Why Fish Piracy Persists

THE ECONOMICS OF ILLEGAL, UNREPORTED AND UNREGULATED FISHING



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Pourquoi la pêche pirate perdure

LES RESSORTS ÉCONOMIQUES DE LA PÊCHE ILLÉGALE, NON DÉCLARÉE ET NON RÉGLEMENTÉE

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FOREWORD

The adoption of UNCLOS in 1982 and the unilateral extension of the exclusive economic zone to 200 miles were attempts, *inter alia*, to ensure that the fish resources of the high seas come under appropriate management. However since 1982, fisheries technologies have developed rapidly and it has now become technically feasible to fish at great depths uncovering new resources and fish species. Furthermore, some of the species of fish found on the high seas are of high economic value including tuna, Patagonian toothfish and orange roughy. Concurrently, fishing fleets have become more mobile internationally. These developments pose new challenges for fisheries management and the international community concerned with sustainable responsible fishing on the high seas.

Illegal, Unreported and Unregulated (IUU) fishing is considered as a major factor undermining sustainability of fisheries. It occurs in both small-scale and industrial fisheries, in marine and inland water fisheries, as well as in zones of national jurisdiction and on the high seas. Recognizing the serious economic, social and environmental problems caused by IUU fishing activities the OECD's Committee for Fisheries, in the programme of work for 2002-2005, launched a study which:

> *"….will provide policy makers with environmental, economic and social arguments in support of measures in relation to IUU fishing activities, including the FAO International Plan of Action on IUU Fishing. It will examine the effects of overexploitation and possible depletion of stocks as a consequence of IUU fishing and focus on the economic and social impacts of IUU, including an analysis of the conditions of competition between IUU vessels and vessels fishing consistently with adopted measures consistent with international obligations (i.e. the implicit support that non-intervention in the fisheries sector gives rise to and its impact on fisheries sustainability and the environment). Finally the study will survey investment rules and review the rules that allow transfer and re-flagging."*

In pursuing this endeavour, the Committee decided that the detailed objectives were to:

- Examine the environmental, social and economic effects of IUU fishing activities;
- Explore the importance of high seas fisheries and the component of it which is IUU type fishing activity;
- Identify and analyse the economic drivers behind IUU fishing;
- Provide an inventory and analysis of possible actions that can be taken.

This study is in response to this endeavour and is the fruit of the discussions of the Committee for Fisheries and a Workshop on IUU Fishing Activities which the Committee hosted in April 2004, the proceedings of which are published as *Fish Piracy: Combating Illegal, Unreported and Unregulated Fishing*. This latter publication can be purchased from the OECD Bookshop http://www.oecdbookshop.org/oecd.

This report was approved by the Committee for Fisheries during the 95th Session from 4-6 April 2005. It should be noted that the Committee for Fisheries will continue working on IUU related issues.

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Delegates to the Committee for Fisheries and the OECD Secretariat have made important contributions to this study. Furthermore, voluntary contributions from a number of Member countries toward the financing of the Workshop on IUU Fishing Activities are graciously acknowledged. Bertrand Le Gallic was the principal author of the chapter on "Economics of IUU Fishing" and Ki-Jeong Jeon was the principal author of the chapter on "Measures in Place Against IUU Fishing Activities". This publication has been prepared and edited by Emily Andrews-Chouicha and Kathleen Gray.

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LIST OF ACRONYMS

Acronym	Definition
AAFC	Atlantic Africa Fisheries Conference
ACFR	Advisory Commission on Fisheries Research
AFMA	Australian Fisheries Management Authority
AMLR Act	Antarctic Marine Living Resources Act (New Zealand)
APFIC	Asia Pacific Fishery Commission
BOBP	Bay of Bengal Programme
CARPAS	CARPAS Regional Fisheries Advisory Commission for Southwest Atlantic
CCAMLR	Convention for the Conservation of Antarctic Marine Living Resources
CCSBT	Convention on the Conservation of Southern Bluefin Tuna
CDS	catch documentation scheme
CECAF	Fishery Commission for the Eastern Central Atlantic
CEPTFA	Council of the Eastern Pacific Tuna Fishing Agreement
CIFA	Committee for Inland Fisheries of Africa
CMIT	Capital Movement and Invisible Transaction
COLTO	Coalition of Legal Toothfish Operators
COPESCAL	Commission for Inland Fisheries of Latin America
COREP	Regional Fisheries Committee for the Gulf of Guinea
CPPS	South Pacific Permanent Commission
CWP	Co-ordinating Working Party on Fishery Statistics
DAFF	Australian Government Department of Agriculture, Fisheries and Forestry
EPBC Act	Environmental Protection and Biodiversity Conservation Act, 1999
EEA	European Environment Agency
EEZ	Exclusive Economic Zone
EIFAC	European Inland Fisheries Advisory Committee
FAO	Food and Agriculture Organisation of the United Nations
FAO S.A.	FAO Statistical Area
FFA	South Pacific Forum Fisheries Agency
FFV	Foreign fishing vessel
FIRB	Foreign investment review board
FMA	Fisheries Management Act 1991
FONC	Flag of Non Compliance
FPZ	Fisheries Protected Zone
GFCM	General Fisheries Council for the Mediterranean
GFT	Government Financial Transfer
GRT	Gross Registered Tonnage
GT	Gross Tonnage
HSVAR	High Seas Vessel Authorization Record
IATTC	Inter-American Tropical Tuna Commission

IBSFC	International Baltic Sea Fishery Commission
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICES	International Council for the Exploration of the Sea
ICSEAF	International Commission for the Southeast Atlantic Fisheries
ILO	International Labor Organization of the United Nations
IMO	International Maritime Organization of the United Nations
IOTC	Indian Ocean Tuna Commission
IPHC	International Pacific Halibut Commission
IPOA-IUU Fishing	International Plan of Action to Prevent, Deter and Eliminate Illegal, Unregulated and Unreported Fishing
ITF	International Transport Workers' Federation
IUU fishing	Illegal, unreported and unregulated fishing
IWC	International Whaling Commission
LVFO	Lake Victoria Fisheries Organization
MCS	Monitoring Control and Surveillance
MoU	Memorandum of Understanding
MRC	MRC: Mekong River Commission
NACA	NACA: Network of Aquaculture Centres in Asia-Pacific
NAFO	Northwest Atlantic Fisheries Organization
NAMMCO	North Atlantic Marine Mammal Commission
NASCO	North Atlantic Salmon Conservation Organization
NBF	National Board of Fisheries (Sweden)
NEAFC	North-East Atlantic Fisheries Commission
NGO	NGO: Non-Governmental Organization
NMFS	National Marine Fisheries Service (United States)
NPAFC	North Pacific Anadromous Fish Commission
NVDC	National Vessel Documentation Center (United States)
OLDEPESCA	Latin American Organization for the Development of Fisheries
OPRT	Organization for the Promotion of Responsible Tuna Fisheries
PICES	North Pacific Marine Science Organization
PSC	Pacific Salmon Commission
RECOFI	Regional Commission for Fisheries
RFMO	Regional Fisheries Management Organisations
SAG	Stock Assessment Group (CCSBT)
SBT	Southern Bluefin Tuna
SCRS	Standing Committee on Research and Statistics (ICCAT)
SEAFDEC	Southeast Asian Fisheries Development Center
SEAFO	Southeast Atlantic Fisheries Organization
SOLAS	The International Convention for the Safety of Life at Sea
SPC	SPC: Secretariat of the Pacific Community
SRA	Shipping Registration Act 1982
SRCF	Sub-Regional Commission on Fisheries
STCW-F	Standards of Training, Certification and Watch-keeping for Fishing Vessel Personnel Convention
SWIOFC	Southwest Indian Ocean Fisheries Commission
TAC	Total Allowable Catches
TDS	Trade Documentation Scheme

TIS	Trade Information Scheme (CCSBT)
TRAFFIC	Wildlife Trade Monitoring Network
TSPZ	Torres Strait Protected Zone
UNCED	United Nations Conference on Environment and Development
UNCTAD	United Nations Conference on Trade and Development
UNFSA	United Nations Fish Stocks Agreement
VMS	Vessel Monitoring System
WCPFC	Western Central Pacific Fisheries Commission
WECAFC	Western Central Atlantic Fishery Commission
WIOTO	Western Indian Ocean Tuna Organization
WWF	World Wildlife Fund

Executive Summary

Despite national and international efforts, fish piracy continues to thrive worldwide. Illegal, unreported and unregulated (IUU) fishing is a problem that affects both territorial and international waters, and involves all types of fishing vessels, regardless of their registration, size or state of repair. IUU fishing depletes global fish stocks and undermines efforts to secure and rebuild those stocks for the future. In doing so, IUU fishing activities generate harmful effects on the economic and social welfare of those involved in legal fishing, and reduces incentives to play by the rules.

The issue of fish piracy has moved to the forefront of the international fisheries policy agenda. In recent years, governments around the world have recognized the gravity of the problem and have stepped up efforts to combat it. While earlier studies focused primarily on the direct impact that IUU fishing has on fish stocks and on legal measures to combat such activities, this study focuses on the economic and social aspects of fish piracy and identifies the forces that drive the high seas IUU fishing industry. Even in an industry as opaque as this, the bottom line is clear; fish pirates pursue their activities because it is profitable, and will keep pursuing it as long as their revenue exceeds their costs.

1. IUU fishing has important economic, environmental and social effects.

Estimates of the size of the IUU catch and of its impact on the environment vary widely. The data suggest that high seas IUU fishing is mainly concentrated on a few high-value species, such as Patagonian toothfish and tuna. The Food and Agriculture Organization of the United Nations reports that overall, IUU fishing accounts for up to 30 per cent of total catches in some important fisheries, and that catches of particular species could be up to three times the permitted amount. However, it is clear that any size of unregulated catch threatens the sustainability of world fish stocks and undermines attempts to manage resources. The marine ecosystem also suffers potentially adverse effects, especially through mortalities of seabirds, marine mammals and sea turtles.

The economic and social impact of high seas IUU fishing is equally important, and often far greater than what can be measured. Because of their lower operating costs, IUU fishers gain an unjust economic advantage over legitimate fishers. Legal fishers rely on the same fish stocks as IUU operators do to make their living. In the short-term, competition with a fish pirate could mean a smaller catch, lower income and lower employment in communities that rely on the legal trade. The effect may be even more serious in the longer term, as fish stocks become overexploited or severely depleted. As a consequence legal fishers will then have to reduce their activity or even stop operating. The consequences can be especially severe in parts of the world where there are few alternative means of making a living. At the same time, high seas IUU operators often exploit fishers from developing countries as many of the crew on IUU vessels comes from poor parts of the world. Because they have few other employment options, they

work on IUU vessels for low wages and in extremely poor living and working conditions to such an extent that they are considered bonded labor.

2. IUU fishing persists because it pays

The economic model developed in this report is based on a relatively simple premise: That fishers get involved in IUU fishing because they earn higher profits by plying their trade outside national and international regulations than they could by working within the rules. On deeper analysis, the economic model identifies two major forces driving IUU fishing.

Firstly, there is a global imbalance between the capacity to fish and the opportunities available for fishing. Much of this overcapacity can be traced to poor domestic fisheries management including a lack of incentives to scrap vessels or the inappropriate allocation of fishing rights. The problem is also self-perpetuating. As fish stocks become scarcer, partly because of IUU fishing, fish quotas may decline further for compliant vessels. This can create incentives for legal operators to resort to IUU fishing. However, because the operating costs for IUU fishers are less, IUU operators can afford to increase their effort to maintain catches.

Secondly, the international regulatory framework for the high seas is incomplete and inadequately applied. As a result, certain fishing activities are beyond the reach of national and international regulations.

Unlike their counterparts who fish legally, IUU vessels face extra costs to avoid being caught, to bribe officials and in the loss of reputation. However, the fish targeted on the high seas by IUU fishers, in general, have a very high market value. This factor, in connection with the lower operating costs faced by IUU fishers, more than offsets the relatively low costs of avoidance and fraud. Recently, organized IUU fishing operations have emerged. These operations enjoy reduced operating costs, increased access to sophisticated communications technology to avoid detection, and access to bulk processing facilities, and could accelerate the development of IUU fishing. A list of the main institutional, economic and social factors creating incentives for the IUU fishing is given in Box 1.

3. Possible Actions Against Illegal, Unreported and Unregulated Fishing

There are already many national and international laws and regulations in place designed to combat illegal, unregulated and unreported fishing. However, in many cases the practical implementation is still lacking and even if implemented the effect is largely unknown. Even where the political will exists there is still a long way to go in translating that will into concrete action.

Box 1. Main Institutional, Economic and Social Factors Creating Incentives for IUU Fishing

- Existence of excess or idle fishing capacities, which incite operators to engage in IUU activities to get higher revenues and which reduce fishing vessels and crew cost.
- Incompleteness of the international legal frameworks.
- Ineffective flag state control over vessels which allows operators engaged in IUU fishing activities to face reduced operating and risk cost.
- Insufficient or ineffective enforcement of national and international regulations (including low Monitoring, Control and Surveillance capacities and low level of sanction), which reduce the cost of risk faced by IUU operators.
- Existence of tax havens and other non-cooperative practices, which may provide IUU operators with low tax and reduce the cost of risk.
- Prevalence of poor economic and social conditions in some countries, which reduces the cost of fraud, crew costs, the cost of risk and the costs associated with maintaining appropriate safety and working standards.
- Existence of subsidies that reduce the cost of IUU fishing capacity.
- Existence of fiscal and foreign investment rules that reduce the cost of IUU fishing capacity.
- Underestimation and non-internalisation of the social cost generated by IUU fishing activities, which reduce the moral/reputation cost IUU operators might face.

Measures available to combat IUU fishing cover legal, institutional, economic and social dimensions and require the involvement of national, regional and international fisheries authorities. Box 2 provides a range of possible measures, grouped according to their point of impact on the economic operation of IUU fisheries. This includes measures aimed at reducing potential revenues and increasing operating costs and capital costs. Given the limited budgetary resources available, it is important to determine the cost-effectiveness of different approaches in order to identify the most cost-effective options. At the same time, it is important not to forget that preventive actions also have cost and income effects on legal operators and on society at large that will need to be assessed and taken into account.

4. Which way to go?

In order to identify the most cost effective ways forward for national and international authorities in addressing the IUU problem, it is useful to analyse the constituent three elements of the "IUU" concept separately i.e. look at the measures to address illegal fishing, unreported fishing and unregulated fishing one by one. Such a disaggregated approach serves to highlight the varied nature of the IUU problem and the need to draw on a range of regulatory responses at all level of government.

Illegal Fishing Activities

Actions by national states

To deal with foreign illegal fishing activities, three options are open to national authorities:

- Increase the amount of surveillance to increase the risk of being caught:
- Increase penalty levels to reduce expected returns for illegal operators; and
- Apply trade measures.

RFMO actions

In addition to increased surveillance and enforcement by members of the RFMO, contracting parties also need to take action as the RFMO itself has no "penalty" capacity (*e.g.* fishing fines, confiscation). The responsibility for such actions remains with nation states. RFMOs could also consider reducing the allocations (collective penalty) or excluding the flag state of any vessel involved in illegal activity from some of the benefits of membership. Detecting illegal activities is a major problem, and one which can only be improved through additional surveillance. In this regard, onboard observer coverage may offer some help to improve direct surveillance.

Trade and catch documentation schemes can offer a tractable way forward for dealing with illegal catch from RFMO areas; however it is important to ensure that all parties in the chain of custody play an active role in not carrying "illegal fish".

Unreported Fishing Activities

Actions by national states

A framework is already in place which may allow for capturing the un-reported or misreported part of the problem, although the enforcement of existing rules and frameworks need to be stepped up. In the meantime there is still a need to improve the ability of fisheries management authorities to use this information for stock assessments. In this regard closer co-operation between private operators in the chain of custody (processing plants, wholesalers and supermarkets) may offer some payoff. Finally, increased use of on-board observers could be a way to improve the reporting of harvests.

Box 2. The Study Proposes Measures that can be Entertained to Combat IUU Fishing Activities, including:

Reducing Revenues from IUU Fishing

- Reduce incompleteness of current international frameworks and reducing the possibilities for FONC registration
- Provide NPA states with appropriate incentives for joining RFMOs and financial "compensation" for de-registering FONC vessels.
- Improve compliance with current national and international obligations through better Monitoring, Control and Surveillance (MCS) capabilities, including broader cross country cooperation.
- Banning imports
- Listing of banned vessels/companies and countries of origin
- Introduce catch and trade document schemes, and labelling
- Encouraging education and promotional campaigns

Increasing Operating Costs of IUU Fishing

- Eliminate tax havens
- Restrict accessibility to goods and services for IUU operators (fuel, landing, insurance, communications and navigation services etc).
- Ratification and implementation of conventions relating to crews on fishing vessels.
- Improve economic and social situation in countries/regions supplying cheap crews.
- Apply extra territorial domestic sanctions to citizens engaged in IUU operations.
- Make flag states legally liable for lack of appropriate insurance.
- Augment MCS capacities
- Increase penalties and sanctions (prison, confiscation of vessels and catch)
- Harmonise flag state fine levels
- Identify beneficial ownership of vessels
- Encourage private initiatives (including wanted rewards schemes)
- Improve knowledge of the social, economic and environmental consequences of IUU through education programs
- Use cooperate governance initiatives and guidance programs
- Apply the OECD Convention to combat bribery of foreign public officials.

Increasing Capital Costs of IUU Vessels

- Setting and enforcing minimum vessel standards (port state control)
- Reduce vessel capacity potentially available for IUU operations (scrapping and appropriate management regimes)
- Restricting outward investment rules on IUU vessel capital
- Restrict banking laws use of IUU vessel capital as collateral
- Make flag states legally liable for damage resulting from the lack of appropriate maintenance
- Improve macroeconomic conditions in countries supplying low cost crew.

RFMO actions

The different levels of responsibility between the RFMO and the member nations, and the fact that the cost is borne by all contracting parties may make detection of unreported catch difficult. The RFMO could also institute full observer coverage. There may, however, be related benefits generated through improved stock assessment and management, and a deterrence effect vis-à-vis potential "non-reporters".

Unregulated Fishing Activities

The analysis suggests that embargoes and other trade-related measures can be effective and seem to act as an incentive to comply with rules. Actions by an RFMO and its members must include diplomatic demarches and co-opting the involved non-member country into membership or at least ensuring that vessels flying their flags follow the rules. In this regard the keeping of lists of vessels that fail to co-operate and their countries of origin (blacklists) may put some pressure on them and could also serve as a basis for the imposition of trade measures. However, this type of listing requires improved vessel monitoring and surveillance which may be costly to members of the RFMO.

To address governance gaps in high seas areas where no fisheries management arrangements exist, states should cooperate including through the establishment of RFMOs and/or extend the scope of existing RFMOs.

*

* *

In conclusion, in the OECD's view a range of actions could be taken to more effectively combat the problem of fish piracy. These include:

- In combating illegal fishing activities, higher penalties, more efficient monitoring, control and surveillance measures, and the increased use of catch and trade documentation schemes seem to be the most promising avenues. Actions which increase the level of penalty and the costs to IUU operators could have the highest potential net payoff. However, in order to have long-lasting effects, a co-operative approach across countries is needed.
- In the case of unreported fishing, the better use of already existing systems to trace the origins of catches and more generalized use of on-board observers could be helpful.
- Private legal operators have a strong incentive to ensure that their markets are not undermined by IUU fish and should be co-opted into taking a more active role in combating IUU activities. More effort could be made to convince legal fishers to step up their own "naming and shaming" of IUU activities that affect their operations with a view to put moral pressure on illegal fishing operators and change the culture in the industry.
- Countries need to cooperate to include all interested parties in the work of the RFMOs and establish management arrangements in areas of the high seas that are unregulated.
- While more regulation, including monitoring, control and surveillance, may be a central part in the overall combat of IUU fishing activities, these may be costly to implement. Public authorities need to weigh their costs against the potential benefits.

However, it is clear from the work by the OECD Committee for Fisheries that, as long as the IUU operations are profitable, IUU fishing activities will be extremely difficult to completely eliminate. In the meantime, this Study has shed light on some of the tractable ways forward that could prove useful in the fight against IUU activities if put into practice by member countries and international fisheries management bodies. In the meantime, future work of the OECD's Committee for Fisheries will address additional aspects of the IUU challenge that can be useful in the further combat of this activity.

CHAPTER 1

Synthesis Report

Abstract

This chapter brings together a number of elements of the IUU study and forms a synthesis of the analysis, present key observations and identifies possible new ways forward in the combat of IUU fishing activities. Firstly, the chapter presents the state of play on IUU fishing by discussing the available evidence on both the evidence of IUU fishing and the actions taken, from regional fisheries management organisations, national authorities and non-governmental organisations. Secondly follows a description of the analytical framework for IUU fishing and the drivers that underpin such activities. Finally, the chapter presents an assessment of how well the actions taken actually impact the economic drivers of IUU fishing and discusses some alternative avenues for the future combat.

Introduction

Illegal, Unreported and Unregulated fishing is a worldwide problem, affecting both domestic waters and the high seas, and all types of fishing vessels, regardless of their size or gear. Not only is it harmful to current global fish stocks, it also undermines the effectiveness of measures adopted nationally, regionally and internationally to secure and rebuild fish stocks for the future. By undermining effective management systems, IUU fishing activities not only generate harmful effects on economic and social welfare, but also reduce incentives to comply with rules.

IUU fishing is a multifaceted issue that is inextricably linked with the environment as well as other broader social and economic spheres. It is therefore important to analyse and understand the wide range of impacts it can have, for example, on coastal communities dependent on the same fish stocks that are targeted by IUU fishers, on the marine eco-system, as well as the problems that IUU fishing have created for the legal frameworks that govern the use of the seas.

In simple terms, IUU fishing is an economic activity driven by the expectation of a positive net benefit. This is fundamental to understanding why such activities continue unabated despite the adoption and implementation of a number of preventive international actions. Under current conditions, IUU fishing is a profitable undertaking, and hence the

first step in combating such activities is to identify measures that render them unprofitable.

The issue of illegal unreported and unregulated (IUU) fishing has moved to the forefront of the international fisheries policy agenda in recent years. At the G8 meeting in Evian in June 2003, Heads of State adopted a G8 Action Plan calling for the urgent development and implementation of international plans of action under the FAO to eliminate IUU fishing. More globally, the WSSD meeting in Johannesburg in September 2002 also addressed the problem of IUU fishing, and throughout the 1990s, the UN and the FAO drew up a variety of laws, regulations and measures against IUU fishing.

Governments around the world have recognized the negative effects of IUU fishing on resource sustainability, biodiversity, and economic and social sustainability. In this respect it is important to underline the prejudicial effect that IUU fishing activities have on the interests of fishers who follow the rules and regulations laid down by management authorities. This led the OECD Fisheries Committee to address the problem in its 2003-05 work programme, focusing on the environmental, economic and social issues surrounding IUU fishing on the high seas, both in terms of the incentives for engaging in IUU operations as well as their environmental, economic and social impacts.

In its decision to address IUU issues the Committee agreed, in the context of this study, to include only IUU fishing activities on the high seas and foreign fishers' activities within national EEZs. In other words, IUU fishing activities by national vessels within national fishing zones are excluded from the study, although some of the analysis and conclusions are relevant to such activities as well.

To combat the different types of IUU fishing activities demand different responses and widely different actors are involved. Some responses are relying on the national legal framework which may need improvement; others rely on international frameworks as is the case with regional fisheries management organisations. The following table highlights these differences by linking illegal, unreported and unregulated fishing to where it takes place and hence implicitly by whom (national, international or RFMO actors) that most appropriately can take action.

Table 1.1. Variety of Illegal, Unreported and Unregulated Fisheries

Area	EEZs	High seas			
		With RFMOs			Without RFMOs
Actors	Foreigners	Party	Co-operating States	Non-party	Any
Illegal					
Unreported					
Unregulated					

Source: OECD Secretariat.

The FAO has defined IUU fishing in its IPOA-IUU as reproduced in Annex 1 and based on which the following has been drawn. In short, the term *illegal fishing* refers to operations by vessels of countries, or fishing entities, that are party to, or co-operate, with a regional fisheries management organisation, but which operate in violation of the rules of the RFMO; it also refers to foreign vessels operating in a country's waters without permission or in violation of national laws or international obligations. *Unreported fishing* is defined as catch not reported or misreported to national authorities or RFMOs and covers operations of foreign vessels within national EEZs or vessels from states party to the convention or cooperating states within the jurisdiction of an RFMO. Finally, *unregulated fishing* activities are activities that are conducted by vessels without nationality or flying the flag of states not party to the relevant RFMO and who therefore consider themselves not bound by their rules. Such activities take place on the high seas under RFMO area of jurisdiction and beyond. Hence, unregulated fishing also includes fishing activities that are conducted on the high seas outside RFMOs in a manner that is inconsistent with international law.

As far as fishing areas are concerned, the table makes a distinction between fishing which is within or outside EEZs and whether it takes place on the high seas or not, as well as whether the fishing activity is under the regulatory purview of a regional fisheries management body. The table further highlights where illegal, unreported and unregulated fishing activities take place, and by which actors.

The Committee decided on a multi-staged approach: *i)* building an analytical framework, *ii)* seeking empirical evidence by compiling an inventory of measures that have been put in place to combat IUU, and *iii)* hosting a workshop on IUU activities. Confronting the empirical evidence with the analytical framework will provide a basis for proposing alternative strategies to combat IUU fishing.

Due to the nature of IUU fishing and the difficulty in obtaining reliable information and data, more solid empirical evidence on the extent of these activities is needed. Systematic and consolidated information will move our knowledge of IUU activities beyond the fragmented and anecdotal. For this purpose, the Committee hosted a workshop on 19-20 April 2004 which was an important step in bringing together information, analysis and debate on this topic, and proposing new approaches to combating it. Around 120 experts from OECD and non-OECD countries, regional fisheries management organisations (RFMOs), international governmental organisations, non-governmental organisations and academia attended the workshop.

Based on the information presented to the Workshop,[1] and data provided by member countries, as well as on the analysis presented in two key analytical documents developed for the study, this chapter provides an overview of the state of play and the impacts of IUU fishing activities. It identifies the drivers of these activities when seen from an economic angle and assesses possible actions to deter illegal, unreported and unregulated fishing activities respectively. It concludes with a presentation of alternative avenues (or at least as yet unexplored avenues) to combat IUU activities.

Earlier studies of IUU fishing focused on the direct impacts on stock and on actions that the international legal framework governing the seas offers to combat such activities. The value that the work by the OECD's Committee for Fisheries adds to the debate is its focus on the economic and social aspects of IUU fishing. While this is a novel and

1 Published as *Fish Piracy: Combating Illegal, Unreported and Unregulated Fishing*, (OECD 2004).

synergistic approach that brings a new element to the discussion, it should be borne in mind that as IUU fishing is an economic activity it is likely to continue as long as expected incomes exceed expected costs. It may therefore not be possible to eliminate the IUU problem but only to reduce it.

1. The State of Play on IUU Fishing

Evidence and methods of estimating IUU fishing

Present data and information on IUU activities make it difficult to provide a global assessment of the scale of the IUU problem. The data and information collected are of varying quality, difficult to assess, of dubious reliability and usefulness and are collected on a non-standardized basis. The data does suggest, however, that the high seas IUU fishery is limited in terms of the quantities taken and mainly concentrated on a few high-value species. While the overall economic impact may be felt by the legal fishing communities, uncertainties in the data make it difficult to provide an estimate of the total value of IUU-induced losses. In the meantime "back of the envelope" estimates for some species may provide an indication of the scale of the problem. However, it should be noted that calculations of value losses have only been forthcoming for species and areas where economic losses attributable to IUU fishing activities have been considered particularly important.

Among the wide range of actors involved in gathering, processing and disseminating information on IUU fishing activities are governments, intergovernmental organisations, RFMOs, RFBs,[2] NGOs and private industry operators. Although major efforts are invested in assessing the extent of IUU activities, an exact figure for IUU fishing is, by its very nature, very difficult to evaluate. Any suggested amount of IUU catch should therefore be taken "with a grain of salt", and in assessing its validity the method of assessment should be analysed as well.

The varied results of assessments reviewed below are linked to two factors, namely the way in which assessments take place and the extent of the "unknown", *i.e.,* insofar as the IUU activity is clandestine it is obviously not an activity where statistics can be trusted. Nevertheless, possibly the best scientific way to estimate IUU activity is to use biological stock assessments and compare these with known catches from legal fishing operations. In this regard the RFMOs and RFBs are particularly well positioned to estimate IUU catches as they usually also carry out stock assessments.[3] Where estimates by private initiatives are concerned, it should be underlined that these are often focused on particular species/areas and are normally not a good measure of the global situation.

Estimates by RFMOs

Regional fisheries management organisations have a major interest in ensuring that their knowledge about possible IUU activities within their area of competence is as complete as possible. IUU catches directly affect the catch possibilities for RFMO members and undermine the management measures taken by the organisation. The RFMOs surveyed in the present study report that IUU catches are, to varying degree, having major impacts on stocks within their management purview. Annex 2 provides an

2 RFB: Regional Fisheries Bodies

3 It should be recognised that stock assessments also are difficult and the results are at times questionable.

overview of the major RFMOs and their associated assessment of IUU catch within their area of operation (Table A2.2). It will be noted that the relative importance of IUU fishing varies considerably; for example data from CCAMLR[4] suggests that catches of IUU vessels are estimated at around one fourth of the allowable catch in the convention area, whereas in the context of IATTC[5] IUU catches are not considered important.

Estimates of Patagonian toothfish IUU catch are reviewed by the CCAMLR Working Group on Fish Stock Assessment, which estimates total removals for stock assessment purposes. This is based on information on IUU fishing derived from both catch and trade data, in particular information and data collected in the context of the CCAMLR Catch Documentation Scheme (CDS). Prior to 1996 CCAMLR relied on the sighting of IUU vessels to determine the amount of IUU catch as a function of daily catch rates in a given geographical location. Nowadays catch documentation, trade data and stock assessments are used to assess IUU harvests.

