives;
>
> (b) operating principles;
>
> (c) initial rules of procedure;
>
> (d) the budget estimate;
>
> (e) a provisional list of organisations".

So the main procedural and focus issues must be resolved beforehand. This leads to a tedious establishing process (Ingerowski/Salomon 2006: 540). The RACs "shall be composed of representatives from the fisheries sector and other interest groups affected by the Common Fisheries Policy" (art. 5 no. 1). A definition of representatives is laid down in art. 1 no 2, "the catching sub-sector, including ship owners, small-scale fishermen, employed fishermen, producer organisations as well as, amongst others, processors, traders and other market organisations and women's networks". Other interest groups are for example environmental organisations and groups, aquaculture producers, consumers and recreational or sport fishermen.

The membership of representatives and other interest groups is not distributed equally. "In the general assembly and executive committee, two thirds of the seats shall be allotted to representatives of the fisheries sector and one third to representatives of the other interest groups affected by the Common Fisheries Policy" (art. 5 (3)). Scientists can only participate but have no vote. It is thus to be feared that the outcome of this board is the lowest common denominator and lacks scientific expertise (Ingerowski/Salomon 2006: 540).

RACs are composed of a general assembly and an executive committee. The executive committee shall have up to 24 members and is appointed by the general assembly. The

executive committee shall manage the work of the Regional Advisory Council and adopt its recommendations.

4.3 Considerations when legislating co-management instruments

To avoid legal uncertainty and violation of competition law the range in which the POs are exempted from competition rules must be clearly set out. Furthermore it is assumed that POs tend to stress their exemptions from competition law or even violate them for their own benefits. Therefore a high degree of control is necessary.

The power of the POs and the RACs could be furthered in the future but should be limited to certain aspects. Problematic in this regard can be control and enforcement measures, which in the last instance fall into the responsibility of the state and thus can be delegated to private stakeholders only up to a certain extent. Member States have the obligation to enforce European law, therefore they have to control the compliance with EU regulations themselves.

Generally stakeholder participation is associated with more legitimacy. This general statement should be critically reconsidered when legislating co-management instruments.

It has to be distinguished between internal and external legitimacy. For the stakeholder directly involved in the decision making process the legitimacy may improve. But for the general public outside this involvement may not be seen as improvement of legitimacy, it may even be seen as leading to the contrary (Jentoft 2000: 145). This problem has to be taken into account when shifting power to user groups. For example, it might be more appropriate to shift concerns to user group which do not include a wide range of different public interest that have to be taken into account. This aspect problem should be kept in mind when designing co-management instruments. With this background the unequal distribution of members in the RAC (fishery 2/3 and NGOs 1/3) could lead to a lack of even internal legitimacy.

Another problem which arises when establishing co-management institutions is the danger of inconsistency between what people say and what they actually do. For example the North Sea RAC worked out a position paper in which it proposed a long-term management for the fishery. (Ingerowski/Salomon 2006: 542).

5 Decision Rule Systems

Decision rule systems are self-binding mechanisms, which transfer decision-making power from administrations or politics to a system of more or less ‘automatic’ responses to certain developments or situations. Decision rule systems have become more common in the last years. One of them is a harvest control rule system. This is a system, which aims to reduce the reliance on political processes in decision-making on management measures. Non-predictive adaptive systems furthermore intend to minimise the traditional reliance on specific predictions about stock dynamics. Here, the main focus lies on monitoring the system instead of predicting the results of certain management measures and having rules.

One system which uses the non-predictive approach was firstly developed for stocks in situation with poor data is the so-called ‘Traffic Light method’ (Caddy/Defeo 2003: 155). In this method a broad range of indicators is used, and for each indicator reference points are determined in accordance to their state. Each indicator value is than assigned a colour: green (go ahead), yellow (beware) and red (danger). One of the colours then ideally leads to specific

reactions. The reaction has been negotiated beforehand with the stakeholder. Because of that measures can be adopted without going through a time consuming decision process.

5.1 European Union

Neither of the two types of decision rule systems has historically been used to any significant extent within the EU, where TACs generally have been negotiated on a yearly basis in the Council. However, the introduction of multi-annual recovery plans to help rebuild stocks that are in danger of collapse and to a lesser extent the optional multi-annual management plans to maintain other stocks at safe biological level (Council Regulation 2371/2002, art. 5 and 6), was an important part of the provisions of the new basic regulation of the CFP implemented from 1 January 2003. These plans are an example of an EU harvest control rule system, which aims to make (at least for a certain period of time) fish stock management subject to rules rather than political negotiations. The EU uses this instrument hesitantly. The newly adopted multi-annual management plans for Baltic Sea cod, sole, plaice, bluefin tuna and for the European eel were criticized by environmental organizations, because according to them, they do not help to maintain fish stocks at a sustainable level. Some of the Member States only agreed upon the plans after it was clear that no rules about minimum fish sizes were going to be adopted (Euractiv 2007).