The introduction of the CCAMLR catch documentation scheme along with other measures, have reportedly reduced the IUU catch considerably in the CCAMLR[6] area from an estimated 52 000 tons in 1996-97 to around 11 800 tons in 2002; both contracting and non-contracting parties are involved in the IUU fishery in the CCAMLR area. Concurrently, the legal and estimated IUU catches of toothfish (from within the CCAMLR convention area), which fell from an estimated 62 400 tons in 1996-97 to less than 27 200 tons in 2002, indicated that one reason for the decline in IUU take can be ascribed to the poor stock situation. A complicating factor in the case of the CCAMLR is that catches outside the convention area are having an impact on stocks managed by the convention or may "mask" the actual catches taken within the CCAMLR convention area. In the Southern oceans, however, catches have been increasing throughout the period 1997 to 2002, perhaps suggesting that the problem has just moved outside the area. In the meantime, CCAMLR acknowledges that its estimates are minimum estimates due the difficulties in monitoring transhipments, use of different fish names, etc.

The North East Atlantic Fisheries Commission (NEAFC) manages a number of high seas fisheries including herring, redfish, blue whiting and mackerel which, with the exception of redfish, are all fairly low-value species. Recommendations to contracting parties are mainly based on scientific advice from the International Council for the Exploration of the Sea (ICES); scientific advice from ICES does take into account that official catch statistics may not include provisions for IUU operations. In relation to IUU, the major problem relates to redfish; NEAFC reports that up to 20% of the redfish traded internationally in 2001 originates from the activities of IUU fishing vessels.[7] Discussions on IUU-related issues are fairly new to NEAFC and only started in earnest following the adoption of the FAO IPOA-IUU. Some aspects have been delegated to the Permanent Committee on Enforcement and Control and the Working Group on the Future of NEAFC. However, discussions have so far only dealt with the IUU activities of non-contracting parties to the NEAFC convention.

4 Commission for the Conservation of Antarctic Marine Living Resources

5 Inter-American Tropical Tuna Commission

6 See www.ccamlr.org for further details, in particular the Scientific Committee Reports.

7 Quoted in Agnew and Barnes (ibid). The NEAFC has also begun to list the names of IUU vessels (see for instance NEAFC (2002) AM 2002/15 and 34. References to IUU activity appear in the NEAFC annual reports, including most recently the 2002 report. NEAFC Annual Reports are available at the following site: http://www.neafc.org/)

In the Northwest Atlantic Fisheries Organisation (NAFO) area, it was estimated that 10 000 tonnes of groundfish were caught illegally in 2001, including plaice, cod and redfish. In addition, Greenland halibut quotas were also estimated to have been exceeded by 3 100 tonnes, and some parties were reported to have failed to submit observer reports in 2000 and 2001 (reported in OECD, Review of Fisheries, 2003). NAFO advice is supported by the NAFO Scientific Council that provides a forum for consultation and co-operation among the Contracting Parties with respect to the study, appraisal and exchange of scientific information and views relating to the fisheries in the Convention Area. The Scientific Council promotes co-operation among the Contracting Parties in scientific research designed to fill gaps in knowledge pertaining to these matters.[8]

In the case of Atlantic tuna fisheries, ICCAT has estimated that 10% of all tuna is caught by IUU fishing operators. ICCAT has estimated that the IUU catch of bigeye tuna reached a maximum of 25 000 tons in 1998 but declined to about 7 200 tons in 2001. Based on Japanese calculations, ICCAT has been advised that some 25 000 tons, or around 18%, of all fishing activities for tuna over the 2001/2002 season may be attributed to IUU activities. ICCAT uses a combination of trade information and catch data to estimate the unreported take of Atlantic bluefin tuna in its area of operation. By comparing the catch reported to ICCAT with import data from the United States and Japan, which are the two most important markets for Atlantic bluefin tuna, and correcting for traded tuna of aquaculture origins, estimates for the 1994 to 2002 period suggest that between 1 and 5% of the Atlantic bluefin catch may go unreported. ICCAT recognizes, however, that these estimates may be unreliable, particularly due to the use of conversion factors (between traded weight and live weight), the high level of data aggregation, double counting and the possibility that ICCAT's bluefin statistical document programme may not have been implemented by all parties to the convention.

As far as the CCSBT is concerned, estimates of IUU catches (especially unregulated catch) suggest that in 1999 catches of southern bluefin tuna (SBT) by non-members were estimated to be at least 4 000 tons, corresponding to one third of total allowable catches in 1999; due to the stock situation of SBT, IUU fishing constitutes a significant amount. However, the CCSBT reports that significant and increasing volumes of SBT are being taken by vessels from non-contracting parties. The Commission has sought the co-operation of these countries in supporting its management and conservation measures. They have also been advised that if co-operation is not forthcoming, the Commission will consider taking measures, including trade restrictive measures; meanwhile the CCSBT has opened a quota of 900 tons of southern bluefin tuna for co-operating non-members. The CCSBT recognizes that there are some unreported removals in historical fisheries, and that this will continue in future fisheries. The initial analysis will have the potential to allow for both historical and future levels by fishery, but no attempt has been made to agree on values to be used.[9]

The Indian Ocean Tuna Commission (IOTC) estimates that between 120 000 and 140 000 tons of tuna, corresponding to around 10% of all tuna landings, are taken in the IOTC area by IUU fishing operators. The Commission's Permanent Working Party on Data Collection and Statistics has agreed to broadening the scope of the Vessel Registry and using it as an integral part of the proposed sampling scheme for estimating statistical data for fishing otherwise unreported to the Commission, including IUU fishing.

8 www.nafo.int

9 See www.ccsbt.org for details.

Meanwhile the Commission mainly relies on contracting parties' observation and reporting in estimating the amount of IUU, for example through port observations.[10] In the case of IOTC and tuna, port observations and verification at import points may be particularly effective as consignments are likely to be big and concentrated on a limited number of entry ports and countries.

Methodology of estimation by NGOs

A number of NGOs have been very active in the study of IUU fishing activities, and WWF and TRAFFIC in particular have done analytical work on IUU, albeit using different methodologies. `

In its submission to the IUU Workshop, TRAFFIC used trade and market data to estimate certain IUU fishing activities through a sequence of analysis comprising the following elements:

- Comparing estimated catch with level of trade;
- Identification of discrepancies between export and import data;
- Identification of countries engaged in the trade;
- Identification of trade routes for the disposal of IUU fish, and
- Market surveys.

TRAFFIC discusses the robustness of the trade/market data approach in estimating IUU catch based on available and easily accessible data. It is suggested that trade data may only be the second best option and that further refinement is needed to make trade data amenable for such detailed analysis. Another issue is the dynamics of IUU activities which, without difficulty and with low transaction costs, can move fish through different channels and thus make trade data even less useful. Trade data are nevertheless considered an important additional source of information and may help identify the markets with the major IUU problems or at least provide a map of such activities. Nevertheless, the analysis of the toothfish trade undertaken by TRAFFIC in 2001 suggested that the level of the IUU catch could have been up to four times as much as suggested by CCAMLR itself and that half of the international trade in toothfish in 2000 was fish from IUU operations.

In conclusion, TRAFFIC[11] suggests that analysis of trade data may help to:

- Increase the understanding of the nature, scope and extent of IUU activities;
- Provide independent verification;
- Assess the effectiveness of trade and market measures in place; and
- Reveal hitherto hidden problems and show that demand can be a key driver for IUU operators.

Another approach is taken by the International Oceans Network in a report for the WWF.[12] This approach analyses the use of flags of convenience based on records from Lloyds Register of Shipping Vessels. The analysis focuses on the number of vessels from

10 Further details on www.iotc.org

11 See "Using Trade and Market Information to Assess IUU Fishing Activities" by Anna Willock, in *Fish Piracy – Combating Illegal, Unreported and Unregulated Fishing* (OECD, 2004).

12 "Flags of Convenience, Transhipment, Re-supply and At-sea Infrastructure in relation to IUU Fishing" by Gianni and Simpson in *Fish Piracy: Combating Illegal, Unreported and Unregulated Fishing* (OECD 2004)..

the Lloyds' category of "fishing vessels", "trawlers" and "fish factory ships" that potentially can be used as supply ships (for an IUU fishing operation) and vessels for transhipment. Whilst the analysis only deals with countries operating open registers, and keeping in mind that only vessels above 24 meters in length are included in the register, this approach could nevertheless be further explored as a means of providing information on possible/potential IUU operations.

What is the extent of IUU fishing on the high seas?

From the above review of available information it would seem that the international community, in general, has limited knowledge of the extent of IUU fishing on the high seas. This is hardly surprising, given the nature of IUU activities. The methods used to estimate IUU catches are varied, but all lack the possibility of being calibrated; the bottom line is that it is difficult to move beyond "good guesses" in most areas of the high seas. In this regard it is important to remember that FAO reporting requirements are limited to major statistical areas which may include catches both within and outside the 200-mile EEZ. A more detailed breakdown of catches can be made for only some of the fishing areas belonging to regional arrangements (RFMO, fisheries commission etc.), although this only concerns legal operations. It is clear that data capture for high seas fisheries leaves much scope for improvement.

There are, however, a few notable exceptions. It would seem that the CCAMLR in particular has moved a long way towards refining its data on IUU, supported to a great extent by the use of catch documentation schemes incorporating both catch and trade. CCAMLR has developed a suite of integrated measures to address IUU fishing, which include a policy to deal with Contracting and Non-Contracting Parties alike, as well as measures to improve the flow of data from both the high seas and from Port States. The latter has been a very powerful development as it brings the responsibility for monitoring IUU fishing by Port States more into line with the obligations of Flag States. But while improving data and information may be possible, it comes at a cost; before investing major efforts and money into improving data collection due regard should be given to the costs and benefits of obtaining better information. The key issue is to compare the value of additional information (*e.g.* better understanding of long-term sustainable catch levels through improved stock assessments and management) to the cost of compiling this information (*e.g.* data collection and analysis).

The review of evidence of IUU activities also suggests that IUU fishing on the high seas is, at present, of particular concern in certain geographical areas and for certain species. This does not imply that IUU in general is not an important issue but rather that stakeholders have focused their attention in areas where IUU fishing has considerable economic implications on legal operators. This, in turn, may also explain why private initiatives have been developed in only two cases *i.e.,* COLTO for Patagonian toothfish and OPRT for tuna fisheries.[13] In the case of the Patagonian toothfish fishery, for example, the number of legal operators is relatively small and the economic impact of a

13 COLTO is a non-profit group of toothfish operators working together to provide surveillance and other valuable information to governments to help stop the toothfish poachers. OPRT is an international non-governmental organization (NGO), established in Tokyo on December 8, 2000, with the purpose to link the oceans with the consumers and promote the sustainable use of tuna. OPRT comprises tuna longline producers from various countries (Japan, Chinese Taipei, Republic of Korea, the Philippines, Indonesia, China and Ecuador) and organizations of traders, distributors and consumers and public interests in Japan.

"known" illegal catch can be easily identified and assessed; in addition the Patagonian toothfish fishery is of high value to legal operators. The same applies to the tuna fisheries. However, in most other areas where IUU fishing is considered a problem, the fishery is characterised by the presence of many poorly organised fishers, a diversity of species with lower market value, and fishing operations that are geographically spread. This type of scenario also helps explain the difficulties in data collection.

As far as the method of capturing the data/information on IUU is concerned, the work of the Committee and in particular the work at the IUU Workshop, does suggest, however, that the enhanced use of catch and trade documentation schemes could be a promising avenue. Although no formal evaluation of catch and trade documentation schemes has yet been undertaken, it would seem that a number of RFMOs have found such schemes useful and, by the same token, that they worked as a deterrent to IUU operators. Also, if combined with the use of trade measures as a means to combat IUU fishing operations, trade documentation schemes are a *sine qua non.*

The study does not include a review of the extent of foreign IUU activities within national EEZs. It is believed though that such activities are concentrated and could be important mainly in areas where EEZs are contiguous or where commercially important straddling stocks occur. It should be noted in this regard that the social impacts of IUU fishing within national EEZs will be different from that of the high seas as it will involve different fisher groups.

International, Regional and National Actions Taken to Address IUU Fishing

While the above reviews the evidence of IUU fishing activities, the following will review the actions that have been taken to combat it. This review is based on the general literature available on IUU and high seas issues as well as information from regional fisheries management organisations and data collected from OECD member countries in response to a questionnaire.

International measures

The high seas are open to all states (whether coastal or land-locked). The freedom of the high seas is subject to the basic rights and obligations set out in the 1982 United Nations Convention on the Law of the Sea (LOS Convention) and the 1995 UN Fish Stock Agreement. High seas fisheries include a number of discrete stocks located outside EEZs, as well as highly migratory resources and straddling stocks. International law requires that such resources are to be managed through regional fisheries management organisations. In addition to the LOS Convention, the current international instruments related to high seas fisheries are:

- 1993 FAO Compliance Agreement (Compliance Agreement)
- 1995 UN Fish Stock Agreement (Fish Stock Agreement)
- 1995 FAO Code of Conduct for Responsible Fisheries (the Code)
- 2001 FAO International Plan of Action on IUU fishing (IPOA-IUU).

Among existing instruments, the Compliance Agreement and the UN Fish Stock Agreement are legally binding international instruments which contain a range of requirements relating to flag State responsibilities, compliance and enforcement. The Code and the IPOA-IUU, on the other hand, are voluntary and management-oriented instruments, formulated to be interpreted and applied in conformity with the relevant rules of international law.

Although somewhat different in their focus and scope, each instrument has the same goal *i.e.,* to ensure the long-term, sustainable use of fisheries resources. These instruments are also essentially complementary in nature to achieve their objective toward sustainable and responsible fisheries. Table A2.1. of Annex 2 provides a summary of OECD member countries' status with respect to major international agreements.

Although both the UNFSA and the FAO Compliance Agreement have entered into force the level of participation by States is far from universal. The level of voluntary compliance with the Code of Conduct and IPOA-IUU is also less than satisfactory. This situation highlights one of the major shortcomings of international law; that treaties are binding only on those States that ratify or accede to them. Some observers have pointed out that an essential prerequisite to curbing IUU fishing on the high seas is universal participation by States in relevant international instruments.

In this regard, a key principle of the UNCLOS (and reconfirmed in UNFSA) regarding the high seas is that nationals of all States have the right to fish there, albeit subject to certain provisions (UNCLOS Article 116). The principal provision limiting high seas fishing activities is provided in Article 117 dealing with the *"Duty of States to adopt with respect to their nationals measures for the conservation of the living resources of the high seas".* According to this article all States have the duty to take, or to co-operate with other States in taking, such measures for their respective nationals as may be necessary for the conservation of the living resources of the high seas. Hence, to the extent that the UNCLOS is customary international law, flag States have the obligation to ensure that the vessels flying their flags follow the rules. However, many FONC countries do not have the means to ensure appropriate control, and it has become evident that for certain countries this provision has been difficult to implement and enforce.

A particular note should be made of the 2001 FAO International Plan of Action on IUU Fishing[14] and in this regard FAO Technical Guideline No 9 which outlines the implementation of the IPOA. The purpose of the IPOA-IUU is to prevent, deter and eliminate IUU fishing by providing countries with a set of comprehensive, effective and transparent measures on the basis of which they may act either directly or through the relevant RFMOs. The IPOA-IUU seeks to address IUU fishing in a holistic manner and provide a comprehensive "toolbox" as a checklist so that States can select those measures that are most relevant to their particular situations. The implementation of the IPOA-IUU focuses on the elaboration of national plans of action on seven types of measures such as coastal State measures, port State measures, and market-related measures. Under the IPOA, countries were supposed to develop a national plan of action by June 2004 on a voluntary basis. However, according to the FAO, around forty-one countries worldwide are expected to have national plans in place in the near future,[15] and of these, only eighteen member countries reported to FAO that they would be ready before the 2004 deadline. As of March 2005, the European Union, Spain, United States, Japan, Canada, Australia, New Zealand, Mexico, Chile, Tonga, Tuvalu, Federated States of Micronesia, Seychelles, Namibia, Ghana and Gambia had submitted their national plan to the FAO.

14 While the scope of this Study is outlined above**,** the IPOA-IUU deals with all IUU situations both inside and outside of national EEZs.

15 FAO (2003), Progress Report on the Implementation of IPOA-IUU, November 2003 (C2003/21)

Albeit a voluntary instrument, the IPOA provides international support for various types of action against fishing in particular by flags of convenience vessels. Under the Plan, in addition to detailed requirements for the flag State, there are provisions for port States to collect specified information on fishing activities and possibly to deny the landing or transhipment of catches to IUU fishing vessels. States can impose trade-related measures such as import bans, consistent with WTO obligations, as well as adopting legislation making it an offence to trade in fish caught by IUU fishing vessels. The IPOA also urges countries to adopt multilateral catch documentation and certification requirements as a means of eliminating trade in fish derived from IUU fishing. By the same token, coastal States are to implement effective control and surveillance in their waters. With the full and effective implementation of flag State control, the development of complementary port State control would possibly also contribute to a reduction in IUU fishing on the high seas. In this sense, and when properly implemented into national legislation, the IPOA-IUU has the potential to play an important role in addressing IUU fishing activities.

Measures by Regional Fisheries Management Organisations

Although the lack of enforcement capability is a major shortcoming, regional fisheries management organisations nevertheless play a crucial role in combating IUU high seas fishing activities. RFMOs are at the forefront of the fight as it is they and their member countries that initially feel the direct brunt of IUU activities through fewer harvesting opportunities.

Increasingly, RFMOs have been taking steps to combat IUU fishing in a number of ways. Several types of measures have been undertaken or are under consideration covering monitoring, control and surveillance (MCS), vessel listings, port and flag state measures, transhipments, observer participation, vessel monitoring systems (VMS), trade restrictions and catch documentation schemes (a comprehensive description of the measures of various RFMO's can be found in FAO's Technical Guidelines to the IPOA on IUU).

One example of measures is the establishment of catch and trade documentation scheme. Although these schemes have different names and modalities, they all seek to promote ways of keeping track of "legal" catches. In the market place, industry and commerce are increasingly asking for information on origin, and the implementation of such schemes offers the additional advantage that data and information can be collected by RFMOs. This latter type of information can be particularly useful in identifying major markets and trade flows. At present, only a few RFMOs have implemented catch or trade documentation measures, and applied them only to a limited number of species.

While trade and catch documentation schemes offer some possibility for tracking data on harvests from legal fishing activities, it is quite clear that certain markets and ports may still be open to fish from IUU sources. For this reason, at least a couple of RFMOS have actively pursued the possibility of introducing trade embargoes on the harvest of fish from certain origins.

A number of RFMOs have recently developed both a list of vessels permitted to fish within the RFMO area as well as lists of vessels that are not in possession of a permit. If properly maintained, and if sightings for vessels are continued over some time, the lists offer possibilities – especially when combined with other measures such as those taken by national ports state control and penalties/fines by national authorities. In this regard a number of RFMO's, have agreed to a minimum standard of port state control, stipulating

the closure of ports to identified IUU vessels, both as with regards to prohibiting landing catches and seeking other service. In addition minimum standards regarding to prohibit companies from member states of these RFMO's to assist in IUU activities by supplying them with oil or fishing gear or participating in transhipment or joint fishing operation with them.

National measures

In its work on IUU activities, the OECD Committee for Fisheries decided to compile an inventory of national measures which includes the following elements:

1. Legal measures and regulations dealing with:
   - IUU fishing activities by national vessels
   - IUU fishing activities by foreign vessels within EEZs
   - Registration of fishing vessels.
2. Economic measures, *i.e.*:
   - Investment rules
   - Trade rules
   - Rules regarding landing, transhipments and marketing
   - Penalties, fees and restrictions to government financial transfers.
3. Other measures, *i.e.*:
   - Moral measures
   - Ethical measures
   - Other measures not listed above.

The key results from this survey showed that most OECD countries control and monitor national flagged fishing vessels activities using such tools as vessel registration, permits, catch quotas, reporting obligations, high technology VMS[16] and observer coverage. Increasingly, the information derived from VMS and catch reports is used to feedback into real-time fisheries management decisions. There is nevertheless a need for better mechanisms to track vessels through re-flagging. Very few national authorities keep records of this type of information.

OECD member countries also have very strict vessel registration requirements for foreigners. However, apart from New Zealand, Norway and Australia, few countries take into account any previous IUU history of the vessels seeking registration, and the registration process therefore serves a relatively limited filtering role in preventing IUU fishing activities or the practice of vessels "hopping" from one registry to another. Increasingly, trade measures (such as catch and trade documentation schemes) initiated by RFMOs are supported by many member countries due to their success in tracking and curbing IUU fishing.

Three OECD countries, Spain, Norway and New Zealand, apply domestic sanctions to illegal extra-territorial fishing activities by their nationals and national flagged vessels. While a contentious area, ensuring that a country's own nationals adhere to the rules clearly offers some prospects in the combat against IUU activities. In the United States the Lacey Act provides for a "long arm" approach in that it makes it illegal to partake in the trade of fish, wildlife, or plants taken in violation of any U.S. or Indian tribal law,

16 It is observed though that VMS may not be foolproof as there are cases reported where crews have tampered with such installations.

treaty, or regulation as well as the trade of any of these items acquired through violations of foreign law.[17]

Most OECD countries, either through administrative ruling or through court decisions, apply penalties for offences by foreign vessels in national waters. However, the survey across OECD countries shows that the penalties (especially fines) imposed by most member countries are considered too low to have a major impact on deterring IUU fishing activities, compared to the high value of IUU catches. In other words, penalties/fines are not enough to deter IUU fishing. Also, knowledge and information about the vessels and/or fishing companies is important to be able to fine the offender. This is a serious concern which needs to be addressed worldwide. If penalties were harmonized, IUU operators would no longer be able to target the fishing areas with the lowest fines and the weakest monitoring and surveillance.

With some notable exceptions, most countries are not actively using other measures such as encouraging private sector involvement, establishing non-economic and social mechanisms to discourage IUU fishing by their nationals and national-flagged vessels.

In this context, a particular mention should be made of Japan, which has been actively seeking to scrap both domestic and foreign-flagged tuna longline vessels. Given the particular regional movements and ownership of fishing fleets, Japan undertook bilateral consultations and negotiations with Chinese Taipei to establish an Action Plan and to set up the OPRT. Under the Action Plan, which was agreed to in 2000, Japan purchased and scrapped former Japanese tuna-longliners flagged to Chinese Taipei.[18]

Private sector initiatives

A number of non-governmental organisations have been active in combating IUU activities, including TRAFFIC, Greenpeace and the WWF. These organisations have undertaken studies of the IUU problem and in this regard have been a valuable source of information. Some of their studies have also been useful in showing alternative approaches to addressing the IUU problem. Elsewhere, two private initiatives have been particularly successful in combating IUU activities in their respective area of operation, *i.e.* the Coalition of Legal Toothfish Operators (COLTO) and the Organisation for the Promotion of Responsible Tuna Fisheries (OPRT).

As an international alliance of legal fishers formed to eliminate illegal fishing for toothfish, COLTO is committed to working with governments, conservation groups and the general public to highlight the need for urgent action to combat illegal and unregulated toothfish poachers. COLTO, based in Australia, launched an international 'Wanted' reward scheme in 2003. The Coalition is offering a reward of up to USD 100 000 for information leading to the conviction of illegal fishers and companies. In addition, through promotional campaigns and through its official web site (www.colto.org), COLTO advises the public about the problems of IUU fishing for toothfish, and hosts one of the most advanced vessel information databases in the public domain. Legal toothfish operators have supported this project as they have increasingly faced problems in the market place as consumers have been confused as to the difference

17 http://www.csc.noaa.gov/opis/html/summary/lacey.htm

18 Details on this programme are presented in "Efforts to Eliminate IUU Large-Scale Tuna Logline Vessels" by Katsuma Hanafusa and Nobuyuki Yagi, in *Fish Piracy: Combating Illegal, Unreported and Unregulated Fishing* (OECD, 2004).

between legal and illegal toothfish. The COLTO furthermore can be an effective deterrent as market information and intelligence can be gathered close to the source and from commercial interests.

Similarly, the case of OPRT shows that private initiatives can play a very important role in the fight against IUU fishing operators. Established in Japan to promote responsible tuna fisheries, members of OPRT include large-scale tuna fishing organisations from China, Chinese Taipei, Indonesia, Korea, Ecuador and the Philippines, in addition to Japanese tuna operators. A total of 1460 tuna longline fishing vessels had registered with OPRT by March 2004. The main function of the OPRT is to engage in promotional campaigns and disseminate information on IUU tuna fisheries. In this respect it should be noted that, as the world's largest tuna market, the Japanese market plays a key role. Clearly, in the case of tuna, the combat against IUU fishing is helped by this market characteristic.

Before the OPRT initiative was implemented, there were reportedly 250 flag of convenience tuna longline vessels operating. However, with the introduction of the Positive List Scheme on a global scale, IUU tuna catches can no longer be traded in international markets. Given the relative ease of changing the vessel name and registration in an effort to circumvent sanctions imposed by RFMOs, the activities of IUU tuna fishing are closely monitored. In addition, the project involved the scrapping of Japanese longline tuna vessels which would otherwise have been transferred and re-flagged to other countries; these vessels have thus effectively been taken out of service, resulting in a reduction of overall tuna longline fishing capacity.

These two private initiatives provide important evidence of the very high value that legal operators attach to operating in these markets without the interference of IUU fisheries operators. They show that when the incentive structure is right, it is possible to involve private operators in combating IUU fisheries operations which had hitherto largely been addressed through governmental measures. The reward or "bounty scheme" that COLTO offers could have an application in other fisheries. However, such schemes are likely to be most successful in cases where a limited number of operators in well defined fisheries are at stake. A broader application may be more challenging; for example, in fishing areas where many nationalities are fishing in multi-species and multi-gear operations, such a scheme could easily create moral problems between fishing communities and become an administrative liability. It also raises a legal issue *i.e.,* it is unlikely that RFMOs that do not have the ability to fine would have the ability to reward.

2. Impacts of IUU Fishing

IUU fishing threatens the sustainability of fish stocks and undermines the effectiveness of management measures. By the same token, IUU activities have potentially adverse effects on the marine ecosystem, notably the populations of seabirds, marine mammals, sea turtles and bio-diversity in general. At the same time, and of particular importance to this study, IUU fishing undermines the economics of legal operators and thus has social and economic impacts on fishing communities who depend on the same fish stocks that are targeted by IUU operators. It should be highlighted that the scale, time and effects of IUU also will depend on whether the fishing is "commercial" or "subsistence".

While the biological effects (*i.e.*, direct environmental effects) on target stocks are well researched, the broader economic and social impacts of IUU operations are not well

understood or described. The following will first suggest a framework for the potential economic and social impacts of IUU fishing and then review the empirical evidence.

Developing a framework

The Workshop on IUU Fishing Activities shed some light on the issues related to the social and economic impacts of IUU fishing. A number of economic and social impacts of IUU fishing is provided in Table A2.3 and A2.4.

The impacts of IUU fishing are either direct or indirect. Of the direct impacts the most important include diminished fisheries' contributions to the gross domestic product (by the amount of IUU fishing) as well as impacts on employment, port and export revenues, fees and taxes. While direct losses may be quantifiable, second round effects through multiplier effects may be equally important but are not necessarily easy to ascertain. These could, for example, be economic impacts on coastal communities deprived of income sources from their direct fisheries. The important message emerging from this is that IUU impacts are often far greater than what can be measured.

IUU activities also have indirect impacts that may carry considerable economic welfare losses. These include environmental impacts (which again may not be easily quantifiable) *e.g.*, destruction of eco-systems, increased number of user conflicts as well as nutrition and food security.

Economic loss to countries dependent on fishing resources is a short-term issue in the case of resources under RFMOs and only affects member countries and the resources that IUU fishers take from national EEZs. For "true" high seas fisheries, outside the purview of management arrangements, the fishery is characterized by a free-for-all situation; economic loss cannot be ascribed to a single country but clearly there will be a long-run loss from the commons that can potentially impact all stakeholders.

The economic impacts of IUU fishing are both short and long term. Assuming that there are no alternative fishing possibilities, the short-term economic impacts of IUU operations are in essence less fish for legal operators, which could be translated into lower employment (both harvesting and processing), lower incomes and perhaps lower export revenues. Longer-term impacts may be more serious as target stocks become overexploited and legal fisheries have to stop operating. The economic impacts will, however, depend on the stock situation and the level of legal operations, *i.e.*, whether the legal fishery is at, above or below MSY. The serious problem with the existence of IUU operations in this regard is the degree of uncertainty that they add to the calculation of the MSY, and the use of the precautionary approach will in such circumstances put additional pressure on legal operations.

There are also social costs associated with IUU fishing, as it can affect the livelihoods of fishing communities, particularly in developing countries, and because many of the crew on IUU fishing vessels are from poor and underdeveloped parts of the world, often working under inadequate social and safety conditions. It should, however, be noted that little research has been done on these issues despite the fact that important aspects of policy coherence for development may be involved.

The environmental effects of IUU are either direct, *i.e.,* impacts on target stocks, or indirect impacts that arise from by-catches, impacts on bio-diversity *(e.g.,* incidental catches of seabirds and mammals) and on the marine fauna. For obvious reasons the direct stock impact of IUU fishing is a fairly well understood area although the data used are of poor quality and the results are at times questionable; however, the broader

environmental effects are less well understood and described, although they have received a lot of attention, in particular from the non-governmental community.

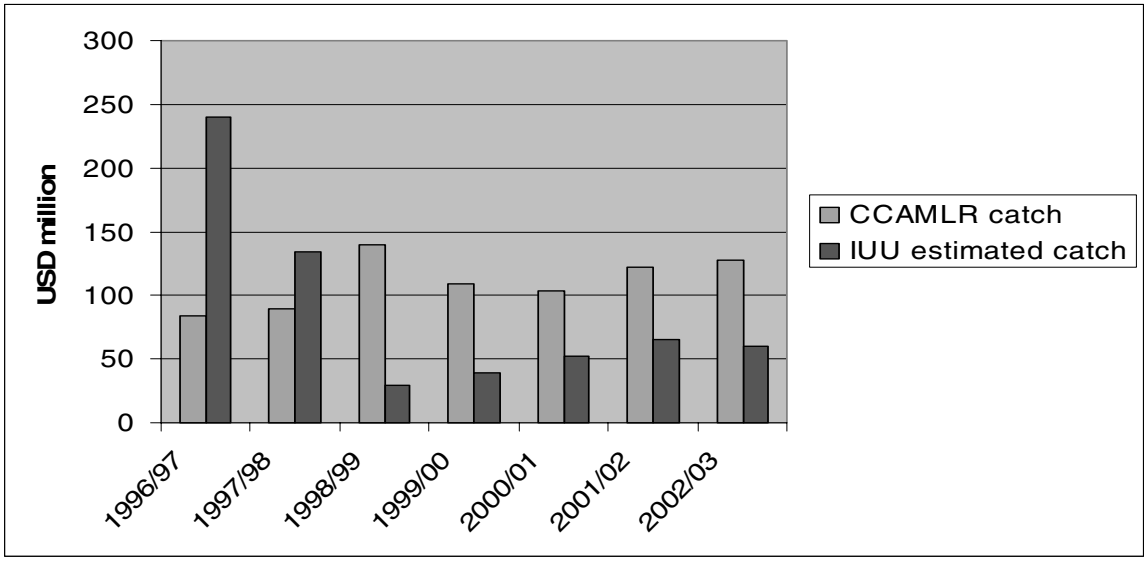
Empirical evidence

As far as the broader environmental impact of IUU fishing is concerned, CCAMLR, in response to the direct impacts toothfish longline fishing has on seabird populations, is one of the regional fisheries management organisation that has been active in this area. The CCAMLR Scientific Committee has promoted various means to help fishers avoid catching seabirds. Incidental catch can be reduced significantly by using appropriate longline gear (combining appropriate line handling and sinks on fishing lines).

The extent of the longline fisheries impact on birdlife (both IUU and legal fisheries) has been estimated by Birdlife International (see www.birdlife.org) to be around 300 000 birds killed per year. A CCAMLR working group calculated that illegal fishing fleets killed between 14 400 and 46 950 seabirds in 2003; again, the wide range of these estimates is due to the "unknown" factor of IUU activities.

Data from the CCAMLR Working Group on Fish Stock Assessment on estimated legal and IUU catch has been used to provide the following graph (Figure 1.1) which shows an overview of the value of CCAMLR and estimated IUU catches of Patagonian toothfish. The prices for toothfish used in the calculation are USD 8/kilo for CCAMLR fish and USD 6/kilo for IUU fish (constant over the period and is based on data from the IUCN). The difference between the prices of legal and IUU fish is explained by an observation that IUU[19] fish (*i.e.,* fish without catch documentation history) have lower prices than fish from legal catches.

Figure 1.1. Value of Patagonian Toothfish Catches in the CCAMLR Region: IUU and CCAMLR Catch



Source: Catch data from CCAMLR; price indications from IUCN.

19 Quoted in The IUCN/TRAFFIC *Analyses of Proposals to Amend the CITES Appendices* see CoP12 Prop. 39 Dissostichus at http://www.iucn.org/webfiles/doc/SSC/CoP12/Analyses/1239.pdf

Meanwhile, empirical research on the social aspects of IUU fishing has been limited. A notable exception is work by the International Transport Worker's Federation (ITF).[20] This suggests that IUU fishers are hired from areas of the world where few alternative job possibilities exist. Due to the lack of alternatives, crews accept low wages and extremely poor living and working conditions on board fishing vessels to the extent that they are considered bonded labour. The poor working, safety and social conditions are compounded by the use of flags of convenience, as it is the flag State's rules and regulations, including labour laws, which are applicable. It would seem that more work in this area is needed. In addition, aspects related to policy coherence for development could usefully be addressed.

3. Drivers of IUU Fishing Activities

Recognizing that IUU fishing continues despite important preventive efforts by the international community, one of the Committee's main objectives was to build an economic model that could provide a more realistic and appropriate analytical framework to understand what drives IUU activities. The Committee noted that previous attempts to prevent IUU activities had largely been based on legal measures, while measures targeting the economic foundation of the activity had for the most part been disregarded.

The proposed framework for the analysis of drivers of IUU is based on the simple observation that:

Expected Profits from IUU fishing = Expected Benefits from IUU – Expected Costs of IUU

The Committee proceeded to explore possible economic drivers (benefit and costs drivers) including the risk and costs associated with fraud, avoidance, and apprehension in relation to IUU fishing. Moral and social factors were reviewed to complement the framework. This allowed the Committee to identify the following groups of important economic and social drivers:

1. Overcapacity in the worldwide fishing fleet caused, inter alia, by management failures;
2. Market demand and the price for IUU fish;
3. Level of MCS operations;
4. Level of sanctions, including fines and non-monetary sanctions, as well as the limitations of legal systems in applying sanctions to fisheries offences;
5. Management regimes;
6. The current international framework, including tax havens; and
7. Economic and social conditions of fishers.

The following briefly discusses each driver and how it links into the economics of IUU operations.

20 "The Social Dimension of IUU Fishing" by Jon Whitlow, ITF; in *Fish Piracy : Combating Illegal, Unreported and Unregulated Fishing* (OECD, 2004).

Excess capacity

It has been pointed out that excess capacity, especially in the fisheries for high-valued fish such as tuna, has the potential to be an extremely powerful driver for IUU fishing, because if vessel-owners are not offered scrapping incentives, they will face large costs which can only be mitigated through engaging in IUU fishing activities. There is considerable and growing concern, especially among developing nations, that the overcapacity problems of developed countries, several developing countries and fishing entities are being "exported" into IUU fishing activities. This is underpinned by the ease of re-flagging vessels and lack of controlling the fishing capacity by some nations and fishing entities and exacerbated by the difficulties in tracking company structures and identifying beneficial owners of IUU fishing vessels.

As the demand for fish rises and fishing limits are introduced, in general there are more incentives to engage in IUU operations. The motivation to participate in IUU activities also increases if there is no capacity regulation and no consideration given to the income-generating ability of fishers. It is therefore important to tackle the problem of excess fishers who may find it difficult to find alternative employment opportunities. In this regard appropriate national management regimes that ensure an adequate income for fishers are important.

Market and value of IUU fish

Most of the fish species targeted by IUU activities have a very high market value. This has been the case for Patagonia toothfish and tuna in particular, but less commercially important species also reach prices that motivate fishers (*e.g.,* Orange roughy). Other species may have lower market value (*e.g.,* squid) but can easily be marketed through traditional channels where they are mixed with "legal" fish. The economic gains from IUU fishing of high-value species are often significant. For example, the market price for toothfish increased from approximately USD 6/kg in 1996 to over USD 11/kg in 2000. As Denzil Miller[21] pointed out in the paper he presented to the IUU Workshop, CCAMLR estimates of IUU catches suggest that the cumulative financial losses arising from IUU toothfish fishing amounted to USD 518 million over the period 1996 to 2000 in the Convention Area; this compares to an estimated USD 486 million in turnover enjoyed by legitimate fishers over the same period.

With the increasing demand for fish, fuelled for example by growing consumer awareness of health aspects and higher disposable incomes, there will be more incentive for fishers to resort to IUU activities.

The level of MCS operation and the demonstration effect

Governments and RFMOs may be achieving a potentially significant demonstration effect through monitoring, control and surveillance in fighting IUU activities. Such measures provide positive signals to legal fishers and send the message to IUU fishers that their products will be excluded from the international market and that their activities will not be tolerated. The International Network for the Co-operation and Co-ordination of Fisheries-Related Monitoring Control and Surveillance Network (MCS Network),[22]

21 See "Patagonian Toothfish: The Storm Gathers", in *Fish Piracy: Combating Illegal, Unreported and Unregulated Fishing* (OECD, 2004).

22 See http://imcsnet.org/

where nations are joining their resources to increase their effectiveness in enforcing conservation measures designed to protect world fisheries and ecosystems, may be a particularly interesting avenue and offer some important cost savings.

Insofar as general demonstration effects of MCS operation is concerned, the Namibian experience with the introduction of a 200 mile EEZ and ensuring that an appropriate monitoring, control and surveillance regime is in place is an example of how the incidence of IUU fishing can be reduced significantly by sending strong signals to potential violators that swift action will be taken against them.

However, in the case of Patagonian toothfish, the economic incentives of high prices are so enticing that the threat of being 'listed' is not enough to deter IUU activities. Many non-governmental organisations are therefore working to detect and publicize vessels catching toothfish illegally. TRAFFIC and Greenpeace are currently operating a wildlife trade monitoring network to publicize illegal operators and name the companies and vessels involved in IUU fishing of toothfish. The COLTO is also offering monetary rewards of up to USD 100 000 to anyone with information regarding illegal vessels. Such actions by private initiatives or NGOs have proven successful in gaining valuable information leading to the identification of illegal vessels. By the same token, they increase the risk that IUU operators could lose their moral and social standing which may, in certain societies, act as a deterrent to IUU fishing.

Level of sanctions against IUU fishing

The absence of severe penalties, combined with limited enforcement and the difficulties in uncovering company structure, makes IUU fishing a lucrative option. One case study[23] submitted to the IUU Workshop suggests that maximum penalties should be increased considerably (and by as much as 24 times) compared to current levels, if they are to have a deterrent effect on IUU fishing activities. A review of national information on penalty levels suggests that they apply a very wide range of penalties and fines. Very few countries seem to have levels of fines that are effective deterrents to IUU activities. It should be noted that the forfeiture of vessels and catch could have a more deterrent effect than fines. Another issue with the legal systems' assessment of fines and penalties is that it is often based on the "ability to pay"; given that fishers often have little income compared to the societal costs of their action and that the true owners of vessels are often disguised, this could work against the deterrence effect.

Since the net profits per fishing trip of each vessel usually exceed the value of the vessel, abandoning that vessel once apprehension occurs is not a major problem for most operators. Furthermore, many vessels use fake operating companies to avoid having to pay fines when caught. The true identity of the vessel may never be detected and the company name may change many times.

From the Northern Australian experience in dealing with IUU operators it should be noted that measures to deal with IUU fishing, when the perpetrators suffer extreme poverty, can be very challenging. Under these circumstances penalties may not be a sufficient disincentive to IUU fishing. It could be that in such cases development policies could play a role in mitigating IUU activities.

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23 See "The Costs of Being Apprehended for Fishing Illegally: Empirical Evidence and Policy Implications" by Sumaila, Alder and Keith, in *Fish Piracy: Combating Illegal, Unreported and Unregulated Fishing* (OECD, 2004)

Management regimes

The way that domestic management regimes are designed is an important determinant for the income that individual fishers will be able to make. The higher the income from domestic fisheries, the lower the incentive for engaging in IUU activities will be. National fisheries management regimes may therefore be an important driver for IUU fishing activities. Hence, countries with weak fisheries management regimes may be a likely source of vessels for IUU operations. This is also linked to and lends support to the importance of introducing capacity restrictions in national fleets.

Weak international framework

A major issue relating to international legal frameworks is that they have been considered to only apply to states that have acceded to the various conventions. This makes it difficult to enforce RFMO rules which have to be implemented through national authorities. It should be noted however in this context that rules from the international law have become customary international law in their application and are thereby binding for all states; this includes the rules stipulated in UNCLOS. The registration of vessels constitutes a loophole which makes it possible to re-flag fishing vessels without any constraints. Coupled with the fact that many of the flag states also operate tax havens, such possibilities help make IUU profitable. In practice, it only takes a click on a mouse (see www.flagsofconvenience.com) to move fishing vessels from one register to another; this makes it very tempting for legal vessels to switch to flags of convenience. Furthermore, only few IMO rules apply to fishing vessels which largely have been ignored as a category of vessels. It should also be highlighted that there are a number of "hot spots" on the high seas for example where adjacent EEZ do not cover fully the area of concern. The existence of such areas may help underpin the profitability of IUU vessels as may the existence of tax havens a characteristic of many countries offering flags of convenience.

It is actually difficult to distinguish between the re-flagged vessels and foreign direct investment since there is no clear "genuine link" between the flag state and the fishing vessels flying the flag. Furthermore, some developing countries are trying to attract foreign direct investment in their fisheries to boost their economy, and vessels from several fishing nations or fishing entities are using these opportunities to re-flag their over-capacity to those countries. However, some of these developing countries do not fully control these re-flagged vessels, increasing the chance that those vessels will engage in IUU fishing.

Poor economic and social conditions

In a number of fisheries IUU fishing activities are carried out by fishers from developing countries with poor economic and social conditions. Other fishers are employed on IUU vessels, often flying flags of convenience, in situations where they are exploited and have no social protection. This is made possible by the fact that there is no widely accepted global convention on safety and personnel requirements for fishing vessels and no ILO (or other) instruments on labour conditions for fishers.

4. Assessment of Possible Actions against Illegal, Unreported and Unregulated Fishing

A wide range of policy measures are available to reduce the expected net benefits from undertaking IUU operations. As part of its work on the issue, the OECD Committee for Fisheries developed a menu of such possible measures, categorised according to whether the measures were aimed at reducing the revenues of IUU fishing activities or increasing the capital and operating costs of the activities. These are briefly summarised in Box 1.1. As can be seen from the list, the range of policy measures is extensive. However, there are considerable hurdles to implementing many of these measures, including issues of cost, political will and the need for international coordination on sensitive issues. Given the limited resources available to national governments and RFMOs in combating IUU fishing, determining the cost-effectiveness of alternative policy actions is essential. The following discussion addresses this issue. As already mentioned, a confusing feature in the IUU debate has been the tendency to group the separate elements of IUU into one analytical basket. However, it is more useful to address each element in turn, highlighting the way in which policy actions can address the particular features of the illegal, unreported or unregulated fishing activity.‘

A wide range of measures are available to combat IUU fishing; however a key concern is that the political willingness to take action may not always be present. These cover legal, institutional, economic and social dimensions and require the involvement of national, regional and international fisheries authorities. Given the limited resources available to national governments and international fisheries management organisations, it is important to determine the cost-effectiveness of different approaches in order to identify the most cost-effective options. At the same time, it is important not to forget that preventive actions also have cost and income effects on legal fisheries operators and on society at large that need to be assessed and taken into account.

A potentially confusing factor in the international debate about IUU has been the tendency to group all the elements of IUU into one. From an analytical perspective a more tractable and tangible way forward may be to discuss and analyse each of the three IUU elements separately, in order to identify where and when economic and policy instruments are appropriate, cost-effective and likely to have the greatest impact. In other words, to establish what type of economic instruments and policy actions are most useful, based on their costs and benefits, for each separate category of activity, i.e., illegal, unregulated or unreported. The following[24] will therefore first seek to elucidate possible actions for each of the IUU elements. In doing so, the cost effectiveness of the proposed actions and their associated problems or issues of implementation will be highlighted. Those actions that cut across the whole IUU phenomenon are presented below as matters of a cross-cutting nature.

[24] The use of the terms *illegal*, *unreported* and *unregulated* fishing in this section does not coincide exactly with the internationally agreed definitions and should therefore only be viewed as a tool for this particular exercise.

Box 1.1. Possible Actions Against IUU

Reducing Revenues

- Reduce incompleteness of current international frameworks and reducing the possibilities for FONC[25] registration
- Provide non-party states with appropriate incentives for joining RFMOs and financial "compensation" for de-registering FONC vessels.
- Improve compliance with current national and international obligations through better Monitoring, Control and Surveillance (MCS) capabilities, including broader cross country cooperation.
- Measures that work on the trade of IUU products. This could include various forms of restrictions on trade on landings, on marketing including the introduction of catch and trade document schemes, and labeling[26]
- Listing of banned vessels/companies and countries of origin
- Encouraging education and promotional campaigns

Increasing Operating Costs

- Eliminate tax havens
- Restrict accessibility to goods and services for IUU operators (fuel, landing, insurance, communications and navigation services etc).
- Ratification and implementation of conventions relating to crews on fishing vessels.
- Improve the economic and social situation in countries/regions supplying cheap crews.
- Apply extra territorial domestic sanctions to citizens engaged in IUU operations.
- Make flag states legally liable for lack of appropriate insurance.
- Augment MCS capacities
- Increase penalties and sanctions (prison, confiscation of vessels and catch)
- Harmonise flag state fine levels
- Identify beneficial ownership of vessels
- Encourage private initiatives (including wanted rewards schemes)
- Improve knowledge of the social, economic and environmental consequences of IUU through education programs
- Use corporate governance initiatives and guidance programs
- Apply the OECD Convention to combat bribery of foreign public officials.

Increasing Capital Costs

- Setting and enforcing minimum vessel standards (port state control)
- Reduce vessel capacity potentially available for IUU operations (scrapping and appropriate management regimes)
- Restricting outward investment rules on IUU vessel capital
- Restrict banking laws use of IUU vessel capital as collateral
- Make flag states legally liable for damage resulting from the lack of appropriate maintenance
- Improve macroeconomic conditions in countries supplying low cost crew.

Source: OECD Secretariat.

25 FONC refers to Flags of Non Compliance.

26 This is a promising area that needs further attention. To some extent it has been successfully applied to tuna and Patagonian toothfish. More work is needed on understanding how traceability and responsibility can be ensured throughout the chain of custody i.e. from catch to consumer's plate. Also more work is needed to understand the links between the use of trade measures and the rules of the international trading system. With regard to the latter see Bertrand Le Gallic "Using Trade Measures in the Fight against IUU Fishing: Opportunities and Challenges" paper presented to the IIFET Conference, Tokyo Japan, 26-29 July 2004. Available at the OECD Fisheries web site : www.oecd.org/agr/fish/ under Staff presentations.

Illegal Fishing Activities

The term "illegal" refers to fishing operations conducted by vessels of countries that are party to regional fisheries management organisations or belong to co-operating States, but which operate in violation of their rules, or foreign vessels operating in a country's waters without permission. The fact that the operation is illegal means that a legal framework is already in place but that it is ineffective in terms of surveillance and enforcement, and is therefore an insufficient deterrent.

Illegal operations have a direct effect on legal fishers as their unit fishing costs will increase due to lower catches; in other words, the net profits of legal fishers are directly influenced by the amount of illegal fishing. Furthermore, if the illegal catch is marketed on the same market as the legal catch, the price received by legal fishers could come under pressure and reduce incomes unless a system of price discrimination, for example through labelling, is applied. Another important element in illegal fishing activities is that, if they remain undetected, they will make stock assessments unreliable. When the precautionary principle in fisheries management is applied, this may result in significant costs to legal fisheries if their fishing capacity is restricted in order to conserve stocks. Evidence from RFMOs indicates that allowable catches for members are reduced in relation to the assessed amount of IUU fishing to ensure sustainability and to avoid stock collapses.

Depending on whether the responsibility for taking measures to improve the situation lies with national states or RFMOs, the following actions could be considered.

National states' actions

The penetration of foreign illegal fishing activities can be dealt with through improving surveillance and enforcement-related activities. Three options seem to be open to national authorities:

- Increase the amount of surveillance to increase the risk of being caught:
- Increase penalty levels to reduce expected returns for illegal operators; and
- Apply trade measures.

Increasing the amount of surveillance could be a costly option but could, in certain circumstances, have the additional benefit of closer monitoring of the fishing activities of legal operators. A positive spill-over effect can thus be expected, and there may be links to other types of enforcement activities such as narcotics, immigration and terrorism. Synergies between such policy areas could usefully be exploited to lower the general cost of enforcement and surveillance to society. One possible way forward is the introduction of compulsory observer coverage on board all fishing vessels, which would increase the chance of sighting IUU activities. Such a policy would, however, carry considerable costs for legal operators unless financed by public authorities. In this regard, the recently developed MCS Network may offer some help in achieving improved surveillance, monitoring, and enforcement at a lower cost.[27]

It has been argued that perhaps the most cost-effective way of dealing with illegal activities is to raise the level of fines considerably so that they become an effective deterrent. It has also been argued in this study that the international community needs to

[27] Further information on http://www.imcsnet.org and http://www.publicaffairs.noaa.gov/worldsummit/mcsdocument.html

ensure that penalty levels do not vary too greatly between countries as this could increase the incentive for illegal fishers to move from one fishing area to another. This calls for actions to improve the co-operation and co-ordination of enforcement and surveillance between countries.

Evidence from the Workshop on IUU Fishing Activities suggests, however, that dealing with illegal fishers is not an easy proposition. Even if illegal fisheries operators are caught and their vessels confiscated, they tend to treat this as a business cost. This can be explained by the low price of IUU fishing vessels, which was suggested to be as low as USD 1.2 million;[28] clearly such capital can be disposed of if need be, and is a small cost compared to the value of the prospective catch. This may also explain why so many illegal fishing operators, and indeed fishing vessels flying flags of convenience, are in such a poor state. The right combination of the physical amount of surveillance, which would increase the possibility of being caught, and the level and type of fines/penalty are therefore crucial if they are to work as an effective deterrent.

The marketing of illegal catches in competition with those of legal fishers poses particular problems, and information presented to the Workshop has highlighted that private initiatives are particularly "active" when such situations occur, as evidenced by the experiences of OPRT and COLTO. This can be explained by the incentive structure. The use of trade measures is one way public authorities can seek to stop illegal catches entering their markets and there are a number of cases where such measures have been shown to be effective (*e.g.,* embargoed tuna in the case of harvest by non-contracting parties under ICCAT and IOTC, and Patagonian toothfish in the case of CCAMLR). In other cases (*e.g*., NAFO) the provision for trade restrictive measures exists although these have not yet been invoked.

RFMO actions

Illegal operators in RFMO areas include either vessels from countries party to the RFMO or vessels from states that co-operate with the RFMO, although the latter situation is rare. It should be noted in this respect, however, that these States are (under UNCLOS and the UN Fish Stock Agreement) required to co-operate with the relevant RFMOs. It should be pointed out that very little can be done about vessels of non-contracting parties fishing within an RFMO area; although UNCLOS provides that vessels and their states of origin have an obligation to act in a way that does not undermine the RFMO's fisheries management, it has no authority to arrest such operators. In fact, on the high seas, only the flag State can intervene *vis-à-vis* vessels flying its flag.

Albeit dependent on the stocks situation, the impact of illegal fishing activities in an RFMO area is felt by fishers from all contracting countries as their fishing costs will increase. As less fish is available, the revenues of legal fishers will drop. Another important consideration for RFMOs is their ability to carry out reliable stock assessments; this will be undermined by non-verified illegal fishing activities.

In addition to increased surveillance and enforcement by members of the RFMO, contracting parties also need to take action as the RFMO itself has no "penalty" capacity

[28] See for example Agnew and Barnes *"Economic Aspects of IUU Fishing: Building a Framework"* in *Fish Piracy – Combating Illegal, Unreported and Unregulated Fishing* (OECD 2004). In recent cases, ITLOS (www.itlos.org) has used bonds of EUR 350 000 (the JUNO TRADER case) suggesting even lower vessel values. It is noted, though, at a price of USD 10/kilo for toothfish, this compares to a value of USD 3 million for an average vessel loaded with 300 tons of catch.

(*e.g.* fishing fines, confiscation). The responsibility for such action remains with nation states. In the meantime, RFMOs could consider reducing the allocations (collective penalty) or excluding the country of origin of the vessel involved in illegal activity. Detecting illegal activities is a major problem, and one which can only be improved through additional surveillance. In this regard, onboard observer coverage may offer some help although such schemes will also have additional costs for legal fishers.

Illegal activities could also be detected through catch and trade documentation schemes. Such schemes may have success in curbing illegal activities, in particular when followed up with trade measures. Trade and catch documentation schemes therefore offer a tractable way forward for dealing with illegal catch from RFMO areas; however it is important to ensure that all parties in the chain of custody play an active role in not carrying "illegal fish". Meanwhile, when introducing catch and trade documentation schemes the costs to legal fishing operators should be considered. When combined with nationally implemented trade measures, such as those that have been in use under the ICCAT and IOCT *vis-à-vis* tuna, this has proven to be a successful way of dealing with illegal RFMO catches.

Unreported Fishing Activities

Unreported fishing is defined as catches that are either not reported or misreported to national authorities or RFMOs. Unreported fishing takes place both within national EEZs by foreign fishing vessels and under RFMOs by vessels from state parties to the convention or co-operating parties.

The major problem and cost of unreported fishing is that it adds uncertainty to fish stock assessments and complicates quota determination. Evidence from RFMOs as to how they deal with unreported catch shows a wide range of ways to take unreported catches into account in stock assessments. Meanwhile, if the only alternative stock assessment method is direct verification (*e.g.,* trawl surveys) both national states and RFMOs will have to bear additional costs as direct survey methods are considered more expensive than assessments based on catch data. However, an advantage of direct stock assessments is that they could be more accurate, in particular if IUU catch levels are considered to be particularly high.

Unreported fishing, whether in national EEZs or within RFMOs, could have an effect on legal fisher's ability to catch as authorities make provisions for an "unknown" factor in their catch allocations. As a result, the revenues of legal fishing operators may be lower than they would have been in the absence of unreported fishing activities.

National states' actions

While un-reporting or misreporting is possibly linked to other dishonest behaviour, and hence covered by the national legal machinery, it is still possible to improve the level of reporting through economic incentives and through the point of reporting *(i.e.,* data capture). At present, most reporting is done at the catch level by vessels. However, traceability concerns mean that in most developed markets, fish are traced through the chain of custody, *i.e.,* from landing to the consumer's plate. Major OECD fish consuming countries have now introduced some type of obligatory labelling of products with respect to origin (place of catch); in Japan, since July 2001 labelling requirements concern origin of fish and country of processing, and in the EU, since January 2002, labelling that includes information on catch area and method of production is required.

It would thus seem that a framework is already in place which may allow for capturing the un-reported or misreported part of the problem, although the enforcement and use of existing rules and frameworks need to be stepped up. In the meantime there is still a need to improve the ability of fisheries management authorities to use this information for stock assessments. In this regard closer co-operation between private operators in the chain of custody (processing plants, wholesalers and supermarkets) may offer some payoff. The fact that the food supply chain is becoming concentrated in fewer but bigger operators (in particular at the secondary processing and supermarket level) could be, in this respect, a useful development for fisheries managers.

Finally it would seem that the increased use of on-board observers could be a way to improve the reporting of harvests. Such action carries a cost for fishing operations that follow the rules, however, and that cost needs to be balanced against the expected benefits, *i.e.*, improved stock assessment and management which could result from better observations, and a possible deterrence effect.

RFMO actions

Most RFMOs make provisions in their stock assessment (and hence in quota allocation) for unreported catch, but only contracting parties (*i.e.,* nation states) can impose fines and other penalties for activities that have gone unreported. The different levels of responsibility between the RFMO and the member nations, and the fact that the cost is borne by all contracting parties may make detection of unreported catch difficult. Ways of changing the incentive structure could be explored, for example through the use of alternative allocation mechanisms that are known to heighten the compliance level.

As in the case of national actions, the RFMO could institute full observer coverage. While full observer coverage is likely to improve the situation, fishing costs for all fishers will increase. There may, however, be related benefits generated through improved stock assessment and management, and a deterrence effect vis-à-vis potential "un-reporters".

Unregulated Fishing Activities

The definition of unregulated fishing activities covers those conducted by vessels without nationality or flying the flag of states not parties to the relevant RFMO, and who therefore consider themselves not bound by their rules. Unregulated fishing also includes fishing activities that are conducted on the high seas outside RFMOs in a manner that is inconsistent with international law (e.g. UNCLOS).

Thus, unregulated fishing activities take place on the high seas under RFMO area of jurisdiction (and are thus illegal according to the RFMO rules) and beyond and also include species of fish that are not subject to specific RFMO regimes. When outside the competence of a specific RFMO the activity is not *per se* illegal but only subject to the general UNCLOS provisions. Due to the legal situation the area of unregulated fishing activities is considered to be the most problematic to deal with.

The cost of such activity to members of the RFMO is increased harvesting costs as the unregulated fishing activity reduces the resources available to legal fishers, with the result that the revenues of legal fishers are reduced. This type of activity is underpinned by a number of arrangements, including the possibility of flying flags of convenience and how easy it is to find crews that are willing to participate in such activities.

The basic problem with unregulated fishing activities in an RFMO area is that it is not illegal; apart from the general provisions of UNCLOS Article 117, there is no specific

legal justification for stopping such activities. However, there may well be a justification on economic grounds that such activities (and the countries from which they emanate) should at least bear some of the costs, direct and indirect, associated with running the RFMO. This is at the centre of the discussion when RFMO members individually or collectively seek to stop fish from unregulated operations entering their markets through the use of trade and market based instruments[29] (*e.g.,* embargoes). Embargoes can be effective and seem to act as an incentive to comply with rules. For example, the import ban on tuna from Saint Vincent and the Grenadines was lifted in 2001 as the Grenadines increasingly co-operated with ICCAT. Embargoes may also incite some Non-Contracting Parties to join relevant RFMOs, as illustrated by Panama and Honduras which joined ICCAT in 1998 and 2001 respectively.

Actions by an RFMO and its members must include diplomatic demarches and co-opting the involved non-member country into membership or at least ensuring that vessels flying their flags follow the rules. In this regard the keeping of list of vessels that fail to co-operate and their countries of origin may put some pressure on them and could also serve as a basis for the imposition of trade measures. However, this type of listing calls for improved vessel monitoring and surveillance which may be costly to members of the RFMO.

Many of the actions proposed in the following section may be implemented in this endeavour. However, it should be borne in mind that the current international legal system does offer the unregulated fisheries operator some protection as not all high seas fisheries are under RFMO jurisdiction, nor do non-member countries have a legal obligation to follow all the rules of an organisation to which they do not belong. While UNCLOS calls for all fishing nations, including non-members of RFMOs, not to undermine the fisheries management rules and objectives, very little can be done to stop unregulated fishing activities.

Meanwhile, it may be useful to recall that members of RFMOs form an exclusive club with its own rules and benefits. This could serve as an incentive for non-members to join the RFMO and benefit from the right to an allocation. Although this could have the short-term effect of reducing the allocation and revenue of "old" members of the RFMO, this policy could bring long-term beneficial effects if unregulated fishing activities are effectively reduced. This trade-off between unregulated fishing operations on the one hand and new members of the club on the other is an economic decision.

It would seem, however, that one possible avenue would be a major international diplomatic effort towards making all relevant countries join the conservation efforts of regional fisheries management organisations. In areas of the high seas where there are important resources but no management regime, such diplomatic efforts could also seek to build appropriate management bodies that could take the necessary actions. The issue of unregulated fishing is clearly a major international governance problem that urgently needs to be addressed.