Art. 5 and art. 6 lay down that the recovery plans and shall set one or more target points for stocks, which are considered outside safe biological limits as defined by ICES.

Target points shall be expressed,

> "(a) population size and/or
>
> (b) long-term yields and/or
>
> (c) fishing mortality rate and/or
>
> (d) stability of catches"(art. 5).

These target points shall be reached over a period of time. Measures that can be taken to reach the target are,

> "(c) establishing targets for the sustainable exploitation of stocks;
>
> (d) limiting catches;
>
> (e) fixing the number and type of fishing vessels authorised to fish;
>
> (f) limiting fishing effort;
>
> (g) adopting technical measures, including:
>
> (i) measures regarding the structure of fishing gear, the number and size of fishing gear on board, their methods of use and the composition of catches that may be retained on board when fishing with such gear;
>
> (ii) zones and/or periods in which fishing activities are prohibited or restricted including for the protection of spawning and nursery areas;
>
> (iii) minimum size of individuals that may be retained on board and/or landed;
>
> (iv) specific measures to reduce the impact of fishing activities on marine eco-systems and non target species;
>
> (h) establishing incentives, including those of an economic nature, to promote more selective or low impact fishing"

In some of the recovery or management plans the measures are defined precisely. In others measures can be chosen by Member States. Then the Member States can choose from the measures mentioned above. The first specie to become subject to a recovery plan in the EU was cod in the North Sea (Council Regulation 423/2004). Fishermen or ship owner receive state aid through the EEF if their fishing activity is reduced because of multi-annual recovery plans (art. 21 regulation no 1198/2006).

5.2 Legal Issues

The implementation of decision rule systems does not raise problems of legality. However it can bring up problems of legitimacy. In the first place the transfer of decisions on (commercially disinterested) experts seems quite a good idea to reach a sustainable fishery management. The history of the European TAC setting process shows that TACs are not set in the range recommended by ICES. In average, the TACs have been set more than 30 percent above the recommended range (Ingerowski/Salomon 2006: 537).

It is assumed, that by giving the ICES recommendation more attention this could lead to healthy and sustainable fish stocks. These recommendations are seen to be independent of the short-run interest of the fishing industry. But the European Union "is founded on the principles of liberty, democracy, respect for human rights and fundamental freedoms, and the rule of law, principles which are common to the Member States" (art. 6 Treaty of the European Union). The principle of democracy thus requires that power is legitimate.

When delegating power it has thus to be taken into account that the democratic principle states that all important public decisions shall be decided by the public, at least through a body which has been elected by the public. When decisions are made by independent expert groups there is no legitimacy through the public.

Furthermore, the decisions on the range of the TACs have to take into account different interests, the interest of the fishing industry as well as the interests of environmental groups, the interest of the fishing consumers etc. The balance of these interests can not only be put in the hand of experts. Normally there is a range of "right" decisions and not only one exact right decision. So the final ruling must be made by a politically legitimatised institution.

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7 Acronyms and Abbreviations

ACE	Annual Catch Entitlements
AE	Enterprise Allocation
CFP	Common Fisheries Policy
DAPPS	Dedicated Access Priviliege Programs
ECJ	Ewuropean Court of Justice
EEZ	Exclusive Economic Zone
FAGA	The Fishing and Aquaculture General Act
FQA	Fixed Quota Allocations
GMITQ	Guaranteed Minimum Individual Transferable Quota
GRT	Gross Registered Tons
IBQ	Individual Boat Quota
IFQ	Individual Fishing Quta
IQ	Individual Quota
ITQ	Individual Tradable/Transferable Quota
IVQ	Individual Vessel Quota
MARPOL	International Convention for the Prevention of Pollution from Ships
MPA	Marine Proteced Area
MRI	Marine Research Institute
NEAFC	North East Atlantic Fisheries Conference
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmispheric Administration
OECD	
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic
PMITQ	Provisional Maximum Individual Transferable Quota
PO	Producer Organisation
QMS	Quota Management System
SDT	Shetland Development Trust
SFPO	Shetland Fish Producer's Organisation Ltd
SIC	Shetland Island Council
SICCT	Shetland Islands Council Charitable Trust
SLAP	Shetland Leasing and Property Ltd.
SOLAS	International Convention for the Safety of Life at Sea
TAC	Total Allowable Catch
UNCLOS	United Nations Convention on the Law of the Sea