[29] See "Using Trade Measures in the Fight Against IUU Fishing: Opportunities and Challenges" by Bertrand Le Gallic. Available at the OECD Fisheries web site: www.oecd.org/agr/fish/ under Staff presentations which discusses the relationship between existing WTO rules and specific trade obligations set out in multilateral environmental agreements (MEAs, i.e. RFMOs in the case of fisheries).

Cross-cutting Actions

In the meantime, and building on the outcome of the Workshop on IUU Fishing Activities, a number of actions of a cross-cutting nature could be considered. These depart somewhat from the approach taken in this section, *i.e.,* treating the various IUU elements in a disaggregated way.

Flag state actions. Links between flags of convenience and tax havens have been established and a more concerted approach towards both could be undertaken. As already been shown above, the existence of tax havens and flags of convenience lower the cost structure of IUU operations. In this regard there is a need to improve transparency in the procedures and conditions for re-flagging and de-flagging; fishing vessels are not an isolated case and general action aiming at all commercial vessels may be needed. In addition, more countries could contemplate applying extraterritorial sanctions to their citizens for violations of international fishing rules.

Port state actions. The development of minimum guidelines for port state controls and actions against IUU fishers should be encouraged. The harmonization of such controls, particularly with respect to the use of prior notice and inspection requirements (including health and safety conditions) should be a priority; this will help improve social conditions and may be a deterrent to prospective IUU operators. There is also a need to prevent access to the services and goods of IUU fishing vessels.

Coastal state actions and international trade responses. Fair, transparent and non-discriminatory countermeasures should be considered against countries that do not comply with the conservation and management measures adopted by RFMOs, or that fail to effectively control the vessels flying their flag. Concurrently, countries could identify the area of catch and the name of fishing vessels and their past history (name and flag) in order to collect the information necessary to improve fisheries management and records of fishing vessels.

RFMO actions. Strengthening the role and mandate of RFMOs and RFBs, in particular in tracking IUU fishing, is important. In this regard, there is also a need to improve information sharing and co-operation among RFMOs, especially in terms of linking and integrating their data on IUU fishing activities; this could be helpful to ensure the tracking of vessels that frequently change flags. More RFMOs could consider publishing lists of companies and vessels engaged in high seas IUU activities and lists of vessels that are authorized to fish. The use of positive and negative lists of IUU fishing vessels and companies is strongly encouraged in this regard. Consideration may also be given to creating a global record/register of authorized fishing vessels that are technically capable of engaging in high seas fishing. RFMOs are dependent on the legal machinery of their member countries as RFMOs do not have penal powers. Ideally, national administrations which invoke national legal machinery should have incentive structures that are congruent with those of RFMOs.

International co-ordination. More technical and financial resources are needed for capacity building, especially in the developing states, for monitoring, control and surveillance. The international community should move to ratify relevant treaties on labour and working conditions in the maritime sector in order to strengthen international hard and soft laws to protect fishing crews in general; this could increase the costs of IUU operations. Improved monitoring of foreign direct investments (out-going and in-coming) in the fishing sector will assist in tracking potential IUU fishing operations. In this regard the recently established International MCS Network could play an important role in

ensuring appropriate international co-ordination in the monitoring, surveillance and control of IUU activities.

Work should be undertaken nationally and multilaterally to lift the veil of corporate secrecy surrounding the companies undertaking IUU fishing activities and related services. Partnerships between public authorities and businesses could help significantly in the fight against IUU fishing. In this regard, the OECD Guidelines for Multinationals provide recommendations that could be followed up by national regulatory authorities.

NGO and private sector actions. Whenever possible, governments should consider bilateral consultation with businesses engaged in IUU activities to determine whether alternative means of getting vessels out of the business can be found. Efforts to communicate the IUU problem should be stepped up, for example through promotional/educational campaigns with the market, including intermediate buyers, processors, distributors and consumers. Such activities would help raise awareness of the problem and inform the wider community of the social, economic and environmental consequences of IUU activities. In the same vein, industry and NGOs should be encouraged to continue to self-organise their response to IUU fishing, given that legal private industry operators are the primary economic beneficiaries of combating IUU activity.

5. Final Observations

At the more general level it is worth recalling that pressure to engage in high sea IUU fishing activities are brought on, *inter alia,* due to poor domestic management regimes. In addition, the globalisation process, i.e. free movement of goods, services, investments (companies) and people makes fighting IUU activities a challenging and difficult task. When coupled with the ease of re-flagging vessels and "hiding" true ownership of companies and vessels engaged in such activities fighting IUU may even be characterised as an administrative nightmare. Perhaps the most important observation that flows from this analysis is that while many national and international laws, regulations and instruments to fight IUU are in place, and indeed signed up to by a number of countries, the practical implementation is still lacking. In other words, while political will may be present there is a long way to go in terms of translating that will into concrete action that can help reduce the IUU problem. Nevertheless the following will seek to identify some practical action that can be taken and which will help limit the IUU problem.

The previous sections have highlighted the variety of measures that already exist in the toolbox for national and international fisheries managers. In combating illegal fishing activities, monitoring, control and surveillance (MCS), vessel listings, port and flag state measures, transhipments, observer participation, VMS, trade restrictions and catch documentation schemes would seem be promising avenues. to. In the case of unreported fishing activities, the improved use of already existing traceability systems and a more generalised use of on-board observers could be helpful. Finally, regarding unregulated fishing activities, and in particular fishing activities outside the purview of RFMOs, “softer” measures, *e.g*., diplomatic approaches, could be useful. However, it is clear that unregulated fishing activities will be extremely difficult to prevent unless a major diplomatic effort underpinned by serious political determination is undertaken.

While the above analysis shows the range of possible actions open to governments, regional fisheries management arrangements and private operators, it also reveals that

these actions are not necessarily equally cost effective. Actions which increase the level of penalty and the costs of IUU operators could be particularly powerful and have the highest potential net pay off. Immediate action should therefore concentrate on measures that act on costs and on penalty levels. However, it should be recalled that to have any long-lasting effect a co-operative approach across countries is needed to prevent "vessel hopping" between marine fishing areas and flags. Private operators have a particularly strong incentive to ensure that their markets are not undermined by IUU fish and should be co-opted into taking a more active role in combating IUU activities. After all it is the private operators, *i.e.* legal fishers and processors, who benefit from the management arrangements put in place often at considerable cost[30] to society as a whole. As a corollary to this, when management regimes are ineffective, it is also the private operators that suffer the consequences and society misses an opportunity to ensure that benefits are maximized.

Consequently, more effort could be invested into "responsibilising" legal fishers who could step up their own "naming and shaming" of IUU activities that affect their operations. One possible way to do so is to involve legal fishing operators more closely in the management process of high seas resources and introduce allocation systems in which operators have a clearer incentive structure. It is worth noting in this regard that only a few high seas resources (allocated through national fisheries management services or through RFMOs) are managed using market-based economic instruments.[31] The link between the vessel operator and the management authority is therefore very weak. While this is an area that needs further analysis, it is clear that such longer-term solutions and other measures to address the IUU issue will also be necessary.

As shown above, the net returns of legal fishing operators are influenced by illegal, unreported and unregulated fishing activities: fishing costs increase, fewer fish can be caught, and as the illegal or unreported fish may be marketed in competition with legal catch prices are driven down. Processors and legal fishers therefore have an important incentive to ensure that such activities are discovered and stopped. In support of that, nation states could usefully consider applying trade measures, including catch and trade documentations schemes, labelling and embargoing of IUU catches, all of which have a high potential pay-off, with relatively low costs of implementation. In this process, operators along the value chain can and should be encouraged to contribute to ensuring that IUU fish are detected and removed.

IUU fishers operate with lower costs than legal fishers. This may be due to two distinct factors *i.e.,* one that can be ascribed to non-co-operative and non-compliant behaviour (with regard to both international applicable standards and regulations [*e.g.,* ILO, IMO] and the RFMO rules) and the other that can be ascribed to higher efficiency and lower input costs. Incidentally, an issue that has received little attention in the IUU discussion has been the fact that since IUU operators have lower costs due to higher

30 See the review of regional fisheries management organisations in the chapter: *Measures in place against IUU fishing activities*. For example, budget costs for the operation of ICCAT is EUR 1.9 million (2004), IATTC USD 4.9 million, CCSBT AUD 2.4 million (2003), IOTC USD 1.3 million (2003) and CCAMLR AUD 2.9 million (2003).

31 In the case of the CCSBT Australia and New Zealand manages the quotas with ITQ and licences and trade between countries is under consideration. In the International Baltic Sea Fishery Commission area (IBSFC), once quotas have been distributed among member countries, companies holding quotas can trade across borders via joint ventures. There is a government requirement that trades are registered with statistical offices for quota control purposes.

efficiency or lower input costs, the removal of fish from this source will negatively impact consumer welfare in the short term.[32] A corollary of this is that the imposition of market measures should address the part of the cost structure that can be attributed to non-co-operative and non-compliant behaviour only. Market measures that have a broader application and address total costs may be conceived to be anticompetitive in some cases.

RFMOs have a number of running costs, and the associated MCS activities undertaken by member countries of the RFMO are particularly expensive as it is onerous to undertake surveillance and control on the high seas.[33] At the same time, fishers participating in these fisheries do not usually pay for management arrangements, including the running costs of RFMO and MCS activities to keep illegal fishers at bay; ultimately these activities increase the value of the catch of legal fishers. This may be an implicit transfer. Furthermore, in most fisheries arrangements several nations participate and each may contribute widely different payments to the arrangement while the benefits are reaped by their national legal fishers. Under such circumstances, or if only some RFMO member countries charge for the managements costs, the competitive situation among fishers from different countries serving the same markets may be an issue. This is an area that may need further analysis and consideration.

This work has concentrated on identifying tangible short and medium term solutions to the problems created by IUU fishing activities, including fully implementing existing arrangements. However, it has also revealed that the shortcomings of current high seas governance arrangements need to be addressed over the longer term. Present high seas governance structures are built on the assumption that the legal framework creates frameworks for cooperation. The analysis in this work indicates that the incentive structures and the legal frameworks are not necessarily mutually supportive and that significant changes to the arrangements may be warranted in the longer-term (recognising that such changes to the UNCLOS are unlikely to be achieved in the short to medium term). Future work along these lines could address a number of scenarios drawing, amongst other things, on institutional responses to other international natural resource management issues. For example, lessons from the United Nations Framework Convention on Climate or the administration of the seabed and ocean floor under UNCLOS may provide some guidance for future high seas governance. Proclamation of the high seas as a common heritage which is then placed under international administration (as is done for the seabed and ocean floor) may be a tractable way forward and may open possibilities for the increased use of economic instruments for the management of high seas resources. Such an endeavour is not dissimilar to the fisheries policy reform processes that many OECD countries go through with regard to their national waters. Future work of the Committee for Fisheries on fisheries policy reform may address such international issues.

The Study by the OECD Committee for Fisheries has taken a novel approach to the IUU issue as its analysis has been based on the premise that IUU operations are an economic activity. The study has added new elements and a different angle to the discussion and has highlighted how difficult it is to combat a profitable undertaking.

32 In the longer term the IUU fishing will undermine the resource and this will have negative consequences for the consumers and the society as a whole.

33 See for example The Costs of Monitoring, Control and Surveillance of Fisheries in Developing Countries (*FAO_Fisheries Circular No. 976)* for a more detailed discussion of cost factors. Available on: http://www.fao.org/documents/show_cdr.asp?url_file=/DOCREP/005/Y3780E/y3780e04.htm.

Hence IUU fishing is likely to continue as long as the expected incomes exceed the expected costs for the IUU operator. In all likelihood, it is therefore not possible to completely eliminate the IUU problem; there is, however, much scope for reducing it. Above all, what is needed is a clearer incentive structure, broader co-operation among countries, and harnessing the efforts of those stakeholders who have an economic interest in seeing IUU activities stopped. In this endeavour more consideration should be given to the identification of alternative allocation mechanisms of high seas fish resources that help ensure a more conducive incentive structure for both legal and IUU fishers.

Annex 1. Definitions of IUU Fishing in the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing

Illegal fishing refers to activities:

conducted by national or foreign vessels in waters under the jurisdiction of a State, without the permission of that State, or in contravention of its laws and regulations;

conducted by vessels flying the flag of States that are parties to a relevant regional fisheries management organization but operate in contravention of the conservation and management measures adopted by that organization and by which the States are bound, or relevant provisions of the applicable international law; or

in violation of national laws or international obligations, including those undertaken by cooperating States to a relevant regional fisheries management organization.

Unreported fishing refers to fishing activities:

which have not been reported, or have been misreported, to the relevant national authority, in contravention of national laws and regulations; or

undertaken in the area of competence of a relevant regional fisheries management organization which have not been reported or have been misreported, in contravention of the reporting procedures of that organization.

Unregulated fishing refers to fishing activities:

in the area of application of a relevant regional fisheries management organization that are conducted by vessels without nationality, or by those flying the flag of a State not party to that organization, or by a fishing entity, in a manner that is not consistent with or contravenes the conservation and management measures of that organization; or

in areas or for fish stocks in relation to which there are no applicable conservation or management measures

Source: http://www.fao.org/documents/show_cdr.asp?url_file=/DOCREP/003/y1224e/y1224e00.HTM

Annex 2. Tables

Table A2.1. OECD Member Country Status with respect to Three Major International Agreements (as of August 2004)

OECD Member Country or Entity	LOS Convention	Compliance Agreement	UN Fish Stock Agreement	
Entering into force	16 November 1994	24 April 2003	11 December 2001	
	Ratified	Acceptance	Signed	Ratified
Australia	5.10.94	Yes	4.12.95	23.12.99
Austria	14.07.95	Yes	27.06.96	19.12.03
Belgium	13.11.98	Yes	3.10.96	19.12.03
Canada	11.07.03	Yes	4.12.95	3.08.99
Czech Republic	21.06.96	—	—	—
Denmark	—	Yes	27.06.96	19.12.03
European Community	1.04.98	Yes	27.06.96	19.12.03
Finland	21.06.96	Yes	27.06.96	19.12.03
France	11.04.96	Yes	4.12.96	19.12.03
Germany	14.10.94	Yes	28.08.96	19.12.03
Greece	21.07.95	Yes	27.06.96	19.12.03
Hungary	05.02.02	—	—	—
Iceland	21.06.85	—	4.12.95	14.02.97
Ireland	21.06.96	Yes	27.06.96	19.12.03
Italy	13.01.95	Yes	27.06.96	19.12.03
Japan	20.06.96	Yes	19.11.96	—
Korea	29.01.96	Yes	26.11.96	—
Luxemburg	05.10.00	Yes	27.06.96	19.12.03
Mexico	18.03.83	Yes	—	—
Netherlands	28.06.96	Yes	28.06.96	19.12.03
New Zealand	19.07.96	—	4.12.95	18.04.01
Norway	24.06.96	Yes	4.12.95	30.12.96
Poland	13.11.98	—	—	—
Portugal	3.11.97	Yes	27.06.96	19.12.03
Spain	15.01.97	Yes	3.12.96	19.12.03
Sweden	25.06.96	Yes	27.06.96	19.12.03
Switzerland	—	—	—	—
Turkey	—	—	—	—
United Kingdom	25.07.97	Yes	27.06.96	10.12.01
United States	—	Yes	4.12.95	21.08.96

Source: FAO, United Nations, RFMOs and OECD Secretariat..

Table A2.2. Overview of Major RFMOs and their IUU Catch Assessment

Name	Establis-hed	No. of Members	Target Areas	Target Species	IUU Catch Assessments
ICCAT	1969	38 (EU)	Atlantic Ocean/ adjacent area	Tuna and tuna-like species	Significant impact (10% of major catches); 98/99 reported to FAO suggests 25000 tons of bigeye tuna only
IATTC	1950	14	Eastern Pacific Ocean	Skipjack and yellowfin tuna	Possible, not important; 5000 tons reported to FAO
CCSBT	1994	4	Southern hemisphere sea area at high latitudes	Southern bluefin tuna	Minimum 4000 tons, 1/3 of total annual catches (11750 tons in '99)
IOTC	1996	20 (EU)	Indian Ocean (FAO area[1] 51, 57)	Yellowfin, skipjack tuna, marlins and swordfish	10% of all tuna landings (120000-140000 tons)
CCAMLR	1982	24(EU)	The Antarctic (FAO area[1] 45, 48 and 88)	Antarctic marine living resources (euphausiid, toothfish, etc.)	25% (8418 tons) of total estimated catches
NAFO	1979	17(EU)	Northwest Atlantic Ocean	All marine living resources except salmon, tunas, whales, etc	In 2001 some 10 000 tons of groundfish and 3 100 tons of Greenland halibut
NEAFC	1982	6(EU)	Northeast Atlantic (FAO area[1] 27)	Redfish, mackerel, herring, blue whiting, deep sea species	Redfish is the most important species accounting for 20 per cent of trade in redfish i.e. 20-25 000 tons
WCPFC	2000	20	Western and Central Pacific Ocean	All species of highly migratory fish stocks (except sauries)	Important but not quantified

1. FAO Statistical Area

Source: FAO.

Table A2.3. Potential Impacts of IUU Fishing

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PARAMETER	INDICATORS	IMPACTS
Contribution of fishing to GDP/GNP	Value added; value of landings	IUU fishing will reduce the contribution of EEZ or high seas fisheries to the national economy and lead to a loss of potential resource rent.
Employment	Employment in the fishing, fish processing and related sectors	IUU fishing will reduce the potential employment that local and locally based fleets may make to employment creation.
Export revenues	Annual export earnings	IUU fishing by reducing local landings and non payment of access dues will reduce actual and potential export earnings. This will, of course have potentially serious implications for surveillance activities, where these are supported wholly or partly by export revenues (or port revenues, see below).
Port revenues	Transhipment fees; port dues; vessel maintenance; bunkering	IUU fishing will reduce the potential for local landings and value added.
Service revenues and taxes from legitimate operations	Licence fees, revenue of companies providing VMS, observer etc facilities, exchequer revenue from company taxes.	IUU fishing will reduce the resource which in turn will reduce the other revenues that would accrue from companies providing legitimate fishing services. This includes company taxes
Multiplier effects	Multiplier impacts on investment and employment	The direct and indirect multipliers linked to fishing and fishing associated activities will be reduced with the loss of potential activities through IUU fishing.
Expenditure on MCS	Annual expenditure on MCS linked to IUU fishing.	The existence of IUU fishing will put budget pressures on MCS/fisheries management[34]
Destruction of ecosystems	Reduction in catches and biodiversity of coastal areas	Loss of value from coastal areas e.g. inshore prawn fishing areas and from mangrove areas that might be damaged by IUU fishing. Reduction in income for coastal fishing communities.
Conflicts with local artisanal fleets	Incidences recorded of conflict between IUU fishing vessels and local fishing fleets.	Reduction in the value of catches for local fishing fleets. Possible increased health and safety risks because of conflicts between the artisanal and industrial fleets.
Food security	Availability of fish for local consumption (food and protein balance sheets)	The reduction in fish availability on local markets may reduce protein availability and national food security. This may increase the risk of malnutrition in some communities.

Source: Amended from Agnew and Barnes "Economic Aspects of IUU Fishing: Building a Framework" in *Fish Piracy – Combating Illegal, Unreported and Unregulated Fishing* (OECD 2004).

Table A2.4. Potential Social Impacts of IUU Fishing at the National Level

PARAMETER	INDICATORS	IMPACTS
Employment	Employment rates in marine fishing communities	IUU fishing may lead to lower employment if it has a negative impact on stocks and the activities of artisanal and local coastal fishing activities. Less opportunities for new generations of fishers to participate in fishing
Household incomes	Gross and net household incomes	IUU fishing through conflicts with local fishing fleets and by over exploitation of certain species may lead to reduction in household incomes and therefore exacerbate poverty. Possible negative impacts on income distribution.
Gender issues	Employment of women in fishing and fish marketing	IUU fishing may have a negative impact on shore fishing by women and on the marketing opportunities for women who in many societies have an important role in basic fish processing and marketing.
Nutrition and food security	Availability of fish on local markets at affordable prices.	In some cases IUU fishing through its negative impact on fish stocks and availability may have a detrimental impact on the availability of fish, an important source of protein in some countries.

Source: Amended from Agnew and Barnes "Economic Aspects of IUU Fishing: Building a Framework" in *Fish Piracy – Combating Illegal, Unreported and Unregulated Fishing* (OECD 2004)

Annex 3.

Key Observations and Findings by the IUU Workshop Chairs[35]

The issue of illegal, unreported and unregulated (IUU) fishing has moved to the forefront of the international fisheries policy agenda in recent years. Governments around the world have recognized the negative effects of IUU fishing activities on resource sustainability, biodiversity and economic and social sustainability. In many cases, the burden is borne by the fishing industry. The OECD hosted a workshop on IUU fishing activities in Paris on 19-20 April 2004. The objective of the workshop was to gather information and data on the extent of IUU fishing and identify the economic and social drivers to IUU fishing. Around 120 experts from OECD and non-OECD countries, regional fisheries management organizations, international governmental organizations, non-governmental organizations and academia attended the workshop.

The workshop was organised around 4 sessions addressing: the state of play of IUU fishing; data and information needs; economic and social drivers; and possible future actions. The following observations and findings from the Workshop have been compiled by the Workshop Chairs.

The State of Play on IUU Fishing

- IUU fishing is a world-wide problem, affecting both domestic waters and the high seas, and all types of fishing vessels, regardless of their size or gear.

- IUU fishing is harmful to fish stocks and undermines the efficiency of measures adopted nationally and internationally to secure fish stocks for the future.

- IUU activities also have adverse effects on the marine ecosystem, notably on the populations of seabirds, marine mammals, sea turtles and bio-diversity as a whole (discards, etc.).

- IUU fishing distorts competition and jeopardizes the economic survival of those who fish in accordance with the law and in compliance with relevant conservation and management measures.

- There are important social costs associated with IUU fishing as it affects the livelihoods of fishing communities, particularly in developing countries, and because many of the crew on IUU fishing vessels are from poor and underdeveloped parts of the world and often working under poor social and safety conditions.

- The impact of IUU fishing for some species (primarily tuna and tuna-like species) is global, whereas that for other species (e.g., Patagonian toothfish and Orange roughy) is specific to those areas where such species occur. This means that global and local solutions are required, as well as solutions tailored to specific species.

35. The Workshop Chairs were Mr. Ignacio Escobar, Mr. Jean-Francois Pulvenis de Seligny, Mr. Nobuyuki Yagi, Ms. Jane Willing and Ms. Lori Ridgeway.

- There is a concern that excess capacity in fisheries in OECD countries can lead to a spillover of capacity into IUU fishing activities.

- IUU fishing is a dynamic and multi-faceted problem and no single strategy is sufficient to eliminate or reduce IUU fishing — a concerted and multi-pronged approach is required nationally, regionally and internationally, and by type of fishery. The full range of players should be involved in helping bring forward solutions to the IUU problem.

- Many developed and developing states have not been fully responsible in complying with their responsibilities as flag states, port states, coastal states, states of vessel owners and trading nations.

- The FAO International Plan of Action to combat IUU fishing contains tools to tackle the IUU issue. The question is to find ways to better implement such tools.

Information and Data Needs

- In spite of recent improvements in information collection, there remains a lack of systematic and comprehensive information on the extent of IUU operations and impacts. This is compounded by the varying level in quality, accessibility, reliability and usefulness of the available data.

- There are a number of international instruments addressing the collection of fisheries information and statistics. However, these need to be integrated and further, there remains a need for improvement in national statistics on trade in fish and fish products, especially in relation to IUU fishing.

- There is a diversity of actors involved in gathering, processing and disseminating information on IUU fishing activities — governments, intergovernmental organizations, RFMOs, RFBs, NGOs and industry.

- Trade-tracking and the resulting accumulation of information by market countries are an enormous task but it is very important for the creation of effective measures to combat IUU fishing.

- There is a need to broaden the scope of the information gathered so it covers activities and situations "upstream" and "downstream" of the IUU fishing operations themselves. This will help to better define the nature and scope of IUU fishing and to improve knowledge of the economic and social forces which drive IUU fishing in order to help target future actions.

Economic and Social Drivers

- Under current conditions, IUU activities can be extremely profitable due, amongst other factors, to lower cost structures than for compliant fishing activities. Strategies to combat IUU fishing need to include measures that reduce the relative benefits and raise the costs of IUU fishing.

- The demonstration effect achieved by government and RFMO efforts in fighting IUU activities is significant. This will provide positive signals to legal fishers and send the message to IUU fishers that their products will be excluded from the international market and that their activities will not be tolerated.

- Inefficient domestic fisheries management may work as a driver for IUU fishing activities; the more economically efficient management is the higher the fisher income will be and thus lessen the incentive to engage in IUU activities.

- The size of penalties and the risk of being apprehended is not generally a sufficient deterrent to IUU fishing activities. This is complicated by the ease of re-flagging vessels and the difficulties in tracking company structures and identifying beneficial owners of IUU vessels. The lack of harmonisation of penalties across countries is also a concern.

- IUU fishing inflicts damage on a law abiding fishing industry aiming at sustainable exploitation.

- IUU fishing activities also make it harder for countries to strike a balance between food security and protection of the marine environment.

Possible Actions

- There is a wide range of possible measures that can be undertaken to address the problem of IUU fishing. These will need to cover legal, institutional, economic and social dimensions and will require the involvement of multiple players in the national, regional and international fisheries sectors.

- Determining the cost-effectiveness of alternate approaches to addressing IUU fishing problems should be undertaken to help identify priorities amongst the possible options so that the best results can be obtained from limited resources that are available to national governments and international organizations.

Flag state actions

- Links between flags of convenience and tax havens have been established and a more concerted approach towards both could be undertaken.

- There is a need to improve transparency on the procedures and conditions for re-flagging and de-flagging.

- More countries could usefully investigate the possibilities for applying extra-territorial rules for their nationals.

- The penalties for IUU offences should be significantly increased and harmonised between jurisdictions.

Port state actions

- The development of minimum guidelines for port state controls and actions against IUU fishers, particularly with respect to the use of prior notice and inspection requirements (including health and safety conditions), should be encouraged. The harmonisation of these controls and actions should be a priority.

- There is a need to ensure a broader use of port state control measures including inspections, preventing access to services and goods of IUU vessels

- There needs to be an agreement to make it illegal to tranship, land and trade in IUU fish.

- There is also a need to improve the monitoring of the provision of at-sea services and transhipment of fish and fish products.

Coastal state actions and international trade responses

- It is necessary to augment monitoring, control and surveillance capacities and improve fisheries management across the board, but in particular in developing countries.

- Improving and extending the use of catch and trade documentation schemes could help provide additional information on IUU activities.

- Fair, transparent and non-discriminatory countermeasures should be adopted, consistent with international law, against countries that do not comply with the conservation and management measures adopted by RFMOs or fail to effectively control the vessels flying their flag in order to ensure they comply with the conservation and management measures adopted by RFMOs.

- Countries should identify the area of catch and name of fishing vessel and its past history (of name and flag) in order to collect information necessary for better fisheries management and elimination of IUU fishing.

RFMO actions

- Strengthening the mandate and role of RFMOs and RFBs, in particular their possibilities for tracking IUU fishing, is an important requirement.

- There is a need to improve information sharing and cooperation among RFMOs, particularly in terms of linking and integrating their data on IUU fishing activities.

- More RFMOs should consider publishing lists of companies and vessels engaged in high seas IUU activities and lists of vessels that are authorized to fish. The use of positive and negative lists of IUU fishing vessels and companies is strongly encouraged in this regard.

- The creation of a global record/register of authorized fishing vessels that are technically capable of engaging in high seas fishing should be considered.

International coordination

- Resources matter: more technical and financial resources are needed for capacity building, in particular in the developing states for monitoring, control and surveillance, and in all activities in combating IUU activities.

- The international community should move to ratify relevant international treaties on labour and working conditions in the maritime sector in order to strengthen international hard and soft laws to protect fishing crews in general.

- Improved monitoring foreign direct investments (out-going and in-coming) in the fishing sector will assist in tracking potential IUU fishing operations.

- Work should be undertaken nationally and multilaterally to lift the veil of corporate secrecy surrounding the companies undertaking IUU fishing activities and related services. Partnerships between public authorities and businesses offer important scope in the fight against IUU. In this regard, the OECD Guidelines for Multinationals offers some possibilities that could be followed-up by national regulatory authorities.

- A major effort is required, in particular by regional fisheries management organisations and market countries, to collect and disseminate relevant information.

- The efforts already underway to improve information at all levels and mechanisms to share information need to be supported and strengthened.

NGO and private sector actions

- Whenever possible, governments should consider bilateral consultation with businesses engaged in IUU activities to determine if alternative means of getting IUU vessels out of the business can be found.

- There should be continued efforts to communicate the IUU problem, for example through promotional/educational campaigns with the market including intermediate buyers, processors, distributors and consumers. Such activities will help raise awareness of the problem and improve the knowledge of the social, economic and environmental consequences of IUU activities.

- Industry and NGOs should be encouraged to continue to self-organise their response to IUU fishing and information collection.

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CHAPTER 2

Economics of IUU Fishing Activities

Abstract

The purpose of this chapter is to develop an analytical framework for understanding the IUU fishing activities. The analytical framework borrows heavily from the economics of crime and punishment. Section 1 clarifies the concepts and terms used; *i.e.* IUU fishing activities can be conducted by vessels registered in flag States assumed to comply with current international regulations and by vessels registered in flag States not party to RFMOs or to international conventions. Section 2 presents the analytical framework: theory suggests that an individual will commit an offence if and only if the [private] expected benefit from IUU fishing exceeds the expected sanction for doing so. The following section examines variables that influence the fishing profit function. The fourth section provides evidence of the likely consequences of organised IUU fishing operations. Based on this analysis, section 5 proposes measures that can be entertained to combat IUU fishing activities.

Introduction

Most of the previous investigations and analyses of Illegal, Unreported and Unregulated (IUU) fishing activities have been undertaken in the context of legal and jurisdictional frameworks. Very little, if any, effort has been invested in understanding the basic nature of IUU behaviour and analysing the IUU problem as an economic-driven activity. The purpose of this chapter is to redress this situation by taking as its point of departure the economic basis of IUU fishing. Incentives to engage in IUU fishing activities are economic by nature. Incentives can be of two distinct forms: to earn higher revenues and/or to incur lower costs than otherwise would be the case if rules were observed. However, although IUU fishing activities are economic by nature, it should be underlined that they can only take place in the absence of appropriate controls, which makes them a low-risk cost undertaking for IUU operators.

To understand IUU fishing activities it is necessary to identify and analyse the economic, institutional (regulatory) and social factors that create these incentives. This chapter compares the expected fishing profit for a vessel engaged in IUU fishing activity with the expected profits for a vessel conducting regular fishing activities. Based on this

analysis, actions are then proposed to reduce the incentives to engage in IUU fishing activities.

1. Definition

The analysis deals with IUU fishing operations in general, as defined by the FAO. For the purpose of the analysis, it is assumed that the problem of IUU fishing can take two distinct, extreme forms.[1] The first concerns IUU fishing operations conducted by vessels registered in flag States assumed to comply with current international regulations. These States, which are expected to enact and enforce appropriate regulations, are referred to as "committed" States. Accordingly, vessels registered in these States are referred to as "committed" [2] vessels.

The second distinct form concerns IUU fishing operations conducted by vessels registered in flag States not party to RFMOs or to international conventions. These States, which are assumed to have little or no regulations in place, are referred to as "Non-Party" (NPA) States. Accordingly, vessels registered in these States are referred to as "Non-Party" (NPA) vessels.

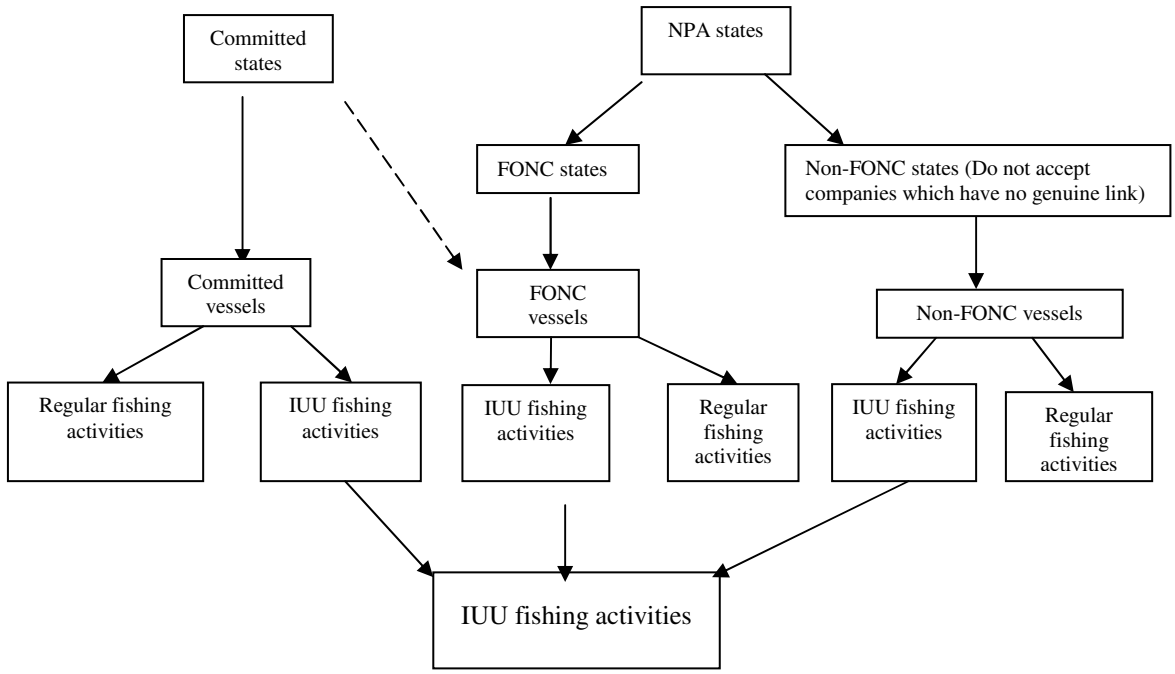
Among IUU fishing activities conducted by NPA vessels, a particular concern is IUU fishing that takes place through flagging or re-flagging vessels originating from committed countries in "Non-Party" flag States, which register vessels from other countries without having a "genuine link" with the companies owning the vessels and without having the ability or the willingness to ensure effective control of their flag. Such countries are referred to as "Flags of Non Compliance" (FONC), while foreign vessels registered in FONC States in order to engage in IUU fishing are referred to as FONC vessels. Figure 2.1. below summarises the typology of IUU fishing activities.[3]

1 In practice, such a "black and white" approach needs to be considered with caution. Grey areas are often the rule rather than the exception, with committed States sometimes complying only with some international rules/agreements and Non-Party States also complying with some international rules/agreements.

2 Respectively referred to as "responsible" and "standard" vessels in the Spanish and the Japanese works (see footnote 4).

3 It should be noted that this does not imply that IUU fishing activities are only carried out by vessels registered in Non-Party States or in FONC States, nor that all vessels registered in these States are engaged in IUU fishing activities. When appropriate (*i.e.* when costs and benefits differ), the following may refer to "IUU/FONC vessels" and "IUU/committed vessels". The acronym "IUU/FONC vessels" refers to those vessels registered in FONC States in order to engage in IUU fishing activities. The term "IUU/committed vessels" refers to those vessels engaged in IUU fishing activities and registered in committed States.

Figure 2.1. Typology of IUU Fishing Activities



Where:

- Committed States: flag States assumed to comply with current international regulations.

- NPA States: flag States not party to RFMOs or to international conventions.

- FONC States: those NPA flag States which in addition accept to register vessels from other countries without having a "genuine link" with companies owning the vessels and without having the ability or the willingness to ensure effective control of their flag.

– – – → Signifies the engagement of committed States' citizens into IUU/FONC fishing activities, either through the re-flagging of existing vessels originating from committed States or new investment in IUU fishing capacities.

Source: OECD Secretariat.

2. Analytical Framework [4]

The analytical framework draws heavily on the economics of crime and punishment, the basis of which are the work of Becker (1968) and Stiegler (1971). The main lesson/outcome of this theory is that a risk-neutral individual[5] will commit an offence if, and only if, his private expected benefit [E(B)] exceeds the expected sanction [E(S)] for doing so, *i.e.,* in this context, if the expected profit [E(π)] of IUU fishing is positive. In general terms, this result can be expressed as follows (details of the model can be found in Annex 1):

(1) Expected profit from IUU > 0 ↔ Expected benefit > Expected sanction

or (2) E (π) > 0 ↔ E (B) > E (S)

or (3) $Prob_2$ x (B) > $Prob_1$ x (S),

Where:

E (π): expected profit

E (B): expected benefit

E (S): expected sanction (in absolute value)

$Prob_1$: probability of being apprehended,

$Prob_2$: probability of not being apprehended, with $Prob_2$ = (1-$Prob_1$),

The following analysis also seeks to understand why fishers engage in IUU fishing activities ***rather*** than in regular fishing activities. In this context a risk-neutral individual will engage in IUU fishing activities if the private expected profit [E(π_{iuu})] exceeds the private profit expected when engaging in regular fishing activities [E(π_r)][6]: $\boldsymbol{E(\pi_{iuu}) > E(\pi_r)}$.

There are three key assumptions underlying this broad framework:

(a) The economics of crime and punishment makes the assumption that an individual's compliance decision is not influenced by the behaviour of other individuals *i.e*., decisions are independent of each other (Jost, 2001). However, co-ordination may play an important role in the decision on whether or not to engage in illegal operations (Jost, 2001). In the context of IUU fishing activities, recent developments where organised fleets of IUU vessels with common ownership

4 A similar approach was previously developed by Spain as part of the OECD Study "Towards Sustainable Fisheries" ("The quotient of convenience: Estimation of the cost relative to responsible fishing", in OECD 1997, pages 229-247; [OECD/GD(97)54]). A notable difference between the present paper and the work developed by Spain is that all the variables are translated into private and social costs of responsible fishing in the Spanish contribution. Japan also developed a similar approach in the framework of the OECD Study *Fisheries Market Liberalisation: Scope and Effects* ("The economy of Flag of Convenience Tuna Fishing Vessels"; OECD, 2003a, pp. 316-320). This latter work mainly focuses on the benefit and operating cost sides of the problem. Both studies provided useful insights to the present document.

5 That is an individual that has neither particular preference for nor aversion to the risk.

6 In the document, index ***iuu*** refers to IUU fishing activities; index ***r*** to regular/committed fishing activities; index ***c*** to FONC vessels.

undertake IUU fishing may thus require particular attention. In addition, the factors affecting the decision whether to engage in IUU fishing activities may not be same for individuals and companies.7

(b) The framework also makes the assumption that individuals are "risk-neutral". While such an assumption may be considered sound at a global level, it does not always hold true in the real world. For many years, "risk-preference" and "risk-adverse" behaviours have been identified in the specialised literature (see Varian, 1992). In the context of IUU fishing activities, it should be noted that the nature of an individual's utility function is likely to play a particularly strong role in understanding (and modifying) IUU behaviour. This may be especially relevant when dealing with crews originating from low-income countries.

(c) Finally, the economics of crime and punishment makes the assumption that fishers' decisions about whether to fish illegally are based solely on profit-maximising criteria with penalties incurred simply being perceived as a "cost of doing business". However, non pecuniary factors, based on moral and social considerations, can also play a major role in fishing decisions (Sutinen and Kuperan, 1999). This may require further exploration, in particular when IUU fishing activities are carried out by individuals living within strong fishing communities or by established enterprises that might have an interest in paying attention to corporate governance issues. A variable denoting a "moral/reputation" dimension can be included in the model.

3. Exploring the Incentives to Engage in IUU Fishing Activities

Based on the analytical framework, this section explores the variables of the profit function for which incentives to engage in IUU fishing may exist. For each of these variables, the factors behind the incentives are identified.

The methodology to do so involves comparing on a pair-wise basis a vessel engaged in IUU fishing activity to a vessel conducting regular fishing activities and registered in a committed State (*i.e.*, a "reference" regular/committed vessel). First, section 3.1 presents the situation where both IUU and regular vessels are registered in a committed State. Second, section 3.2 compares the "reference" regular/committed vessel with an IUU/FONC vessel.[8]

3.1. Incentives to engage in IUU fishing activities for vessels registered in committed States

This section considers the general situation where flag States are assumed to comply with international agreements on resource conservation and on work and safety conditions. In particular, States are assumed to have ratified current international conventions relating to fishing (UNCLOS, UNFSA) and to belong to the relevant regional

7 See section below "Enlarging the Framework" and Agnew and Barnes, reproduced in *Fish Piracy: Combating Illegal, Unreported and Unregulated Fishing* (OECD, 2004).

8 The situation of IUU fishing conducted by vessels registered in NPA is not discussed in the paper, as it doesn't provide any additional insight compared to section "Incentives to engage in IUU fishing activities for vessels registered in committed States", which deals with two vessels flagging the same flag, and to section "Incentives to engage in IUU/FONC fishing activities on the high seas", which deals with those NPA vessels engaged in IUU/FONC fishing. It should, however, be mentioned in the interest of the completeness of the approach.

fisheries management organisation (RFMO). As fishing activities are assumed to be regulated, we are thus considering both illegal and unreported fishing activities.

In order to identify the incentives to engage in IUU activities, we compare two committed vessels, assumed to be technically identical and thus to have the same capital and operating cost structure. Incentives to engage in IUU fishing activities would then depend on the difference between the expected total revenues and the cost of engaging in IUU fishing operations (*i.e.*, fraud cost, avoidance cost, moral/reputation cost and the expected sanction).

The market side: Higher expected revenues

Quantity of fish caught (Q_i)

As fishing activities are assumed to be regulated by committed States, it is assumed that committed vessels are constrained both by output regulations (*e.g.,* vessel quota under RFMO management, minimum fish size) and input regulation (*e.g.,* effort limitations,, gear type, etc). All things being equal, a vessel may engage in IUU fishing activities to catch more fish than it could have expected when complying with rules: $\boldsymbol{Q_{iuu} > Q_r}$

One of the fundamental factors influencing IUU fishing activities is the possibility for a vessel to catch more fish than it is entitled to as a committed vessel. This can occur because of the imbalance between a vessel's fishing capacities and its fishing possibilities. The imbalance between fishing capacities and fishing possibilities can have various structural origins, such as general overcapacity in the domestic fleet or inappropriate allocation of fishing rights. Both may result from inappropriate management regimes. It may also be due to temporary factors, such as the inter-annual variation in fishing possibilities (*e.g.*, seasonal TAC).

In the particular case of RFMOs, IUU fishing activities may also take place because some Members are not granted "sufficient" fishing possibilities in comparison to their - sometimes emerging - fishing capacities. This may be due both to the closed nature of some RFMOs and the lack of fishing history of some members, which restricts their potential claims to greater shares of a TAC.

Additional factors may also affect this variable, and thus the incentive to engage in IUU fishing operations:

- As the resource becomes scarcer due, among other things, to IUU fishing activities, the "committed" quota may decline still further for vessels complying with regulations, while the amount fished by IUU vessels may remain unchanged. Hence, in the short term this will reduce incentives for legal/regular operators while in the long term more uncertainty is added to fisheries management.
- The decline in stocks and quota may create market pressure, and thus lead to higher prices for both types of vessels. This may incite additional vessels to engage in IUU fishing.
- The reduction in stocks resulting from IUU fishing may have some effects on monitoring, control and surveillance activities (MCS). For example:
  - Reduced stock sizes could lead to lower government revenue from the fishery (either in the form of licence sales or tax receipts). This could in turn lead to

decreased MCS budgets. Unless additional funds are identified (e.g., by increasing fines for IUU activity), this can increase the difficulties faced by a management body in adequately policing its waters.

– Furthermore, some observers suggest that the presence of committed vessels can have a deterrent effect on IUU vessels (e.g. Agnew and Barnes,9 reporting on the CCAMLR situation). Committed vessels may have observers on board who have a statutory obligation to report all vessel sightings. Committed vessels also find their interests coinciding with those of management authorities when it comes to informing on poachers.10 However, as stocks are depleted the fishing opportunities of committed vessels also decrease, with the result that their effectiveness as a deterrent may be reduced.

Price of the fish (Pi)

It is assumed that both types of fishing operation (IUU and regular) have access to similar markets and are likely to receive the same price per kg of fish: $\boldsymbol{P_{iuu} = P_r}$**.** Underlying this assumption is the near impossibility, given current technology, to physically differentiate between IUU products and products from regular fisheries, although an appropriate labelling mechanism may help in this respect.. Nevertheless ,it should be noted that, all things being equal, the (relative) difference between IUU and regular profit rises with the price and adds to the incentive to engage in IUU activities..

Expected Total Revenues $E(TR_i)$

As a result, engaging in IUU activities is likely to generate higher revenues than complying with the rules: $\boldsymbol{TR_{iuu} > TR_r}$. However, IUU catches have to be "converted" into revenues to make IUU fishing a profitable operation. This means that a vessel engaged in IUU fishing needs to avoid being identified/apprehended while acting in violation of legislations and that its catch is not properly identified as IUU fish in subsequent stages of the value chain. If the vessel conducting IUU fishing activities is apprehended and proved guilty, its catch may be confiscated, and its expected total revenue $E(TR_{iuu})$ would be zero. Conversely, vessels complying with regulations don't face any risk concerning their expected total revenues.[11]

It is thus difficult to determine whether expected total revenues derived from IUU fishing activities are greater than those derived from regular operations. Incentives to undertake IUU activity exist as long as the total revenues differential $[(TR_r - TR_{iuu}) / TR_{iuu}]$ is higher than the probability of being arrested (Prob1; see Box 1 below): $\boldsymbol{E(TR_{iuu}) > E(TR_r)}$**.**

9 See *Fish Piracy: Combating Illegal, Unreported and Unregulated Fishing* (OECD, 2004), p.184.

10 For instance, a licensed Australian trawler spotted a notorious IUU vessel, the Eternal (previously the Arvisa 1, Kambott or Camouco, using several different flags) in French waters around Kerguelen, and after calling the French authorities took up hot pursuit until the Eternal was intercepted by the French naval vessel the Albatross on 3 July 2002, arrested and taken to Reúnion. *La Voz de Galicia*, 9 July 2002.

11 Other types of uncertainty (Gates, 1984) are not considered here, as it is assumed that they equally affect both types of vessel operations.

Box 2.1. Linkage between Revenue Differential and Probability of Being Apprehended

- $Prob_1$: probability of being apprehended and punished (equals 0 for regular/committed operations),
- $Prob_2$: probability of not being apprehended and punished, with $Prob_2 = 1\text{-}Prob_1$,
- TR_{iuu}: total revenues derived from IUU fishing activities if not apprehended. Otherwise, total revenues equal zero (assuming the confiscation of the catch)
- TR_r: total revenue derived from regular fishing activities (certain)
- $E(TR_{iuu}) > E(TR_r)$
- $\leftrightarrow Prob_1 \times 0 + (1- Prob_1) \times TR_{iuu} > 0 \times TR_r + 1 \times TR_r$
- $\leftrightarrow Prob_1 < (TR_r - TR_{iuu}) / TR_{iuu}$

Source: OECD Secretariat.

IUU fishing activities will therefore be influenced by MCS capacities and the ability and/or willingness of the State to enforce regulations. This will influence the probability of a vessel being apprehended (Prob1). It should be added that "ineffective" MCS does not solely result from the inability of the flag State to take appropriate actions. It may also be due to the insufficient MCS capacities of all RFMO Party States, as well as a lack of co-operation between those States.

In addition, the probability of being apprehended may also be affected by the avoidance behaviour/strategy of IUU vessels (including the number of vessels operating IUU fishing activities in the same fishing ground at the same time; see discussion on co-operative behaviour in section 4 below).

The cost side: insufficient disincentives

Avoidance cost (AVi).

To avoid being detected while acting in contravention of management rules, IUU vessels are likely to incur avoidance costs in the form of additional steaming time, steaming fuel costs, "research" operation (*e.g.,* costs associated with the detection of MCS vessels, including electronic equipment costs) or associated transaction costs that are not likely to be levied on regular vessels. As a result, $\boldsymbol{AV_{iuu} > AV_r}$.

Incentives to engage in IUU fishing activities will continue to exist as long as the avoidance cost is not considered "sufficiently" high by vessels operators. While the appropriate level of avoidance cost may vary among IUU operators (*e.g.*, due their relative preference *i.e.*, risk aversion), it is nevertheless linked to insufficient MCS capacities and/or that the rules are not enforced *i.e.,* lack of appropriate control.

Fraud Cost (FC_i)

To convert IUU catches into revenues, IUU vessels need to circumvent reporting, labelling, fiscal or any other regulatory measures in place. In doing so, IUU vessels are likely to face a fraud cost which is not paid by regular vessels. Hence $\boldsymbol{FC_{iuu} > FC_r}$.

Fraud cost may even include the cost of financing corruption where State officials are involved either directly or indirectly. A particular avenue for IUU companies to take would be to disguise their fish through misnaming catches, repackaging and re-labelling (see Agnew and Barnes in *Fish Piracy: Combating Illegal, Unreported and Unregulated Fishing* (OECD, 2004). Assuming that the catch is from a different stock, genetic methods of identifying the species from fish products could be used. These methods are, however, usually expensive and not available routinely for control authorities. Therefore, attempts to disguise fish products may go undetected.

As in the case of avoidance costs, incentives to engage in IUU fishing activities will not diminish while fraud costs are not considered "sufficiently" high by vessel operators. The low level of fraud cost could be attributed to insufficient MCS capacities, or may be the result of the low level of sanction faced by IUU operators. The higher the expected sanction, the higher the return to engage in fraud operations would have to be before an IUU fisher would consider undertaking an IUU activity.

Moral/Reputation Cost (RE_i)

When engaging in IUU fishing activities, both individuals and companies may face a moral/reputation cost. This could, for example, take the form of being outlawed from the fishing community or boycotted. While this cost may be seen as a non-monetary one, it may nevertheless be transformed into loss of revenues or cost to "recover" lost reputation. This cost is unlikely to be a concern for regular vessels so that $\boldsymbol{RE_{iuu} > RE_r}$.

Once again, incentives to engage in IUU fishing activities will exist as long as the moral/reputation cost is not considered "sufficiently" high by IUU operators. The low level of moral costs can be explained by three main drivers. First, IUU fishing activities may not be perceived as a "genuine" crime. There is no "scene of the crime" helping people understand the environmental and social damage that result from IUU fishing (Boostrom, 2000). Second some fishers consider that it is not possible to "over-fish" fish stocks. Third, with respect to the particular aspect of the high seas, IUU operators may consider that they are just stealing "anonymous resources". As showed by Hatcher *et al.* (2000), this may play an important role, as social/community-based moral considerations may no longer apply

Expected sanction $E(S_i)$

Any committed vessel acting in contravention of its flag State's rules faces the risk of being prosecuted and sanctioned wherever it operates. This follows from the important UNCLOS provision that flag States have the responsibility to ensure that vessels flying their flags follow the rules. Vessels complying with the rules do not face this risk ($E(S_r)=0$), so that $\boldsymbol{E(S_{iuu}) > E(S_r)}$.

The same conclusion can be drawn: incentives to engage in IUU fishing activities will not decrease as long as the expected sanction is not considered "sufficiently" high by vessel operators. The level of expected sanction is positively linked to two main factors: the probability of being apprehended ($Prob_1$) and the fine/sanction level (S_c).

Together with insufficient MCS capacities or willingness (resulting in the low probability of a vessel being apprehended), an additional factor is then the inability to apply sufficiently high sanctions (Box 4 illustrates the impact of fines on the expected profit).

3.2. Incentives to engage in IUU/FONC fishing activities on the high seas

Consider now the situation where a fishing operator from a committed State decides to register its vessel in a "Non-Party" State, with the explicit objective of engaging in IUU fishing activities, thus circumventing domestic regulations. Assuming that the "Non-Party" State registers the vessel without having a "genuine link" with the company that owns it, then this State is designated as a "Flag of Non Compliance or FONC State, and vessels registered in these States are "FONC vessels".

In order to identify the incentives to engage in such fishing operations, we now explore the differences between a FONC vessel and a committed vessel engaged in high seas fishing activities, for each component of the profit function.

Market side: Higher Expected Total Revenues

With respect to the operations of FONC vessels, it should be recalled that on the high seas, even in a fishing area under RFMO jurisdiction, a FONC vessel is not necessarily bound by international rules and is effectively beyond the reach of international law.[12] In addition, as long as the FONC State fails to ensure appropriate control, the probability of a FONC vessel being apprehended and punished on the high seas is zero.[13] Accordingly, the Expected Total Revenues of FONC vessels' activities on the high seas may be considered as "certain"[14] and equal to Total Revenues (Q_i x P_i) so that $\boldsymbol{E(TR_c) = TR_c}$.

Committed vessels engaged in high seas fishing activities are expected to comply with national, regional (when operating under RFMO jurisdiction) and international regulations. Their probability of being punished is thus zero: $\boldsymbol{E\ (TR_r) = TR_r}$.

As in both cases total revenues are certain, this section only focuses on the factors influencing catches and prices.

Quantity of fish caught (Q_i)

A committed vessel is in general constrained both by output regulations (*e.g.*, vessel quota under RFMO management, minimum fish size) and input regulation (*e.g.,* effort limitations, seasonally closed areas under RFMO management, gear type and size, etc). Conversely, FONC vessel activities are not constrained by regulations in the high seas. As a result, a FONC vessel is likely to catch more fish than it could have expected when

12 UNCLOS article 117 dealing with the *"Duty of States to adopt with respect to their nationals measures for the conservation of the living resources of the high seas"* offers additional insights. According to this article all States have the duty to take, or to co-operate with other States in taking, such measures for their respective nationals as may be necessary for the conservation of the living resources of the high seas. Hence to the extent that UNCLOS is customary, international law flag States have the obligation to ensure that the vessels flying their flags follow the rules. However, many FONC countries do not have the means to ensure appropriate control.

13 Except in the case of "hot pursuit" (see below).

14 See footnote 11.

complying with rules, *i.e.* : $\boldsymbol{Q_c > Q_r}$[15]**.** An illustration of this expectation can be found in the Japanese case study (see OECD, 2003a), where it is suggested that the catch amount of FONC vessels is 10% larger than "standard" operating vessels.

A number of factors contribute to this incentive. First, from an institutional perspective, the incompleteness of international legal frameworks (including insufficient willingness and capability of FONC states) and failure of States to implement international obligations increase the likelihood that FONC vessels will fish more than similar vessels complying with rules.

Second, there is a global imbalance between fishing capacities and fishing possibilities. In the particular situation of RFMOs, IUU fishing activities may for instance take place because some Non-Party States, when being considered for accession to RFMOs, are not offered "sufficient" fishing possibilities compared to their fishing capacity. An additional factor concerns the appropriateness of national management regimes in force in the IUU/FONC fishing operator's country of origin; the stronger the domestic regulations in place, the greater the incentives to circumvent them through engaging in IUU/FONC fishing activities. As noted above, there may be a dynamic element to engage in IUU fishing activities, as such behaviour is likely to reduce stocks and thus lead to more restricting regulations (*e.g.,* in the form of reduced domestic TAC.

Price of the fish (P_i)

In the absence of any measures, a FONC vessel is likely to receive the same price per kg of fish as a committed vessel: $\boldsymbol{P_c = P_r}$[16]**.**

As a result, and due to the difference in the quantity caught, the expected revenues derived from IUU/FONC fishing activities are greater than those expected when complying with rules: $\boldsymbol{E(TR_c) > E(TR_r)}$.

The cost side: Lower Expected Costs and insufficient disincentives

In addition to the incentives related to higher catch and hence higher revenues resulting from the circumvention of domestic regulations, IUU operators may also find other advantages to registering in FONC countries. These could be due to lower registration costs and lower costs of operation.

Fishing company tax rate (R_i[17]):

Tax evasion has often been cited as an incentive to have vessels flagged in an FONC country and subsequently have it engage in IUU/FONC fishing activities (Agnew and Barnes, 2003; Upton and Vangelis, 2003). Indeed, most FONC countries are likely to apply lower taxation rates than other countries, so that $\boldsymbol{r_c < r_r}$**.**

In this regard it is observed that a number of countries which do not comply with regional or international conservation rules,, or which have been involved in ITLOS[18]

15 Although there may be quality differences (*e.g.* small fish), which are captured in price effects.

16 Except if the quality is lower, in which case the price received by a FONC vessel is also expected to be lower: $\boldsymbol{Pc < Pr}$**.**

17 This is similar to how to treat the case of cost recovery (which may be taken to be a form of a tax), not further covered in this paper.

18 International Tribunal for the Law of the Sea (http://www.itlos.org).

cases (such as Belize, Panama, St. Vincent and the Grenadines, Seychelles, etc.), were also listed by OECD as tax havens in 2000. A comprehensive list of jurisdictions identified as tax havens is provided in Table A2.1 in the Annex. A number of examples of cases brought under ITLOS are provided in Box A2.1 in the Annex.

More generally, among the twenty-eight countries declared FOCs by the ITF[19] (see the comprehensive list of jurisdictions declared FOC by ITF provided in Table A.2 in the Annex), twelve (*i.e.*, 43%, highlighted in bold in Tables A1.1 and A1.2) were also listed by OECD as tax havens in 2000. These were Antigua and Barbuda, Bahamas, Barbados, Belize, Gibraltar, Liberia, Marshall Islands, Netherlands Antilles, Panama, St. Vincent and the Grenadines, Tonga and Vanuatu.

It should be noted that most jurisdictions listed as tax havens in 2000 have since made commitments to co-operate with the OECD in addressing harmful tax practices; these jurisdictions have agreed to the gradual introduction of regulatory and administrative measures to implement the agreed standards of transparency and exchange of information for tax purposes, including transparency of ownership. They are also expected to implement measures by 1 January 2006, at which date observed progress would be measured. However, it should be further noted that two of the six jurisdictions still listed as un-cooperative tax havens have significant shipping registers: Liberia and Marshall Islands [OECD (2003d)[20] and Fensby T., *pers. com.*].

Fuel cost (F_i):

As vessels are assumed to be technically identical, fuel costs of fishing (FFi) and fuel cost of steaming (FS_i) from any place *(e.g.,* the landing port) to the fishing grounds are expected to be similar: $\boldsymbol{F_c = F_r}$.

Monitoring, Control and Surveillance (MCS_i)

Under RFMOs' framework, committed vessels may have to carry additional costs associated with monitoring, control, surveillance and verification, such as on-board observers, regular inspections, VMS, etc. For instance, the purchase cost of a VMS unit is about USD 3 000-5 000, the operating cost of VMS is estimated at around USD 400-1 000 per vessel per year (polling every four hours; Kelleher, 2002), while an observer may cost up to USD 300-500 a day. In 1993, communication costs per Spanish vessel operating in NAFO amounted to around USD 26 000 per year [OECD/GD(97)54]. Such costs are by nature not borne by IUU/FONC vessels, and thus $\boldsymbol{MCS_c < MCS_r}$.

In addition to these direct financial costs, indirect costs may also occur in the form of transaction and opportunity costs, including loss of fishing time and fish quality through delays and inspections, maintenance of records required for control and reporting purposes, and increasingly complex regulations which require vessel operators to invest time in their interpretation and discussion with authorities (Kelleher, 2002).

Such direct and indirect costs related to MCS operations may play an additional role in the decision to engage in IUU/FONC fishing activities. In this context, it is worth noting that MCS operations conducted at quay and on land could reduce the costs faced

19 The International Transport Workers' Federation (ITF) use the term FOC (and not FONC) and is a federation of 621 transport trade unions in 137 countries, representing around 5 million workers (http://www.itf.org.uk).

20 OECD (2003d) "Marine Security - Ownership and control of ships: options to improve transparency".

by committed vessels, and hence the economic incentive to engage in IUU/FONC fishing activities. In particular, if MCS operations were directed at major purchasers, committed vessels operators wouldn't be the *only ones* to be charged for them, as purchasers are likely to "transfer" part of the cost associated with MCS operations onto FONC and committed operators alike.

Flag registration cost (FL_i)

In general, the cost of registration in a FONC country which has established open registers, and accepts vessels from other countries with no genuine link between the flag state and the vessel, is minimal (around USD 1 000-5 000, mainly legal costs); procedures are relatively simple and fast, and can often be done at sea.[21] Conversely, for committed vessels registered in committed countries, transfers of flag are much more costly, and may involve protracted administrative procedures. The cost of registration in a FONC country is thus lower than in a country which fully undertakes its obligations under international regulations: $\boldsymbol{FLc < FLr}$.

Insurance cost (INi)

In many cases FONC vessels may not be fully insured or not insured at all (which is however in contravention to international regulations). Hence, the cost of insurance is likely to be lower for a FONC than for a regular vessel, in particular when the capital insured has little value (see discussion on vessel capital costs below): $\boldsymbol{IN_c < IN_r}$.

Repair and maintenance costs (M_i)

This variable is partly linked to the previous one, as FONC vessel owners are not likely to pay for maintenance to the standards required by international regulations or recommendations. Conversely, committed vessels in general need to get maintenance done, as they can be prevented from leaving harbour if the seaworthiness or general conditions of the vessel are found "unsatisfactory" by competent authorities: $\boldsymbol{M_c < M_r}$.

This factor may have dramatic social (and environmental) consequences and may result from the precarious economic and social conditions in some countries. As cheap, non-informed and ready labour exists, owners of FONC vessels may neglect the state of the vessel. This factor may also be influenced by the lack of appropriate Port State control in committed States, where most vessels have to stop at least from time to time.

Crew cost (CR_i)

In many cases the crew on FONC vessels may not be operating under the health and safety conditions required by ILO and IMO regulations and recommendations. As a result, crew cost, including medical insurance, is in general lower for FONC vessels: $\boldsymbol{CR_c < CR_r}$.

For example, in the case of the CCAMLR longline fishery, it is reported that very cheap labour is used, as Indonesian, Chinese and other developing country crew are paid approximately USD 100/month (Agnew and Barnes*, Op. cit.,* 2004).

21 It should also be noted that vessel flag transfers also reduce the traceability of vessels and compromise MCS attempts to control IUU fishing, since the legitimacy of hot pursuit ceases if a vessel changes its flag.

The availability of low-cost crews reflects the poor domestic social conditions prevalent in many countries. Large economic disparities (*e.g.,* in incomes) of developed and developing countries create a ready and cheap labour pool for IUU/FONC vessels (for example many crew are Indonesian, Chinese or Filipino). The opportunity cost of labour[22] is close to zero in many developing countries, as excessive supply of labour pushes salaries to very low levels, whatever the conditions and risks associated. For instance, it is reported that the poaching of trochus in Australian waters in the early 1990s was mostly due to the extreme poverty of Indonesian fishers, who undertook the activity despite potentially heavy penalties and the risk of imprisonment (Peachey, 1991).

Another factor is the existence of excess or idle capacity that may lead to lower costs of crews to FONC vessels. Transfer of capacity not only concerns vessels (see vessel capital cost below), but also fishers. In particular, when scrapping funds are made available, fishing communities are likely to face multiple job losses through the multiplier effects of fishing opportunity losses which depress the job market in these areas. Vessels engaged in IUU/FONC fishing will therefore find it doubly beneficial, first because they would otherwise have to remain idle at the dockside and second because the labour market will be cheaper.

Vessel capital cost (VCi)

The capital cost of FONC vessels may be influenced by several factors which are all likely to reduce the cost. First, it is often assumed that part of the IUU/FONC fishing fleet consists of old vessels, for example in the case of tuna vessels transferred off the Chinese Taipei and Japanese flags since 2000 (Agnew and Barnes, 2004). Hence, the vessel capital cost is likely to be lower for FONC vessels (see example in Box 2.2.), so as ***VCc < VCr***.

Box 2.2. The Capital Cost of FONC Vessels

In the case of FONC vessels undertaking longline fishing for toothfish in CCAMLR waters, vessels may be relatively inexpensive to buy. Information is hard to come by, but there have been a number of relevant cases of contested bonds of arrested IUU vessels brought to the International Tribunal of the Law of the Sea.[23] Valuations of vessels in court cases are likely to be lower than the market price, since they are the subject of negotiations on damages. The "Camuoco" was originally valued at about USD 3 million by the French authorities which arrested it, but this was contested at the ITLOS court by Panama and it was decided that the value for bond purposes was USD 345 000. In the "Monte Confurco" case (Seychelles v France) the vessel was originally valued at USD 1.5 million by France and USD 500 000 by Seychelles, with the Court upholding the value of USD 500 000. In the case of the "Grand Prince" (Belize v France), France valued the vessel at USD 2 million and the respondent at USD 360 000, although the court does not seem to have made a judgement between these two figures. In all of these cases there are strong vested interests – for the applicant in having a high valuation (to increase the bail amount) and for the respondent in having a low valuation (to reduce the amount of bail). Therefore the "true" value of the ship is likely to lie somewhere between the two at an average of about USD 1.2 million. While these examples may not be transferable, they serve as an illustration of the relatively limited value of the capital engaged in IUU/FONC fishing activities.

Source: Agnew and Barnes, *Op. cit*., 2004.

22 For example, the remuneration of the labour engaged in the next best alternative activity.

23 Copies of the court proceedings and judgements in the ITLOS cases can be found on the ITLOS website, http://www.itlos.org.

Second, various other "capacity factors" also explain the low cost of FONC vessels, and thus the incentive to engage in IUU activities:

- Excess or idle capacity has the potential to be an extremely powerful driver for IUU fishing, as excess in supply is expected to lead to a decrease in the value of fishing capacity, *i.e.*, mainly in the value of vessels.[24]
- Some fisheries policy programmes aimed at regulating local or regional excess capacity may have adverse effects on the value of FONC vessels. In particular, when subsidies are granted to operators to sell vessels, and if these vessels subsequently become available to the "FONC vessel market", the subsidy may act to artificially depress the purchase cost (Agnew and Barnes 2004, estimate that the cost may sometimes be reduced by as much as 30%).
- Shipbuilding subsidies may also artificially decrease the capital cost of fishing vessels, and thus have the potential to be a driver for IUU fishing, especially when granted to vessels that may not have access to regular fishing opportunities. For instance, there are some signs that new long-liners are being purpose-built for the IUU fishery on toothfish (Agnew and Barnes, 2004). The number of such vessels available has increased and their purchase costs may be decreased by subsidies for building new and more efficient fishing vessels.
- Vessel capital cost may also be affected by fiscal and financial factors. The following examples serve as illustration only, and are based on sparse and anecdotal information.
- The shared objective of free circulation of capital may have adverse effects in the context of IUU/FONC fishing activities, as it often implies little restriction on investment, and in particular on foreign direct investment (FDI). As a result, OECD residents may quite easily and inexpensively invest their capital in FONC countries (*e.g.* some Estonian vessels involved in IUU fishing activities in NAFO areas are reported to operate under Icelandic ownership, OECD, 2003b).
- Some banking facilities may also reduce capital cost, for instance when a FONC vessel can be used as collateral for the attribution of a loan.
- Fiscal rules regarding depreciation of the capital may also act as an incentive to engage in IUU activities, as they may artificially reduce the cost of the capital engaged. For instance, in some countries, the law allows the capital to be depreciated over 8 years, while the lifespan of a vessel may be 20 to 30 years. As a result, a vessel can be written off the books after 8 years in some cases. A modification to such a fiscal rule may change the incentive to sell a vessel, increase the cost of fishing vessels and hence may reduce the incentive to engage in IUU/FONC fishing activities, although this will depend on the market characteristics of the IUU vessel market, an area that could be further explored.

Safety Equipment cost (SE_i)

It should be further noted that in many cases, FONC vessels are not likely to comply with general safety and pollution requirements of the IMS/MARPOL, etc. As committed vessels have to comply with such national and international regulations: $\boldsymbol{SE_c < SE_r}$.

24 The extent to which excess capacity drives IUU fishing activities is also debated in Hatcher, *Fish Piracy: Combating Illegal, Unreported and Unregulated Fishing* (OECD 2004).

This variable is also likely to be influenced by the poor social conditions and few employment opportunities prevalent in some developing countries, as labour supply remains high despite the risks incurred.

Fraud Costs(FC_i)

On the high seas, whether or not under RFMO jurisdiction, IUU/FONC vessels are not forbidden to fish under the current maritime law (see however footnote 44 on UNCLOS Article 117). Nevertheless, some trade measures are in place, attempting to prevent IUU/FONC vessels from selling catches taken in violation of international agreements. IUU/FONC vessels can then face fraud costs in order to circumvent such trade measures, as evidenced by the Japanese experience with the difficulty of ensuring that tuna from ICCAT IUU-listed vessels is not imported. Such costs are not likely to be supported by committed vessels: $\boldsymbol{FC_c > FC_r}$.

These costs may also include the cost of financing corruption where state officials are involved in either tacitly or actively assisting fraud. A particular avenue that IUU companies could take would be to disguise their fish through repackaging and re-labelling (Agnew and Barnes, in *Fish Piracy* (OECD, 2004). Although there are genetic methods of identifying the species from fish products, these methods are usually expensive and not routinely available to customs authorities. Therefore, attempts to disguise fish products may go unnoticed.

Fraud costs are likely to be heavily influenced by global and local economy imbalances. Local economy collapses, for instance, are likely to increase the incentive for corruption, decreasing its cost, therefore decreasing the cost of this part of the IUU/FONC fishing vessel's equation. They are also likely to be influenced by factors relating to organised IUU/FONC fishing operations (see Section 3).

Avoidance cost (AV_i).

Even if IUU/FONC vessels are unlikely to be controlled on the high seas, except in the case of "hot pursuit", they will probably have an interest in not being identified. They are therefore likely to support avoidance costs, in the form of steaming time, steaming fuel costs (see above) or "research" operations (*e.g.* costs associated with the detection of MCS vessels, including the cost of electronic equipment). One explanation for this behaviour is the desire not to be listed as an IUU/FONC vessel. Committed vessels are unlikely to have to face this type of cost: $\boldsymbol{AV_c > AV_r}$.

Moral/Reputation Cost (REi).

Due to their activities, IUU/FONC fishing companies are unlikely to face strong moral/reputation costs. While the drivers identified in the general case still apply (*i.e.* failure to recognise the gravity of the problem), a strong additional factor is the confidentiality allowed by some FONC jurisdictions (*e.g.,* tax havens). Lack of transparency, in particular when dealing with transboundary flows, reduces the possibility of identifying those individuals or companies against whom actions could be directed.

Expected sanction E (Si)

As already noted, on the high seas, whether or not under RFMO jurisdiction, IUU/FONC vessels are not forbidden to fish under the current maritime law (see footnote 12 on UNCLOS Article 117). Thus, even when they undermine fisheries

management, IUU/FONC vessels are rarely punished for doing so, *inter alia*, because the FONC state often lacks appropriate means to ensure action is taken. As it is assumed that committed vessels comply with national, regional and international regulations, the expected sanctions on the high seas are identical, and equal to zero, so that $E(S_c)=E(S_r)=0$.

Summing-up

Table 2.1 summarizes the differences that may arise between IUU/FONC vessels and committed vessels engaged in high seas fishing. In particular, the table indicates, for each component of the fishing profit function, which vessel may have an advantage and the main factors influencing each variable.

3.3. Incentives to engage in IUU/FONC fishing activities within a foreign EEZ

It is now assumed that both FONC and committed vessels are engaged in fishing activities within a given foreign country's Exclusive Economic Zone (including under RFMO jurisdiction if one exists) and that each type of vessel is technically identical. The main difference between this case and that of the high seas is that any FONC vessel may be controlled and prosecuted if proven guilty. Since in most cases FONC vessels don't have access rights, it is assumed here that when fishing within an EEZ, FONC vessels operate illegally, *i.e.*, in violation of national (and international) regulations.

As the ownership situation remains unchanged, the results presented in Table 2.1 are still valid for all but three variables of the profit function: the expected total revenue E(TR), the avoidance costs and the expected sanction.

Expected Total Revenues $E(TR_i)$

As on the high seas, FONC vessels are likely to fish more than committed vessels within the EEZ for a given period of time by not complying with input or output regulations. However, an important difference arises compared to the high seas situation. As FONC vessels fish in violation of national and RFMO rules, they need to avoid controls to convert the catches into revenues. If they are controlled, their catch could be confiscated, and their total revenue would be zero. Committed vessels, on the other hand, run no risk concerning their expected total revenues.[25]

[25] As mentioned above, other types of uncertainty are not considered here (Gates, *op.cit.*).

Table 2.1. Incentives to Engage in IUU/FONC Fishing Activities

Variables	Comparison between IUU/FONC vessel and committed vessel	Main factors influencing the variable
Quantity of fish	Qc > Qr	IUU/FONC vessels not bound by international regulations; Existence of excess or idle capacity; Insufficient responsibilities of FONC countries
Price of fish	Pc ≤ Pr	Insufficient premium for certified/labelled fish; Possibilities to disguise catches;
Expected Total Revenues	E(TRc) ≥ E(TRr)	Depends on the outcome of P and Q
Company tax rate	Rc < Rr	Existence of tax haven;
Fuel cost Other running cost	Fc < Fr ORc ≤ ORr	Tax system distortion; Insufficient restriction to port/facilities access; Insufficient need for avoidance behaviour;
Crew cost	CRc < CRr	Existence of ready and cheap labour, resulting from poor economic situation/outlook in developing countries; Existence of excess or idle capacity; No extra-territorial application of domestic rules;
MCS costs	MCSc ≤ MCSr	IUU/FONC vessels are not bound by national and international regulations (if charged to committed vessels)
Flagging / Registration costs	FLc < FLr	Existence of FONC countries; Re-flagging international rules (IMO)
Insurance costs	INc < INr	IUU/FONC vessels are not bound by national and international regulations; Poor economic and social situation/outlook in developing countries (existence of ready and cheap labour)
Vessel purchase cost	VC c < VCr	Subsidies to build or export vessels; Existence of excess or idle capacity; Insufficient fiscal and foreign investment rules
Repair and maintenance;	Mc < Mr	IUU/FONC vessels are not bound by national and international regulations; Poor economic and social situation/outlook in developing countries
Safety equipment cost	SEc < SEr	IUU/FONC vessels are not bound by national and international regulations; Poor economic and social situation/outlook in developing countries
Fraud Costs	FCc > FCr	Insufficient control of trade measures to circumvent (repackaging/re-labelling), Existence of global or local economic imbalances
Moral/Reputation Cost	REc > REr	Lack of recognition of the gravity of the problem Lack of transparency in company ownership
Avoidance Costs	AVc > AVr	Insufficient MCS capacities; Insufficient "blacklisting"
Expected sanction	0 = E(S c) = E(Sr) (high seas)	IUU/FONC vessels not bound by national, regional and international regulations → can't be punished under current regulations;

Index ***c***: IUU/FONC fishing activities; Index ***r***: regular/committed fishing activities;
Source: OECD Secretariat.

The difference in expected total revenues between FONC and committed vessels thus depends on the probability of being controlled (Prob1), which is influenced by the following factors:

- The MCS capacity of the country concerned,
- The proximity of the fishing ground to the high seas,
- Avoidance behaviour/strategy,
- The number of IUU/FONC vessels operating in the same fishing ground at the same time (see co-operation behaviour in section 4 below),

It is therefore difficult to determine whether expected total revenues derived from IUU/FONC fishing activities are greater than those expected when complying with the rules. Again, incentives exist as long as the total revenue differential is higher than the probability of being apprehended (prob1; see above).

Access Fees (AF_i)

Within the EEZ, in particular in some developing countries (*e.g.,* in Africa), foreign fleets may be charged a fee to access the resource. By definition, vessels engaged in IUU/FONC fishing activities do not pay this cost. When the access right is charged to committed vessels: $\boldsymbol{AF_c < AF_r}$.

Avoidance costs (AV_i)

When fishing within the EEZ in violation of national and RFMO regulations, IUU/FONC vessels run the risk of being caught. They therefore have a strong incentive to avoid being observed while fishing illegally, and are likely to spend time and money on avoidance behaviour. In particular, fuel costs of steaming may increase, as well as costs associated with "technological survey" (*i.e.,* means to spy on the initiatives of management authorities): $\boldsymbol{AV_c > AV_r}$.

Avoidance costs are likely to be affected by various factors, including the enforcement capacity of the EEZ country, the quality of MCS operations, the size of the fishing ground and whether or not the fishing ground is close to the high seas. The latter factor relates to the fact that, when steaming in the high seas, IUU/FONC vessels can't be arrested, except in the case of "hot pursuit".

Expected sanction $E(S_i)$

Within the EEZ, an important cost difference between FONC and committed vessels concerns the level of the expected punishment/sanction, as this cost is only likely to be faced by IUU/FONC vessels under current assumptions: $\boldsymbol{E(S_c) > E(S_r)}$.

The expected sanction is likely to depend on various factors, including the probability of an IUU/FONC vessel being caught (Probc) and the value of the expected fine/sanction (S_c).

As mentioned above, the probability of being caught is likely to depend on the enforcement capacity of the coastal state, the quality of MCS operations, the size of the fishing ground and whether or not the fishing ground is close to the high seas. It should also be noted that the enforcement capacity and the quality of MCS operations are likely to be influenced by some general factors, including financial facilities/capacities and the national economic situation in general. For example, illegal fishing in Somali waters is largely due to the ineffective patrolling and enforcement of the Somalian EEZ, itself a function of the country's economic and political situation.[26] A poor economic outlook may also force states to make cuts in MCS, often an early casualty of worsening economic conditions.

In theory, the financial sanction should be set by the authorities of the EEZ country, and should reflect the marginal cost of the violation (Becker, 1968; Charles, 1999). Yet,

26 Hassan, M.G., "Marine resources in Somali waters: opportunities & challenges", 6th Asian Fisheries Forum Book of Abstracts. p. 93. Asian Fisheries Society (quoted in Agnew and Barnes, *Op cit.* (OECD, 2004), p. 185).

in practice, the level of fines has been strongly influenced by the decision of the International Tribunal for the Law Of the Sea (ITLOS), and the level of penalty remains one of the problems facing MCS authorities. Illustrations in Box 2.A1 in the Annex suggest that the level of bond that the Tribunal regards as appropriate is lower than the expected annual profit of an IUU vessel. However, it is also clear that what is most important to ITLOS is the value of the vessel and its cargo, not the overall damage that the vessel can do to the resource. This factor has an important influence on the incentive to engage in IUU/FONC fishing activities. In order to illustrate the role that can be played by the level of the fine (*i.e.,* the financial sanction), Box 2.3. presents an example taken from the Japanese case study presented at the 87th Session of the OECD Committee for Fisheries (see OECD, 2003a).

Box 2.3. Expected Impact of the Fine on Expected Profit

In the Japanese case study, IUU/FONC vessels are assumed to receive a net sales profit of JPY 56.5 million per year (USD 434 500), while "standard"' vessels record a loss of around JPY 16 million a year. Assuming that the catches of IUU/FONC vessels are realised within the EEZ (even partly), IUU/FONC vessels may thus be apprehended and punished. An additional assumption is that the probability of being arrested is 10%.

The expected profit of an IUU/FONC vessel is given by the equation:

$E(\pi) = Prob_2 \times 434\,500 - Prob_1 \times E(S)$

With $Prob_1$, the probability of being apprehended, equal 0.1; $Prob_2$, the probability of not being controlled, equal 0.9.

If the fine value is USD 2.8 million (see Box A2.1 in the Annex), the expected profit is thus:

$E(\pi) = 0.9 \times 434\,500 - 0.1 \times 2\,800\,000 = \text{USD } 111\,050$

In this example, to make illegal fishing unprofitable, the fine level should be USD 3 910 500.

Source: OECD Secretariat.

It is important to note that the expected sanction may be negatively affected by how easy it is to re-flag vessels under the current IMO legal framework, since the legitimacy of "hot pursuit" ceases as a vessel changes its flag. In theory, even if a vessel is observed fishing illegally in the EEZ and is pursued and apprehended on the high seas, it can only be prosecuted under the same flag. The expected sanction incurred can thus be strongly reduced depending on whether the IUU/FONC vessel re-flags. It should, however, be noted that a recent ITLOS decision took this feature into account (see Box 2.4), which may act as a deterrent to IUU/FONC fishing activities.

Box 2.4. When Re-flagging Fails

Re-flagging problems seem to have acted against the vessel *Grand Prince*, convicted of IUU fishing. Between the time that she was arrested by the French authorities (12 December 2000) and the date when the court in La Réunion set the FF 11.4 M bond, her registration with Belize lapsed (Agnew, 2002). The ITLOS questioned apparent irregularities in the Belize registry of this vessel. In its decision, the tribunal held that,

"the assertion made on behalf of Belize that the Grand Prince was still considered as registered in Belize did not provide sufficient basis for holding that Belize was the flag State of the vessel for the purposes of making an application under article 292 of the Convention [paragraph 85].[27]"

Source: Agnew and Barnes, 2003.

4. Enlarging the Framework

This section explores situations that modify the analytical framework, including the emergence of organised IUU fishing activities and dual-flag operations. It deals with the relaxation of the assumption that the decision to engage in IUU fishing activities is based on private interests.

4.1. Organised/Co-ordinated IUU fishing activities

Up until a few years ago, most IUU vessels fishing were thought to be acting relatively independently. More recently, however, the existence of organised IUU fleets of vessels with common ownership and control links has been reported (see example in Box 2.5).

Box 2.5. An Example of Organised IUU Fishing Activities

Two major companies based in the Far East – Pacific Andes and P. T. Sun Hope Investments (Jakarta), are reported to be operating an organised IUU fleet, although Pacific Andes officially denies this. The Austral Fisheries press release states that "the 'alphabet' boats are owned by dummy companies in (at various times) the British Virgin Islands, Russia, Belize, Bolivia and elsewhere".[28]..

Source: Agnew and Barnes, 2004.

The development of highly complex company ownership structures has several effects on the economic balance sheet for these vessels:

- First, mixing IUU catch with regularly obtained catch (the company Pacific Andes is a major purchaser of fish caught by committed vessels) may allow the price of IUU fish to be higher than would otherwise be the case. In this regard, there is considerable evidence of fraud in the documentation accompanying

27 ITLOS press release 48.

28 Page 3 of the Austral Fisheries document. It should be emphasized that at the moment these are simply allegations from Austral Fisheries.

toothfish catch documents, as is also the case in the certificates required by Japan for imports of tuna.

- Second, it is not sufficient to simply examine the economics of a single vessel when a company runs a series of IUU vessels, because single vessels can quite easily be sacrificed to the overall benefit of the fishery. For example, there are allegations that the two vessels arrested by the Australian navy in February 2002 (the Volga and the Lena) were the oldest and most dispensable in the IUU fleet fishing around Heard Island (Agnew and Barnes, 2004). Thus the actual disincentive of arrest may be much less (for the company) than would be assumed for a single vessel. After the arrest of the least efficient vessels which are used as decoys, the rest of the fleet is practically assured of a "calm" period of fishing, uninterrupted by a patrol vessel.
- Third, some companies will have the ability to disguise fleet movements through rapid re-flagging, name changing, and modification of vessels which may thwart legal cases (e.g., in cases where two vessels are identical but carry different flags, it is practically impossible to prove that a vessel was sighted in a particular area unless it is boarded).
- Finally, a fleet and large company operation can much more easily afford the administration costs required for rapid disguising tactics, including i) access to worldwide markets, so that they can split consignments and confuse customs authorities, ii) access to bulk processing facilities, with further opportunities for disguising/hiding IUU catch, iii) access to sophisticated communications and early warning systems, and iv) complex company ownership structures, which are costly for MCS authorities to trace and easy to change.

These factors all tend to reduce the costs that an IUU vessel would usually expect to pay. It should be kept in mind that committed vessels could enjoy some of the same advantages if they are owned by a large company.

It should also be noted that some of these factors may be intensified when IUU fishing companies are also involved in other illegal trade, such as drug and weapons (Upton, 2003; ITF, 2002). In this case, the effectiveness of potential preventive actions may be reduced due to the financial and bribing power of such companies.

4.2. Dual-Flags

In addition to the foregoing arguments regarding company size, the make-up of the fleet in a company is of particular importance. Companies operating fleets of both IUU and committed vessels can expect lower operating costs (through paying less in licence fees and other access requirements) than companies operating only committed vessels. A number of companies are suspected of operating this strategy (Agnew and Barnes, 2003).

On the other hand, an added risk factor with this strategy is the increasing propensity of licensing authorities to take this feature into account when allocating fishing rights or licences. For example, one way of deterring IUU/FONC activities could be to refuse any licence worldwide to a company if one of its vessels was proven guilty. This trend, if strengthened, could well redress the balance of the equation and create an overall cost rather than benefit from adopting this strategy.

5. Possible Actions to Curb IUU Fishing Activities

Based on the review of the drivers that create economic incentives to engage in IUU fishing activities in section 3, this section proposes a series of actions directed at affecting these drivers, in order to modify the incentive structure of IUU fishing operators.

In taking this approach, the document seeks to identify areas where further research would be best directed in order to reduce incentives for IUU fishing activities.

In line with the general structure of the model used, this section first examines actions directed at reducing total operating revenues (the market side), before reviewing actions directed at increasing, respectively, operating costs, capital cost and costs of engaging in IUU fishing activities (*i.e.* avoidance, fraud, moral/reputation and penalty costs).

5.1. Exploring ways to reduce total revenues

Some of the possible actions to reduce the operating revenues of IUU fishing activities include limiting IUU catches, limiting IUU sales and trade (trade measures), or giving a price premium to regular catches in order to reduce the gap between IUU and regular revenues.

Possible avenues to limit IUU catches (Qi)

To reduce unregulated catches on the high seas, a preliminary set of actions could be taken or promoted to reduce the shortcomings of the current international legal framework:

- Ratification of all international conventions by all flag states (including UNCLOS, UNFSA, etc.), in order to provide a comprehensive legally binding framework and the building of appropriate capacity to deal with control in flag states;
- Establishment of RFMOs wherever fishing takes place;
- Adhesion to all RFMOs by involved flag States.

Such comprehensive improvements in the system could, in particular, make FONC states more willing and able to deal with vessels flying their flag. Appropriate incentives should be found to convince FONC countries to join any RFMO or become a contracting party. However, due to the lack of fishing possibilities and the related "closed" nature of some RFMOs, such an initiative may not be straightforward. Two distinct situations might occur.

If a FONC country is a fishing nation with some national fishing interest in a RFMO area, it would be necessary to enlarge the club of RFMO members to include this country, although this would generate a cost for existing members in the form of reduced quotas. In addition, as most FONC countries are developing countries with limited budget capacities, their active and effective participation could be facilitated if member states provided newcomers with incentives such as financial and human assistance (including fee reduction, training, etc.). Another option would be if the FONC state decided to charge for its newly obtained RFMO quota and thus generate an income stream.

Conversely, if the main aim of a FONC country is to generate "register income" (which is likely to be the most frequent situation), an alternative incentive could be to give this country a financial compensation, "equivalent" to the register income, in order

to remove – permanently – all FONC vessels from its register (and to join the RFMO) although such action may appear inappropriate, as it might be seen as a reward for non compliance. However, an important factor needs to be taken into account, i.e., UNCLOS provides any state with the right to access marine resources on the high seas and a financial compensation could, in this respect, be seen as committed operators buying implicit fishing rights.[29, 30]

A second set of actions can be taken to improve the effectiveness of the international legal framework in place:

- Developing minimum and enforceable guidelines/standards/requirements for Parties to international agreements. This may include, for instance, an enforceable definition and application of the principle of "genuine link", as well as the definition of other minimum control requirements.
- Ensuring compliance from all contracting Parties to international agreements, including through the use of legal appeal/procedures. In this regard, it is worth recalling that the subjects of international law are States, not individuals or legal persons (unless there is some provision in the domestic law which makes the rule in question applicable and enforceable as a matter of domestic law; FAO, 2000, p.21).
- Improvement of MCS capacities, whether on the high seas, within national EEZ or on land. This could "traditionally" take place through a greater resort to usual observation mechanisms: more on-board observers, more patrol vessels, greater implementation of VMS systems, etc. Such an approach would require additional financial resources, synonymous with a further increase of the budget burden.[31] But it can also be done through a greater collaboration between committed states, including through sharing some "platform" costs and information. In this regard, a recent 2003 treaty between Australia and France establishing co-operative surveillance in the Southern Ocean in the EEZ around Heard Island and McDonald Islands and France's EEZ around Kerguelen Island is worth noting. In this context, it should also be noted that specific actions to provide RFMOs with adequate management capacities and powers need to be envisaged.

Possible avenues to limit IUU sales and trade (Q_i)

Measures can also be taken to reduce the possibility of IUU catches being "converted" into revenues. Such measures, which aim at preventing IUU catches from entering regular markets, are of a trade nature. They can take the form of embargoes or other forms of import restriction for fish and fisheries products. For instance, in 2000 ICCAT asked Contracting Parties to introduce commercial measures aimed at banning

29 The question of who should be charged for the cost is not addressed here.

30 Second, such action has a strong theoretical background. The reciprocal nature of the Coase theorem shows that it is *socially* equivalent to compensate for the non-emission of an externality or to charge the externality (Coase, 1960).

31 In particular it is worth noting that reinforcement of MCS operations may result in additional costs for committed fishers (either physical or opportunity costs). Paradoxically, while improved MCS schemes should be seen as a prerequisite to limit IUU catches, they also may contribute to further development of the phenomenon.

imports of swordfish from Belize, Honduras and Equatorial Guinea.[32] Similar measures were introduced in 2001[33] for bigeye tuna from Belize, Honduras, Cambodia, Equatorial Guinea and Saint Vincent and the Grenadines. In 1999, the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR) adopted a Catch Documentation Scheme designed at preventing IUU toothfish catches from entering markets in CCAMLR member countries. The sale of Patagonian toothfish is limited to certified catches.

While these two initiatives have the same objective, they are not based on the same logic. In the ICCAT case, trade measures require the establishment of a "blacklist" of countries supporting IUU fishing activities. Such a procedure requires strong monitoring capacities that need to be comprehensive and effective. On the other hand, in the CCAMLR case, trade measures are based on a "positive list approach", as only those vessels that comply with rules are allowed to sell certified toothfish. While the positive list approach focuses on catches and individual vessels, the blacklist approach seeks a collective sanction, as trade measures are expected to apply to all products imported from listed States.

It should be noted that in the case of the positive listing procedure, the burden of proof may be charged to vessel operators, which may reduce RFMOs' need of monitoring. Recent empirical evidence suggests that "blacklist" measures have not proved effective due to "fish laundering" and the use of forged documents[34]. As a result, in 2003 ICCAT adopted new measures based on positive listing (as did IATTC and IOTC).

Importing states can support multilateral initiatives by taking action to limit the sales of IUU products in their domestic market. For instance, the Japanese government requires traders importing tuna to submit a report indicating the fishing vessel's name.[35] Furthermore, in response to recommendations from international organisations, the Japanese government strengthened measures against IUU vessels by requesting tuna traders to voluntarily terminate imports of fish products from IUU vessels.

Possible avenues to reduce the difference of expected revenues (P_i)

A third set of measures seeks to reduce the relative difference in revenues between IUU and committed fishing operators by increasing the price of regular catches. The fundamental logic underlying this is that consumers may be willing to provide committed operators with a price premium in order to "reward" their responsible behaviour.[36] Such measures require the use of labelling, certification using a catch document or any other trade tracing document. There is evidence from the CCAMLR situation that fish certified

32. Under the "1995 Resolution": *Resolution for an Action Plan to Ensure the Effectiveness of the Conservation Programme for Atlantic Swordfish*.

33. "The 1998 Resolution": *Resolution Concerning the Unregulated and Unreported Catches of Tuna by Large-Scale Longline Vessels in the Convention Area.*

34 Presentation of Japan at the International Conference of Illegal, Unreported and Unregulated Fishing. Santiago de Compostela, 25-26 November 2002.

35 On the basis of the "Law Concerning Special Measures to Strengthen Conservation and Management of Tuna Resources".

36 Another possible reason for this premium relates to the fact that a FONC vessel has an incentive to sell the product as soon as possible, in general at a lower price (in practice, "black" fish is often sold under a false name, belonging to a lower price species; OECD, 2003a).

using a catch document scheme may command higher prices than uncertified fish, as the current premium on fish carrying CCAMLR Catch Documents is 20–30% (Agnew and Barnes, 2004). The success of other labelling programmes that promote responsible fishing practices (*e.g.,* Marine Stewardship Council certification scheme) indicates that consumers react positively to these types of initiatives (despite the additional cost), provided that appropriate information and communication are available. In this regard, it should be noted that the success of such labelling schemes depends to an extent on educating the public. While educational activities may have a cost in the short term, they could lead to a long-term boycott of IUU products without too much cost and effort (OECD, 2003a). Private initiatives could also play a significant role in this context, as a complement to public programmes. For example, some aquarium networks propose programmes designed to educate children about ocean matters, including IUU fishing, in line with the recommendations of certain UN agencies[37]

However, the success of such labelling programmes depends to a great extent on the level of the price premium associated with responsible behaviour. While reporting that such initiatives had initially shown encouraging signs, some authors indicated that the premium was not sufficiently high to incite operators to comply with the rules (*e.g.* see the Japanese case study; OECD, 2003a; Agnew and Barnes, 2004). In addition, all trade measures face traceability difficulties that can limit their effectiveness (labelling fraud, etc.).

The situation is complicated by organised IUU activities that aim to mix IUU catch with regularly obtained catch (see section 4); the more sophisticated the organised IUU activity, the greater the need for MCS capacities. Organised IUU activities may thus generate an important pressure on public budgets.

5.2. Exploring ways to increase operating costs of IUU/FONC vessels

Fishing company tax rate (R_i)

As suggested above, the registration of a fishing company in any FONC country that is also a tax haven may create an incentive to engage in IUU/FONC activities. In this regard, the answer could be to promote the elimination of tax havens and address any other tax distortions that may encourage IUU fishing activities. As highlighted above, the OECD is taking initiatives on this issue by establishing criteria to improve transparency in tax systems.

Reciprocal actions may also be directed at "equalising" tax rates prevailing in different States by reducing tax levels in committed States.[38] This is indeed one of the purposes of "second registers", *i.e.* registers created for fiscal and labour matters (see below) by industrialised countries attempting to check "national tonnage flight". In this regard, Llacer (2003) shows that a distinction can be made between "offshore second

37 See the Intergovernmental Oceanographic Commission (IOC) - UNESCO web site for interesting examples; http://ioc.unesco.org

38 While both approaches may be equivalent from the tax perspective, confidentiality issues remain in the case of tax havens.

registers" (created by a State in an overseas territory under its sovereignty) and a "special register" (created by a State within its own national territory).[39]

Fuel cost (Fi) and Other Running cost (OR_i):

Section 3 showed that physical operating costs are often similar for both FONC and committed vessels (fuel, other commodities and services). Trade measures could therefore be taken to restrict the provision of some goods and services to FONC vessels in order to increase their costs. For instance, preventing FONC vessels from landing their catch in a given port is likely to increase the fuel cost of steaming (*e.g.* the banning of Estonian vessels from Canadian ports in 2002). In some instances, alternative landing places may even be far enough away to remove IUU fishing from a given area.

Other restrictions may be applied either to fishing input goods (*e.g.,* ice; navigation, detection or communication devices) or on services such as maintenance or repair of vessels, satellite connections, etc. While such measures can be technically circumvented, they are likely to generate additional costs (including transaction and opportunity costs) that may act as a disincentive to engage in IUU/FONC vessels. In addition, it should be noted that for some goods and services (*e.g.* engine, sonar, insurance, communication, etc.), the number of providers may be small enough to establish a real embargo.

Crew cost (CR_i):

Due to its relative importance in any fishing operation, crew cost is likely to be a factor that provides strong incentives to engage in IUU/FONC fishing. Three types of actions can be envisaged to increase the cost of crews on FONC vessels.

The first of these is of a regulatory nature and affects all crews regardless of the type of vessel. It concerns the ratification and implementation by all flag States of international conventions regarding the working conditions of fishers, in particular the ILO conventions. It is important to note that ILO Convention 163 (Seafarers' Welfare Convention) and Convention 180 (Seafarers' Hours of Work and the Manning of Ships Convention) have only been ratified by 12 and 15 countries, respectively.[40].

The second concerns unskilled crew, mainly originating from developing countries. As pointed out, a major factor affecting this variable is the prevalence of cheap and ready labour in some developing countries. Any action aimed at improving the economic and social situation/outlook in these countries is likely to increase the opportunity cost of labour in that economy, and should thus contribute to increasing the wages of unskilled crew. While such actions can only be considered in a medium- and long-term perspective, they are nevertheless likely to generate a durable disincentive to engage in IUU/FONC fishing operations.

The third set of actions focuses more specifically on skilled crews (e.g. skipper, fishing master, engine "chief"), as they are often reported to be citizens of OECD Member countries (Agnew and Barnes, 2004). This involves the "extra-territorial" application of domestic laws and regulations (and hence the possibility for sanctions) to the citizens of individual countries wherever in the world those citizens may be, and

39 Examples of which are respectively The Isle of Man (UK), The Netherlands Antilles or Kerguelen Islands (France) for offshore registers; NIS (Norway), DIS (Denmark), GIS (Germany), Canary Islands (Spain) or Madeira (Portugal) for special registers.

40 ILOLEX: http://www.ilo.org/ilolex/english/newratframeE.htm

whatever flag they may be working under. In this perspective, the possibilities for "extra-territorial" sanctions is likely to influence the wages of IUU/FONC fishers (for further details, see the discussion on expected sanctions below).

Insurance cost (IN_i):

The cost of insuring FONC vessels could be increased by making the flag State legally liable for any uninsured FONC vessel. This could act as an incentive for FONC States to make the attribution of their flag subject to verification that a vessel has "genuine" insurance.

Repair and maintenance cost (M_i):

The above suggested that a strong factor is the prevalence of cheap and ready labour in some countries. Improving the economic and social situation in these countries could thus indirectly contribute to the increase of repair and maintenance cost of FONC vessels. If safe alternatives exist, workers are likely to be reluctant to engage in an activity that may prove risky because of the poor state of the vessel. To engage in IUU fishing, a FONC vessel operator would either have to pay for maintenance to keep in line with standards required by international regulations or to increase wages, since wages are expected to reflect the opportunity costs of labour for a given level of risk. As insufficient maintenance operations increase the level of risk, a premium should be offered to reward it. In both cases however, the operating costs of IUU/FONC vessels would increase.

5.3. Exploring ways to increase capital costs of IUU/FONC vessels

Vessel capital cost (VC_i):

Section 3 identified three major factors that may explain the low cost of FONC vessels compared to committed vessels: the poor state of vessels, the prevalence of overcapacity and the inappropriateness of certain investment and fiscal rules.

To increase the vessel capital cost, a first set of actions could aim at improving the state of FONC vessels, either directly (*e.g.,* through the definition and application of enforceable minimum standards, in accordance with existing international regulations) or indirectly (*i.e*., through improvement of the economic situation/outlook).

A second set of actions could be envisaged to reduce local and global imbalances between fishing possibilities and fishing capacities (*i.e.*, overcapacity). As pointed out above, excessive supply of capacity leads to a low value of most FONC vessels (for which the "committed" opportunity cost is close to zero). As a result, time-limited scrapping programmes could be conducted in order to reduce global imbalances.[41] However, it should be noted that such a policy comes at a high cost. For instance, EU Member countries granted EUR 32 million for permanent capacity reduction in 2000 (includes both national and EU funding), while Korea spent up to KRW 254.5 billion (USD 197 million) for the same purpose in 2001 (OECD, 2003b). Alternative, less costly measures, such as the adoption of management regimes which would permanently reduce fishing capacities or prevent further development of capacities, could be considered. On

41 The overall efficiency of scrapping schemes in a given fishery depends on various factors, including the management regime in place. Yet, notwithstanding these management issues, physical scrapping schemes are likely to increase the price of remaining vessels.

the other hand, subsidies which are likely to artificially reduce the value of vessels (*e.g.* shipbuilding subsidies) should be eliminated.

A third set of actions that could be taken to increase FONC vessels capital cost relates to restrictions on investment, for example on outward investment. One way of increasing the capital cost of IUU fishing activities could be to submit OECD residents' foreign direct investments in FONC countries to prior notification to fiscal authorities,[42] to prove that such investments are not dedicated to IUU fishing activities. While it would be possible to circumvent such a measure, its application could nevertheless increase the cost of the investment (including the transaction cost), and hence reduce the incentive to engage in IUU/FONC activities. An interesting example of such restrictions on outward direct investment can be found in the Japanese reservation lodged under the OECD Code of Liberalisation of Capital Movements (OECD, 2003c).[43] This reservation states that direct investment abroad by residents should only apply to investment in an enterprise engaged in fishing regulated by international treaties to which Japan is a party, or fishing operations coming under the Japanese Fisheries Law. Similarly, in Spain, while foreign investment is not restricted, national investment in third countries is regulated, especially when government aids to reduce domestic fishing capacity can be obtained. In Portugal, chartering is subject to prior authorization by the government. The authorization is issued for a period not exceeding two years.

Another type of restriction on investment consists of preventing IUU operators from using FONC vessels as collateral. In particular, when loans are attributed by banks based in OECD countries, such practice should be discouraged. This could make loans dedicated to IUU fishing activities more difficult or more costly to secure and could also increase the cost of investment (including the transaction cost), hence reducing the incentive to engage in IUU/FONC activities.

Safety Equipment cost (SE_i):

The cost of safety equipment, which is often avoided by FONC vessels, may be increased by making the flag State legally liable for any non-compliance with general safety and pollution requirements. This could act as an incentive for such States to condition the attribution of their flag to vessels only if they are properly equipped. In this regard, enforceable minimum standards would have to be clarified.

Another way of increasing the cost of compulsory safety equipment would be of a trade nature, as it deals with restrictions on access to goods and services. For instance, restrictions on the provision of some satellite equipment could result in higher costs for FONC vessels. As pointed out above, providers of safety equipment may be sufficiently few in number that the establishment of an embargo may be a possibility.

Lastly, as the previous analysis suggested, a major factor in the low safety cost for FONC vessels is due to the poor social outlook in some countries, any actions designed to improve macroeconomic conditions are likely to increase this cost item.

42 As a key initiative for eliminating IUU fishing activities which could consist of addressing IUU fishing activities operated from OECD countries or by OECD residents.

43 The Code is actually a Decision of the OECD Council, which is legally binding on OECD member governments. See *OECD Codes of Liberalisation of Capital Movements and Current Invisible Operations: Users' Guide*, April 2003, p. 6.

5.4. Exploring ways to increase the costs of engaging in IUU fishing activities

The costs of risk include the cost related to fraud, corruption and avoidance behaviour, the cost of expected sanction and the "moral/reputation" cost.

Expected sanction E (S_i):

Although any increase in expected sanctions would affect decisions to engage in illegal and unreported fishing activities within national EEZs or on the high seas, it would have no effect on unregulated activities conducted by NPA vessels on the high seas. As pointed out above, the level of expected sanction is positively linked to two main factors, *1)* the probability of being apprehended and *2)* the sanction level.

To increase the probability of being apprehended (*i.e.,* the detection likelihood), a first set of actions could aim at improving "traditional" MCS capacities (leaving aside budgetary implications). A second set of actions is of regulatory nature, as it concerns widening the risk incurred, for example through the "extra-territorial" application of domestic sanctions. While different countries have different attitudes to the extra-territorial application of their laws to their citizens, this approach is becoming more widespread (its extension to certain types of sex tourism is a recent example). In the context of IUU fishing activities, it is worth noting that several OECD countries have passed or are considering passing such regulations (*e.g.*, New Zealand and Spain).

This can also be applied through resorting to so-called "long-arm approaches", which allow for a government to prosecute a national who acted in contravention of a foreign law. Such a mechanism is often referred to as a "Lacey Act" provision or contravention. The Lacey Act, which was passed in the US to outlaw interstate traffic in birds and other animals illegally killed in their State of origin, can apply to the acts of landing, importing, exporting, transporting selling, receiving, acquiring, possessing or purchasing any fish taken, possessed, transported or sold contrary of the law of another State (Kuemlangan, 2000[44]). A recent example of the use of the US Lacey Act involves both foreign and US nationals who were illegally importing large quantities of Honduran spiny lobster.[45]

Related to this, a third and direct way to widen the scope of possible sanctions in any country could consist of making the trade of IUU fish an offence (*i.e.*, in particular if the scope was widened to include downstream operators, down to and including final consumers). Committed vessels would naturally not be affected by such a regulatory measure, as they are expected to comply with national, regional and international regulations. In addition, such a measure is also likely to have an indirect effect on the price offered for IUU products, as any operator facing the risk of being pursued may be likely to require a "premium" for this risk.

Concerning the level of sanction, several actions can be envisaged to raise the cost side of IUU/FONC vessels, whether at national or at international level. A first set of actions concerns the level of fine. At the international level, the above suggested that fines were not sufficiently high due*, inter alia*, to certain ITLOS decisions (see Box A2.1). While these decisions appear to be justified from a legal point of view (*e.g.,* in

44 Kuemlangan reports that at least one prosecution of an offence committed against a Lacey Act provision has been conducted outside the US (IUU operator from Papua New Guinea convicted and penalised for catching fish in Salomon Island without appropriate rights).

45 See the US "Draft National Plan of Action to Prevent, Deter, and Eliminate Illegal, Unregulated, and Unreported Fishing" (2003); http://www.state.gov/g/oes/rls/or/18488.htm

stating that bonds should be reasonable, *i.e. inter alia* "related" to the value of the vessel and the cargo size, etc.), they nevertheless seem to underestimate the seriousness of the short- and long-term effects of IUU fishing activities. In this context, any actions designed to make it easier for international courts to allow for increased fine levels should be encouraged.

A second, related set of actions concerns the level of fine set by individual States for their nationals involved in IUU fishing activities (including under extra-territorial and "long-arm" prosecutions). The main rationale behind this move is to increase the expected sanction incurred in order to prevent nationals from engaging in IUU fishing activities. However, it should also be noted that ITLOS often bases its decisions on the penalties imposed or imposable under the laws of the state concerned (*i.e.*, for instance that the fine faced by FONC vessels can hardly be greater than the "current" domestic fine levels). In this regard, it should be further noted that any action to harmonize fine levels across flag states could be encouraged (*e.g.,* see European Commission, 2001[46]).

A third set of actions concerns the form of the penalty incurred. Up to now, the analysis has only focused on direct monetary penalties, but sanctions can also take other forms, such as vessel and catch confiscation or prison sentences. While vessel or catch confiscation can translate into reduced profits for IUU/FONC vessel operators (in the form of additional capital cost or loss of revenues), due to the prevalence of a ready labour force in some countries, this only has an indirect effect. For instance, when crew members are sentenced to jail, IUU/FONC vessel owners rarely face additional costs (except those incurred by the loss of fishing time). Crew members are often just abandoned by their employers, as they can be replaced at low cost, while "real" owners are hardly prosecuted, due to the lack of transparency in company structures.

To complement these potential measures, a fourth set of actions could be envisaged that affect IUU/FONC vessels' capital owners by identifying the "beneficial ownership". Since one of the major reasons for lack of transparency is that fishing companies have recourse to confidential registration in some countries, actions seeking the elimination of tax havens or other non co-operative territories/jurisdictions could be encouraged. In this regard, it should be noted that the OECD is also at the forefront of international initiatives on these issues through the Financial Action Task Force on Money Laundering.

Avoidance cost (AV_i):

As pointed out above, IUU/FONC vessels are likely to face avoidance costs, in the form of steaming time, steaming fuel costs or "research" operations (*e.g.,* costs associated with the detection of MCS vessels, including electronic equipment costs). While these costs can currently be considered as insufficient to prevent IUU/FONC fishing activities, they could be mechanically increased through the improvement of public MCS capacities (see discussion above on the budgetary implications).

In addition to public actions, it should be noted that private initiatives may also contribute to increasing the avoidance cost of IUU/FONC vessels. For instance, in the Antarctic toothfish fishery, legal/regular operators gathered to form the COLTO (Coalition Of Legal Toothfish Operators[47]) and established a "wanted" reward scheme in

46 Communication from the Commission to the Council and the European Parliament, *Behaviour which seriously infringed the rules of the common fisheries policy in 2000.* COM(2001) 650 final, Brussels, 12.11.2001.

47 For further details see: http://www.colto.org

order to improve the identification of IUU/FONC vessels. As a result, IUU/FONC vessels need to avoid being seen not only by official patrol vessels, but also by any committed fishing vessels. While the overall outcomes of the scheme are still unknown, such an initiative is likely to increase avoidance cost of IUU/FONC vessels as it raises the probability of being detected.

Moral/Reputation Cost (RE_i)

Section 3 suggested that the moral/reputation costs faced by IUU fishing operators were often insufficient due to a general lack of recognition of the seriousness of this activity. Any action directed at improving the social knowledge of the adverse economic, social and environmental effects of IUU fishing could be encouraged. In particular, the valuation of the environmental, economic and social damage incurred could be useful. Once again, it is worth noting that private initiatives may play a significant role in this context, as a complement to public programmes. For example, this may be done through educational programmes, information dissemination, public campaigns, etc.

With regard to the particular case of established companies that might be interested in addressing corporate governance issues, IUU *shaming* initiatives could play a significant role. In this context, Stokke and Vidas (2004) suggest that "typical" agents of shaming are business and environmental NGOs that provide detailed information on IUU companies and their suppliers in order to increase the costs incurred. As an illustration, Stokke and Vidas report that the disengagement of Norwegian vessel owners from IUU operations in Antarctic waters is believed to be a consequence of ISOFISH publications having named them.

Fraud Cost (FC_i)

In order to circumvent regulations in force, IUU/FONC vessels face some fraud costs (repackaging and re-labelling; faking VMS positions in support of misreporting, etc.), as well as costs for financing corruption. The above analysis showed that a major factor contributing to this behaviour was of a social nature (global and local economic imbalances). As a result, actions aimed at improving the economic and social situation/outlook in some countries are likely to have the side-effect of increasing the cost of fraud for IUU/FONC vessels.

In addition, increasing the level of expected sanctions for people involved in fraud mechanisms should also contribute to raising the cost of fraud, as they would ask for a higher risk premium. In line with the previous discussion on expected sanctions, improved MCS capacities, along with extra-territorial and "long-arm" measures, are also likely to increase the cost of fraud for IUU/FONC vessels.

With respect to the involvement of officials in fraud operations, the OECD is at the forefront of the issue, *e.g.* through the OECD Convention to combat bribery which came into effect on 15 February 1999.[48] This convention requires member countries to make it a crime to offer, promise or give a bribe to a foreign public official in order to obtain or retain international business deals. Countries that have signed the Convention are required to put in place subsequent legislation.

48 The OECD Convention on the Bribery of Foreign Public Officials. http://www.oecd.org/department/0,2688,en_2649_34859_1_1_1_1_1,00.html .

6. Observations from the Analysis

This analysis identifies two major drivers behind IUU fishing activities. First, the existence of overcapacity or idle capacity in the worldwide fishing fleet, which lowers the costs of capital and labour available for IUU fishing operations. This is a problem faced by many OECD countries and its origins can be traced back to poor domestic management regimes. Second, the incompleteness and inadequate application of the current international framework for the high seas put FONC vessels and certain fishing practices beyond the reach of national and international regulations. In sum, by circumventing national and international conservations measures, the advantage of IUU/FONC vessels is that they can produce more, and obtain higher revenues, than when complying with the rules.

Several additional drivers may also play a role in the decision to engage in IUU fishing activities, by allowing it to be as profitable as it is, either by creating higher revenues or lower costs. Some are of an institutional nature, such as the insufficient level of MCS operations (leading to the low probability of being apprehended, even within national EEZs) and the insufficient level of penalties (fines and non-monetary sanctions). Some are of an economic nature, such as the prevalence of tax distortion systems (*e.g.* tax havens), inappropriate management regimes, the prevalence of some forms of subsidies, and some investment or fiscal rules (leading to the artificially low cost of vessels). Finally, some are of a social nature, such as the prevalence of poor economic and social conditions and outlooks in some countries (leading *inter alia* to low crew and maintenance costs).

While all these factors may not necessarily come into play at the same time, they all create an incentive to engage in IUU fishing activities and underline the need to understand IUU fishing as an interdisciplinary issue that calls for multiple tools and institutions to deal with it. Without changes in the current regulatory and economic situation, IUU fishing is thus likely to continue. Moreover, the emergence of "organised IUU fishing operations" could facilitate and accelerate the development of IUU fishing by reducing the monetary and transaction costs faced when engaging in IUU fishing (mainly the cost of risk and avoidance, fraud, registration operations). Rapid actions should be implemented to curb such a threatening development.

While most of the possible actions discussed here already exist within regulators' legislative "toolkit", they often need to be clarified or adapted to the particular situation of IUU/FONC fishing activities. Actions could first be taken at the multinational regulatory level, in order to reduce or close current "loopholes" and weaknesses. In particular, actions aimed at inciting all flag States to accede to international agreements and RFMOs, at conditioning the flagging of a vessel to the prevalence of a defined, enforceable "genuine link", or at defining minimum requirements for the flag State could be envisaged. Although such actions could be both effective and inexpensive, experience from recent multinational negotiations nevertheless suggests that it is difficult to reach agreement on them.[49] Also at the multinational level, actions could be envisaged to facilitate the comprehensive, active participation of all involved flag States in RFMOs.

Notwithstanding future initiatives related to the international legal framework, actions could be taken nationally to ensure a higher degree of enforcement of current regulations.

[49] Vukas and Vidas (2001) show how the concept of requiring a genuine link between Flag State and vessel was repeatedly watered down in the negotiations leading up the 1982 UNCLOS agreement.

First, MCS capacities in committed countries could be improved and augmented in order to better identify IUU fishing activities and to increase the probability of being apprehended. However, the analysis pointed out that traditional MCS means are costly and that alternatives could be explored (*e.g.,* co-ordination between committed States, inland MCS operations). Second, the level of the penalties incurred could be raised in order to act as a genuine disincentive. In this regard, it is noted that penalties should better reflect the total cost of IUU fishing activities, including costs borne by society as a whole. Finally, some actions can be taken to increase the geographical scope of sanctions; in particular, committed States could envisage taking extra-territorial measures against any of their citizens involved in IUU fishing activities and to apply so-called "long-arm approaches" which allow a government to prosecute a national who acted in contravention of a foreign law.

A second set of measures concerns trade measures, which can be designed to affect both revenue and cost. On the revenue side, restrictions may apply to the trade of IUU products, *e.g.* through embargoes, boycotts (*e.g. shaming* actions) or traceability and labeling schemes. While the effectiveness of such schemes is likely to differ from case to case, they would always carry a short-term social cost in the form of a price increase which will have to be weighed against the longer-term social benefits of improved fish stocks. On the cost side, restrictions may apply to the provision of goods and services, such as landing (port closures), transhipment, fishing inputs (*e.g.,* refueling, insurance, satellite communication) and outward investment (*e.g.* Japanese reservation lodged under the OECD Code of Liberalisation of Capital Movements). Recent examples suggest that such measures may be efficient in some situations, at a relatively limited cost.

A third set of measures is of an economic nature, as it is designed to regulate the economic imbalances that facilitate the existence of IUU activities. These actions aim, *inter alia*, at improving the economic and social outlook in some countries, at reducing overcapacity (*e.g.,* through the implementation of appropriate management systems) or, for example, at improving transparency in banking operations.

It should be noted that all these possible actions carry a cost, which would be charged either to the public, industry, consumers, or all three.

Annex 1. The Model

The expected profit function of vessel *i* is:

(1) $E(\pi_i) = E(B_i) - E(S_i)$

$E(\pi_i) = E[(1-r_i) \times (TR_i - TC_i)] - E(S_i)$

Where:

r_i = profit tax rate in country *i*,

TR_i = Total Revenue from fishing operation of the vessel *i*

TC_i = Total Cost of fishing operation of the vessel *i*

$E(S_i)$ = Expected sanction faced by the vessel *i*

(2) Total Revenue: $TR_i = Q_i \times P_i$

Where:

Q_i = quantity of fish caught by the vessel *i*

P_i = price of fish receive by the vessel *i*

(3) Total Cost : $TC_i = OP_i + CC_i + IUUC_i$

Where (see Box A1.1 for details of OP_i, CC_i, $IUUC_i$):

OP_i = Operating costs of fishing of the vessel *i*

CC_i = Capital Cost of the vessel *i*

$IUUC_i$ = Costs of engaging in IUU fishing activities for the vessel *i*,

(4) $E(S_i)$ = Expected sanction faced by the vessel *i* , which is a function of

the level of the penalty (Pen)

the probability of being apprehended ($Prob_i$)

Box A1.1. Components of Total Cost (OPi, CCi, IUUi)

- OP_i = Operating costs of fishing of the vessel *i*
  - Fuel cost (FC_i) = fuel cost for fishing (FF_i) and steaming (FS_i)
  - Crew cost (CR_i) = wage (W_i) and social insurance cost (SI_i) of
  - Other running costs (OR_i) = gear (G_i), bait (B_i) and landing cost (L_i)
  - Flagging and registration cost (FL_i)
  - Monitoring, Control and Surveillance (MSC_i) when these are covered by the fishing vessel
  - Insurance cost (I_i)
  - Repair and maintenance cost: Mi
- CC_i = Capital Cost of the vessel *i*
  - Vessel capital cost (V_i) = purchase price of the vessel
  - Safety Equipments cost (SE_i)
  - Other Capital Costs (OC_i) = Onboard navigation, positioning, communication equipment (including satellite equipment)
- $IUUC_i$ = Costs of engaging in IUU fishing for the vessel *i*, including:
  - Fraud cost (including corruption cost): FR_i
  - Avoidance cost: AV_i
  - Moral/Reputation cost: RE_i

Source: OECD

Annex 2. Tables and Boxes

Table A2.1. The 2000 List of Jurisdictions Identified as Meeting the OECD Criteria for being Considered a Tax Haven

Andorra	The Principality of Liechtenstein
Anguilla – Overseas Territory of the United Kingdom	The Republic of the Maldives
Antigua and Barbuda	**The Republic of the Marshall Islands**[3]
Aruba – Kingdom of the Netherlands[1]	The Principality of Monaco
Commonwealth of the Bahamas	Montserrat – Overseas Territory of the United Kingdom
Bahrain	The Republic of Nauru
Barbados	**Netherlands Antilles – Kingdom of the Netherlands**[1]
Belize	Niue – New Zealand[2]
British Virgin Islands – Overseas Territory of the United Kingdom	**Panama**
Cook Islands – New Zealand[2]	Samoa
The Commonwealth of Dominica	The Republic of the Seychelles
Gibraltar – Overseas Territory of the United Kingdom	St. Lucia
Grenada	The Federation of St. Christopher & Nevis
Guernsey/Sark/Alderney – Dependency of the British Crown	**St. Vincent and the Grenadines**
Isle of Man – Dependency of the British Crown	**Tonga**
Jersey – Dependency of the British Crown	Turks & Caicos – Overseas Territory of the United Kingdom
Liberia	US Virgin Islands – External Territory of the United States
	The Republic of Vanuatu

Notes:
[1] The Netherlands, the Netherlands Antilles, and Aruba are the three countries of the Kingdom of the Netherlands.
[2] Fully self-governing country in free association with New Zealand.
[3] Fully self-governing country in free association with United-States

Source: OECD, 2000.

Table A2.2. List of Jurisdictions Declared FOCs by the ITF (July 2003)

Antigua and Barbuda	Honduras
Bahamas	Jamaica
Barbados	Lebanon
Belize	**Liberia**
Bermuda (UK)	Malta
Bolivia	**The Republic of the Marshall Islands**
Burma/Myanmar	Mauritius
Cambodia	**Netherlands Antilles**
Cayman Islands (UK)	**Panama**
Comoros	São Tomé and Príncipe
Cyprus	**St. Vincent and the Grenadines**
Equatorial Guinea	Sri Lanka
German International Ship Register (GIS)	**Tonga**
Gibraltar (UK)	**Vanuatu**

Source: ITF, 2003 (http://www.itf.org.uk/seafarers/FOC/Body_FOC.html)

Box A2.1. Examples of ITLOS Decisions

In response to large-scale IUU fishing around Kerguelen for toothfish, France has arrested a number of vessels and fined them with large bonds. In three cases now, the flag state of the IUU vessel has taken France to the International Tribunal on the Law of the Sea (ITLOS), seeking immediate release of the vessel and considerable reductions in the level of the bond set. In the first case, regarding the Camuoco (Panama vs France), France had set a bond of FF 20 M (USD 3.1 M). Despite drawing attention to the seriousness of IUU fishing around Kerguelen (estimated by France to be in excess of USD 56 M to that date) on 7 February 2000 the Tribunal found that the bond set by France was too high, and reduced it to FF 8 M (USD 1.2 M). The following factors were cited by the Tribunal in reaching its decision that the original bond was unreasonable.[50]

" The Tribunal, in a previous judgment in the 1997 M/V "Saiga" (Prompt Release) case, had determined that: "the criterion of reasonableness encompasses the amount, the nature and the form of the bond or financial security" and that the "overall balance of the amount, form and nature of the bond or financial security must be reasonable".

The Tribunal, in today's Judgment, reiterated that conclusion and elaborated on a number of factors that are relevant in an assessment of the reasonableness of the bond or financial security. The Tribunal considers the following to be of relevance:

- The gravity of the alleged offences;

- The penalties imposed or imposable under the laws of the detaining State;

- The value of the detained vessel and of the cargo seized; and

- The amount of the bond imposed by the detaining State and its form".

In a second test case (18 December 2000), the Tribunal again decided that a 56.4M FF (USD 8.7 M) bond set by France on the Seychelles flagged Monte Confurco was not reasonable, and reduced it to FF 18 M (USD 2.8 M). However, in the final French case (regarding the Belize registered Grand Prince, 20 April 2001), the Tribunal found "that it had no jurisdiction under article 292 of the Convention to entertain the Application". The Tribunal stated that the "documentary evidence submitted by the Applicant fails to establish that Belize was the flag State of the vessel when the Application was made". France's bond of EUR 1.7 M (USD 1.7 M) was therefore upheld (Belize had asked for its reduction to EUR 206 149)[51].

A similar case was recently brought by the Russian Federation against Australia. This stems from the arrest on 7 February 2002 of the Volga, which was boarded by Australian military personnel from a military helicopter on the high seas in the Southern Ocean for alleged illegal fishing in the Australian fishing zone. The vessel was directed by an Australian warship to proceed to Perth, where it was detained. The crew of the vessel was repatriated to their respective home countries after a period of detention, with the exception of three officers of Spanish nationality, who remained in Perth under court orders. The catch which had been on board the vessel at the time of boarding was sold by the Australian authorities for the amount of AUD 1 932 579.28. The Australian authorities set the amount of the security for the release of the vessel and the crew at AUD 4 177 500. The Russian Federation requested the Tribunal to order the Respondent to release the Volga and the officers upon the posting of a bond or security in an amount not exceeding AUD 500,000. What is particularly interesting about this case is that Australia actually made the arrest in high seas waters adjacent to its EEZ around Heard Island.

50 ITLOS press release 35

51 *La Voz de Galicia*, 13 April 2002. Ultimately, the fine was not paid, and France sank the vessel off La Réunion in early 2002.

In making its judgement, the ITLOS tribunal has obviously learned from its previous experiences. It set a bond consisting of the value of the vessel, fuel/lubricants and fishing gear (AUD 1.9 M). Significantly, they did not consider that the proceeds of the sale of fish and bait from the vessel, which is being held on trust by the Australian authorities pending the outcome of domestic proceedings, should form part of the bond. This departs from their previous judgements, and is an important principle because it means that the company must find an *additional* AUD 1.9 M for a bond guarantee. However, they disallowed an application by Australia to include the sum of AUD 1 M within the bond for a VMS system on board the vessel. This would have been a "good behaviour" guarantee pending full trial in Australia, because as was pointed out during the ITLOS hearing, IUU vessels are usually repeat offenders. For instance the Camuoco, which following the January 2000 ITLOS hearing of Panama v France was released on bail, was arrested on 3 July 2002 by French authorities around Kerguelen Island (again), this time named the 'Eternal' (previously 'Arvisa 1', previously Camuoco). However, at least one judge disagreed with the court finding, and opined that such a good behaviour mechanism would be appropriate given the high level of re-offending of such vessels.

Source: ITLOS and *La Voz de Galicia*, 13 April 2002.

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CHAPTER 3

Measures in Place Against IUU Fishing Activities

Abstract

This chapter outlines existing frameworks for measures in place against IUU fishing activities on the high seas as well as in the national EEZs. The main objective of this chapter is to identify frameworks for current and possible future measures against IUU fishing activities at the national, regional and international levels. On the basis of a literature review and the results of answers to a questionnaire by OECD Member countries, this chapter also provides an overview of measures in place against IUU fishing activities in terms of legal, economic and social aspects. Finally, this chapter also covers other related issues regarding IUU fishing activities including OECD instruments, open register issues, safety of vessels and crews, and regulations on vessel registration.

Introduction

Although the high seas are open to all states (whether coastal or land-locked), freedom of the high seas and governance of high seas fisheries are subject to the basic conditions set out in the 1982 United Nations Convention on the Law of the Sea (LOS Convention). High seas fisheries are often pursuing fisheries on discrete stocks in the high seas as well as highly migratory resources and straddling stocks. These resources are usually managed through regional fisheries management organisations with the relevant international co-operation. In addition to UNCLOS, the current international instruments related to high seas fisheries are:

- 1993 FAO Compliance Agreement (Compliance Agreement)
- 1995 UN Fish Stock Agreement (Fish Stock Agreement)
- 1995 FAO Code of Conduct for Responsible Fisheries (the Code)
- 2001 FAO International Plan of Action on IUU fishing (IPOA-IUU)

Among existing instruments, the Compliance Agreement and UN Fish Stock Agreement are legally binding international instruments and contain a range of requirements relating to flag State responsibilities, compliance and enforcement. On the other hand, the Code and the IPOA-IUU are voluntary and management-oriented instruments. They were formulated to be interpreted and applied in conformity with the relevant rules of international law.

Although somewhat different in their focus and scope, each instrument has the same goal, *i.e.* to ensure the long-term, sustainable use of fisheries resources. These instruments are also essentially complementary in nature to achieve their objective of sustainable and responsible fisheries. The Compliance Agreement and UN Fish Stock Agreement are based on the LOS Convention. The IPOA-IUU has been elaborated within the framework of the FAO Code of Conduct for Responsible Fisheries which in turn is based on the LOS Convention. OECD Member countries' status with respect to major international agreements is shown in Annex 2.

One of the main causes of IUU fishing is considered to be a lack of effective flag State control. If full and effective flag State control existed, the incidence of IUU fishing would be greatly reduced. However, the real world is not perfect and some States, after authorizing vessels to fly their flags, fail to meet their obligations under international law with respect to the supervision and control of these vessels. Furthermore, some States do not provide proper authorizations for their vessels to fish once they assume the State's flag. As a result, this lack of supervision and authorization to fish enables such vessels to engage in IUU fishing with impunity.

Therefore, the focus of this section will be placed on the responsibilities of flag States over fishing vessels flying their flags on the high seas. The rights and responsibilities of flag States have progressively become more detailed with subsequent instruments. They have shifted from a focus on the rights of the flag States to a multitude of duties and responsibilities, including administrative duties, enforcement obligations, duties to co-operate and ensure compliance, and the duty to comply with management measures of regional fisheries management organisations (RFMOs).[1] The notion of a "genuine link" is regarded as a basis for securing more effective implementation of the flag State responsibilities. Table 3.1 shows major flag State responsibilities embodied in the international instruments (shaded cells indicate the provisions taken by international instruments).

It should be noted that the United Nations General Assembly again emphasized IUU fishing issues at its 58th Session in November 2003, calling upon flag and port States to take all necessary measures consistent with international law to prevent the operation of substandard vessels and IUU fishing activities. The General Assembly also urged States to develop and implement national (or regional) IPOA-IUU plans of action to be put into effect by 2004.[2]

1 FAO Fisheries Circular No. 980, Fishing vessels operating under open registers and the exercise of flag State responsibilities, 2002

2 United Nations General Assembly, 58th session Agenda item 52(b), November 2003

Table 3.1. Major Flag State Responsibilities in International Instruments

Provisions	LOS Convention	Compliance Agreement	Fish Stock Agreement	The Code	IPOA-IUU
Maintain a register/record of fishing vessels	■	■	■	■	■
Exercising effective control over fishing vessels		■	■	■	■
Licensing or authorisations to fish			■	■	■
Marking fishing vessels and fishing gear		■	■	■	
Recording and reporting of fisheries data		■	■	■	
Enforcement measures[3]		■	■	■	
Establishing effective MCS mechanism			■	■	■
Restrictions on re-flagging		■			■

Source: FAO, United Nations and OECD Secretariat.

1. International Frameworks on High Seas Fisheries

1982 United Nations Law of the Sea Convention

UNCLOS establishes a comprehensive framework for the management and conservation of all living marine resources and includes all relevant issues regarding the utilization, management and authority over marine living resources. Its most important component is the establishment of 200-mile EEZs. Within the 200-mile EEZ, UNCLOS recognizes broad coastal State sovereign rights for conserving and managing the living resources (Article 62 (2)).

A key principle of the UNCLOS regarding the high seas is that nationals of all States have the right to fish there, albeit subject to certain provisions (LOS Article 116). The principal provision limiting high seas fishing activities is provided in Article 117 dealing with the *"Duty of States to adopt with respect to their nationals measures for the conservation of the living resources of the high seas"*. According to this article all States have the duty to take, or to co-operate with other States in taking, such measures for their respective nationals as may be necessary for the conservation of the living resources of the high seas. Hence, to the extent that the UNCLOS is customary international law, flag States have the obligation to ensure that the vessels flying their flags follow the rules.

[3] It includes sanctions of sufficient severity to secure compliance and discourage violations, deprives offenders of benefits accruing from illegal activities, and may permit refusal, withdrawal or suspension of fishing authorizations if appropriate.

However, many FONC countries do not have the means to ensure appropriate control, and it has become evident that for certain countries this provision has been difficult to implement and enforce.

On the high seas, UNCLOS emphasizes the role of regional fishery bodies for the management of straddling and highly migratory fish stocks. The LOS Convention also provides that the States concerned should seek, through appropriate RFMOs, to agree upon the measures necessary to co-ordinate and ensure the conservation and development of stocks (Article 63). The responsibilities of flag States are an essential component of the legal regime on the high seas.

The Responsibilities of Flag States

With regard to a ship's nationality, UNCLOS recognizes that every State shall fix the conditions for granting its nationality to ships, for the registration of ships in its territory, and for the right to fly its flag. Ships have the nationality of the State whose flag they are entitled to fly. UNCLOS also obliges the flag State to ensure that a "genuine link" exists between the State and the ship. (Article 91)

Under UNCLOS, ships sailing on the high seas are subject to the exclusive jurisdiction of the flag State. Except in exceptional situations, only the flag State has the right to board or otherwise inspect a ship on the high seas (the Coastal State assumes that right and duty in its EEZs).

Regarding enforcement on the high seas, UNCLOS gives exclusive jurisdiction over a vessel on the high seas to the flag State on the basis of the principle of nationality. The flag State has the right to board and inspect a ship on the high seas. It is thus the flag State's responsibility to enforce all aspects of international law on the high seas, including conservation and management measures taken by regional fisheries management organisations (Article 92).

Article 94 of the UNCLOS also sets out the duties of the flag State. Paragraph 1 states that every State shall effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag. This includes, in particular, provisions for maintaining a vessel register and ensuring that the flag State has jurisdiction over the ship with regard to its own laws and regulations.

1993 FAO Compliance Agreement

The Compliance Agreement reaffirms the provisions of UNCLOS that flag States must exercise effective control over their vessels fishing on the high seas. It elaborates this obligation by requiring that all such vessels be licensed to conduct such fishing, and that the licences be conditioned on the vessel abiding by internationally-agreed conservation and management measures. The agreement applies to all fishing vessels over 24 meters in length. The primary objective of the Agreement is to deal with the problem of fishing vessels re-flagging to avoid compliance with agreed conservation and management measures; such vessels are usually referred to as vessels flying flags of non compliance (FONC) and countries that allow such practices and keep such registers as "FONC states". The Agreement, for the first time, underlined the right to fly the State's flag and the right to fish on the high seas. The Agreement is legally binding and came into force on 24th April 2003, with 25 signatory States.

The Responsibilities of the Flag State

The Compliance Agreement sets out the responsibility of flag States in more detail than UNCLOS. While UNCLOS says that States must try to agree upon the necessary conservation measures, the Compliance Agreement provides that:

> "*Each Party shall take such measures as may be necessary to ensure that fishing vessels entitled to fly its flag do not engage in any activity that undermines the effectiveness of international conservation and management measures.*" (Article III paragraph 1a)

The Agreement seeks to ensure that flag States exercise effective control over their vessels while fishing on the high seas by requiring an authorization to engage in such fishing. In this way the Agreement would deter unauthorized vessels from high seas fishing and hence from not complying with conservation and management measures that have been agreed by competent regional fisheries management organisations. The Agreement also seeks to ensure the transparency of all high seas fishing operations through the collection and dissemination of data, and requires each flag State to maintain a record of vessels entitled to fly its flag and authorized to fish on the high seas (Article IV).

Under the Compliance Agreement, flag States should not grant fishing authorizations to vessels that have previously been registered in another state that has undermined the effectiveness of conservation measures. Each state should also undertake to enforce the provisions of international conservation and management measures through criminal sanctions against flag vessels. These sanctions should include refusal, suspension or withdrawal of authorization to fish (Article III paragraph 8).

1995 UN Fish Stock Agreement

The UN Fish Stock Agreement provides an implementation regime for the LOS Convention with regard to straddling and highly migratory fish stocks and a framework for international co-operation in the conservation and management of those fish stocks. It principally applies to the high seas fisheries, but some provisions apply exceptionally to EEZs. It also establishes the role of RFMOs as the major vehicle for co-operation. As a result, the UN Fish Stock Agreement confers considerable powers on RFMOs, including the establishment of a programme for the control and surveillance of vessels on the high seas.

As a management regime, the Agreement introduces new principles and concepts to fisheries management including the precautionary approach, vessel monitoring systems (VMS), compatibility of conservation and management measures, transparency of activities within sub-regional and regional fishery management organisations, high seas boarding and inspection, and port State measures. This Agreement entered into force in December 2001.

The Responsibilities of Flag States

The UN Fish Stock Agreement imposes obligations on flag States under Article 18 paragraph 1, including:

> *A State whose vessels fish on the high seas shall take such measures as may be necessary to ensure that vessels flying its flag comply with sub-regional and regional conservation and management measures and that such vessels do not engage in any activity which undermines the effectiveness of such measures.*[4]

The UN Fish Stock Agreement extends the rights of coastal States to react to unauthorized fishing outside the EEZs. Under the Agreement, States assume a much greater responsibility for effective monitoring, control, and surveillance of fishing to implement and enforce conservation and management efforts in international waters. State parties to the Agreement have the right to board and inspect flag vessels of other party States with a view to verifying compliance with the rules of the regional fisheries organisations.

1995 FAO Code of Conduct for Responsible Fisheries

The FAO Code of Conduct for Responsible Fisheries provides a framework for national and international efforts to promote the responsible exploitation of living aquatic resources in harmony with the environment. The Code was formulated to be consistent with UNCLOS, Agenda 21 of Chapter 17 of UNCED, the Compliance Agreement, and the UN Fish Stock Agreement. Among them, the Compliance Agreement is an integral component of the Code. The Code is global in scope and covers all fishing activities both within EEZs and on the high seas. The objectives of the Code are to establish principles and criteria for national and international legal and institutional arrangements and to provide standards of conduct for persons involved in the fishery sector. The Code is non-binding in nature.

The Responsibilities of Flag States

Under the Code, flag States should ensure that fishing vessels entitled to fly their flag do not fish on the high seas or under the jurisdiction of other States unless they have obtained both a Certificate of Registry and an authorization to fish. Flag States are required to maintain records of these fishing vessels, indicating details of the vessels, their ownership and the authorization to fish. Fishing vessels should be marked in accordance with internationally recognizable vessel marking systems such as the FAO Standard Specifications and Guidelines for Marking and Identification of Fishing Vessels.

The Code also notes that flag States should take enforcement measures regarding the violation of conservation and management regulations. Sanctions should be severe enough to be effective in securing compliance and to discourage violations wherever they occur, and should deprive offenders of the benefits accruing from their illegal activities.

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4 It may be noted that in the FAO Compliance Agreement, a State is not to authorize a vessel to fish on the high seas "*unless it is satisfied that it is able, taking into account the links that exist between it and the fishing vessel concerned, to exercise effectively its responsibilities under this Agreement in respect of that fishing vessel*" whereas, under the UN Fish Stock Agreement *"States shall authorize the use of vessels flying its flag for fishing on the high seas only where it is able to exercise effectively its responsibilities in respect of such fishing vessels under the Convention and this Agreement"*.

Such sanctions may, for serious violations, include provisions for the refusal, withdrawal or suspension of the authorization to fish**.**

FAO IPOA 2001 on IUU fishing

The International Plan of Acton on IUU fishing (IPOA-IUU) was adopted in March 2001 to address the problem of IUU fishing. The purpose of the IPOA-IUU is to prevent, deter and eliminate IUU fishing by providing all States with a set of comprehensive, effective and transparent measures on the basis of which they may act either directly or through the relevant RFMOs. In doing so, IPOA-IUU seeks to address IUU fishing in a holistic manner and provide a comprehensive "toolbox" as a checklist so that States can select those measures that are most relevant to their particular situations. The implementation of the IPOA-IUU focuses on the elaboration of national plans of action on seven types of measures such as coastal State measures, port State measures, and market-related measures. Under the IPOA, a national plan of action would be developed by June 2004 on a voluntary basis.[5]

Though this is a voluntary instrument, it provides international support for countries other than the flag State to take various types of action against IUU fishing by FONC vessels. Under the Plan, in addition to detailed requirements for the flag State, there are provisions for port States to collect specified information on fishing activities and possibly to deny the landings or transhipment of catches to IUU fishing vessels. States can impose trade-related measures such as import bans, as well as adopt legislation making it an offence to trade in fish caught by IUU fishing vessels. The IPOA also urges countries to adopt multilateral catch documentation and certification requirements as a means of eliminating trade in fish derived from IUU fishing. By the same token, coastal States are to implement effective control and surveillance programmes in their waters, including over transhipment at sea.

The Responsibilities of Flag States

Flag State responsibilities are a significant element of the IPOA-IUU. They include requirements to adhere to a system of fishing vessel registration, a record of fishing vessels and an authorization to fish. The IPOA-IUU encourages States to deter vessels from re-flagging and flag-hopping for the purpose of circumventing or non-compliance with conservation and management measures or provisions adopted at a national, regional or global level. States shall take all practical steps, including denying a vessel the authorisation to fish and the entitlement to fly that State's flag, to prevent "flag hopping". It also encourages a State to consider making its decision to register a fishing vessel conditional upon its being prepared to provide the vessel with an authorization to fish in waters under its jurisdiction, or on the high seas.

Consistent with the Compliance Agreement and the Code, the IPOA-IUU encourages keeping records, including information such as vessel name, registration number, previous flag, and so on. In addition to this information, it also requires the name and ownership history of the vessel, including the history of non-compliance and a photo of

5 According to the FAO, around forty-one countries worldwide are expected to have national plans in place in the near future. Of these, only eighteen member countries reported to FAO that they would be completed before the 2004 deadline (FAO C 2003/21). As of March 2005, the European Union, Spain, United States, Japan, Canada, Australia, New Zealand, Mexico, Chile, Tonga, Tuvalu, Federated States of Micronesia, Seychelles, Namibia, Ghana and Gambia had submitted their national plan to the FAO.

the vessel. This information will assist a flag State in monitoring vessels entitled to fly its flag and may make it more difficult for vessels with a history of non-compliance from re-flagging. The IPOA-IUU requires that States ensure that no vessel be allowed to fish without an authorization. Flag States or coastal States may impose conditions on the authorization to fish, including the requirement for vessel monitoring systems, catch and transshipment reporting conditions, observer coverage, and unique marking and identification of vessel and gear.

Summary and key issues

Some observers have pointed out that the most effective measure to curb IUU fishing on the high seas would be the earliest possible adoption or ratification of, or accession to, relevant international fisheries instruments, including the UN Fish Stock Agreement and the Compliance Agreement and full implementation of the Code, by all States and entities engaged in fishing.[6] While these major instruments have now entered into force, one challenge remains, *i.e.,* how to overcome a major loophole in international law, *i.e.,* a country not adhering to a treaty is not bound by its provisions.

With the full and effective implementation of flag State control, the development of complementary port State control would possibly also contribute to a reduction in IUU fishing on the high seas. In this sense, the IPOA-IUU would play an important role in addressing IUU fishing activities if all countries became actively involved in implementing this instrument. However, the IPOA-IUU does not have a feedback mechanism to follow up or apply pressure with regard to the implementation of national measures; this remains another loophole in international instruments.

2. Synthesis of Inventory on National Measures

This section provides an inventory of national measures in place against IUU fishing activities. As a core part of the study, the Committee decided to compile an inventory of national measures already in place against IUU fishing activities in terms of legal, economic and social aspects. On the basis of country notes with answers to the questionnaire, this section also categorizes and summarizes the measures OECD Member countries have put in place. Full text of country responses to the questionnaire are contained in Chapter 4 of this publication.

Main issues in the questionnaire survey

National legal measures and regulations

First, this section focuses on the rules and regulations dealing with national flagged vessels' fishing activities within other countries' EEZs and on the high seas. It also includes extra-territorial application of a country's regulatory measures. Here, the synthesis will seek to compare differences in responses across Member countries. It will include requirements and obligations that apply to fishing vessels, as well as sanctions against IUU fishing activities This information will make it possible to assess capabilities to control and effectively monitor national flagged vessels' fishing activities outside national EEZs and perhaps help identify best practice.

6 FAO (2003), Progress Report on the Implementation of IPOA-IUU, November 2003 (C2003/21).

Second, regulations on foreign fishing vessels' activities within national EEZs will be analysed. The emphasis is on the responsibilities of foreign flagged vessels (such as the installation of VMS, catch reporting etc.) when engaging in fishing activities within other nations' EEZs, and also includes an overview of the penalty structures with regard to IUU fishing activities as well as financial burdens (fines), confiscation of catches and vessels, and the detention of vessels and crews.

Finally, regulations on fishing vessel registration will be discussed. This issue relates to general requirements of fishing vessel registration, possible restrictions on the registration of fishing vessels that have previously engaged in IUU fishing activities, rules regarding genuine link (or economic link) of registering vessel, and whether the prior government's permission for re-flagging of national flagged vessel is needed.

Economic measures

In this category, investment rules regarding fishing vessel ownership, with a particular stress on outward investment rules rather than inward ones, will be discussed. Trade rules on fish and fish products of IUU origin are discussed on the basis of both RFMO arrangements and unilateral measures. This section also includes a description of measures such as catch documentation and certification requirements as well as import and export controls or prohibitions of IUU catches.

Restrictions on foreign direct landings (including use of ports) and transhipments from foreign fishing vessels are also included. This synthesis is looking for information on specific rules for fishing vessels that have been identified to be engaged in IUU fishing activities. With regard to penalties applicable to IUU fishing vessels and fishers, the paper will assess whether a differential penalty structure or treatment according to nationality of vessels and fishing permit holders vs. non-permit holders is the right way forward.

Other measures

This category focuses on moral/ethical measures to prevent IUU fishing activities. These include largely non-economic and social mechanisms that discourage engagement in IUU fishing activities or the provision of services (banking, satellite services, insurance, etc.) to vessels that have been engaged in IUU fishing operations.

Overview of national measures

National legal measures and regulations

Fishing activities by national vessels within other countries' EEZs and on the high seas

Most OECD countries apply their national measures to national-flagged fishing vessels when they are engaged in fishing activities on the high seas as well as in the EEZs of third countries, without distinction. Controlling and monitoring national-flagged fishing vessels' activities are carried out using tools such as fishing permits, catch quotas, reporting obligations on catch data and vessel position, VMS on board and maintenance of logbook, etc. In Turkey, on the other hand, there is no regulation in place to control its national-flagged fishing vessels' activities outside its EEZ.

New Zealand requires a high seas fishing permit as well as an additional authorization to control the fishing activities of New Zealand flagged vessels on the high seas. To engage in trawling or other demersal fishing in the high sea area of the South Tasman

Rise, anyone using New Zealand flagged vessels must hold a high seas fishing permit and an additional authorization issued under the Fisheries Regulations (2000). Fishers within the CCAMLR area are required to hold a high seas fishing permit and a permit issued under the Antarctic Marine Living Resources (AMLR) Act 1981.

Among control tools, VMS is considered to be an effective tool for monitoring and controlling national fishing vessels activities outside of national waters. Iceland obliges all vessels that engage in fishing operations outside its waters to install VMS. In Japan, monitoring activities using VMS are also carried out in major fishing grounds. Korea applies this obligation for deep-sea fishing vessels targeting highly-migratory species. The United States and Australia use VMS and observer coverage. Norway and EU Member countries implement VMS systems for vessels over 24 meters in length. In the EU, this requirement has applied to vessels over 18 meters as from 2004 and will apply to vessels over 15 meters as from 2005. Mexico applies the use of satellite tracking systems on fishing vessels in tuna, swordfish, shark and shrimp fisheries since 2004. All New Zealand flagged vessels fishing on the high seas are required to carry and operate an automatic location communicator at all times.

Illegal fishing activities outside a nation's EEZ may incur fines (see Table 3.2) or imprisonment, including suspension or withdrawal of licence, confiscation of catches, fishing gear and vessels, etc. Canada imposes fines of up to USD 357 142 and/or 2 years imprisonment. In Japan and Korea, anyone engaged in illegal activities without a licence may face up to 3 years imprisonment (and/or USD 16 949 and 16 806, respectively). Fish, fishing gear and vessels may also be confiscated. Korea may also simultaneously assess the penalties of the States and RFMOs when a Korean fishing vessel violates laws set both by a coastal State and RFMOs. Germany imposes fines of up to USD 84 270 and possible licence withdrawal in cases of infringement. In Sweden, illegal fishing might lead to a reduction of fishing ration or to a withdrawal of the special permit for a certain period of time. New Zealand imposes fines up to USD 14 450 and confiscates the fish (or proceeds from sale), fishing gear, and the vessel. If a person is convicted more than once within a 7-year period for specified serious offences, a "banning provision"[7] can be applied for 3 years. Any history of offending in IUU fishing is also taken into account in the process of issuing high seas fishing permits and AMLR permits. Australia applies penalties up to USD 35 483, which can apply to the master and each individual crew member.

In Spain infractions related to IUU activities are divided into heavy infractions or very heavy infractions. Heavy infractions are: *a)* fishing without the appropriate authorization, *b)* fishing a species when its TAC is exhausted, *c)* fishing in closed areas or during seasonal closures or for banned fish species, *d)* no compliance with the effort rules, *e)* not having VMS installed, *f)* no compliance with communication rules, *g)* landings from third-country vessels without control, *h)* landing outside permitted zones, *i)* landing, commercialisation or transportation of undersized products, *j)* the use of non-regulated gears, etc. Heavy infractions are sanctioned by fines of between EUR 301 and EUR 60 000, as well as an immobilisation of the vessel for no longer than 3 years and the seizure of the fish products. Very heavy infractions are: *a)* fishing with a vessel not registered in the Fishing Vessels Census, *b)* Third country vessels fishing in Spanish waters without the required authorization, *c)* landings from third-country vessels without

7 It includes banning from *i)* holding any licence, approval, or fishing permit obtained under the Fisheries Act, *ii)* engaging in fishing authorized under the Fisheries Act, *iii)* deriving any beneficial income from fishing-related activities under the Fisheries Act.

justifying their origin, *d)* no compliance with the obligations derived from International Treaties, *e)* fishing with forbidden gears or techniques (*e.g.*, use of dynamite), etc. Very heavy infractions are sanctioned by fines of between EUR 60 001 and EUR 300 000, an immobilization of the vessel of no longer than 5 years, the seizure of the fish products and the vessel when it is not registered in the Fishing Vessels Census.

Table 3.2. Some Examples of Penalty (Fines) for Offences by National Flagged Vessels

(USD)[8]

Canada	Belgium	Germany	Australia	Japan	Korea	Spain
357 142	112 360	84 270	35 483	16 949	16 806	335 900

Source: OECD Member countries.

Norway prohibits carrying out fishing activities on the high seas without first obtaining authorization to register the fishing vessel. Registration is valid for only one calendar year. One example of a national action taken against a national vessel engaged in IUU fishing was when the Norwegian authorities withdrew the fishing permit of a Norwegian-registered vessel fishing in the CCAMLR-area because the owner had previously extensively violated fisheries regulations.

Regarding the extra-territorial application of domestic sanctions to citizens engaging in IUU fishing, Spain has a regulation on the application of penalties to Spanish nationals employed on FONC vessels. New Zealand also controls the fishing activities of its nationals on foreign-flagged vessels. No New Zealanders may use a foreign-flagged vessel to take or transport fish on the high seas unless they do so in accordance with an authorization issued by a State party to the UN Fish Stock Agreement (including a signatory state) and the FAO Compliance Agreement. Thus, only two OECD countries have made it an offence for their nationals to engage in IUU fishing when on foreign-flagged vessels.

Fishing activities by foreign vessels within national EEZs

Fishing activities by foreign vessels are only possible subject to obtaining a fishing licence from a third country or under bilateral fisheries agreements. In most cases, the licence specifies the type of fishing, type of species etc., and the government may levy a licence fee. Fishing activities are usually controlled and monitored by catch quotas, mandatory reporting, the use of VMS, use of observers and maintenance of logbooks. In the case of fishing activities under bilateral agreements, vessels are obliged to obey measures based on the principle of reciprocity.

In the EU, the Community has exclusive competence to negotiate and conclude fisheries agreements with third countries. Fishing activities by foreign vessels are possible under bilateral agreements with those third countries. Member countries are responsible for implementing control measures and for introducing procedures for prosecution and punishment of IUU fishers within their national EEZs. Norway has an extensive system of agreements with other states and a large licensing programme for foreign vessels, with approximately 1 200 licences granted annually. In Korea and Japan,

8 National unit per US Dollar used in this paper is based on the estimated rate of the year 2003 set by the OECD *Economic Outlook* No. 74.

foreign fishing vessels can conduct fishing activities within their EEZs subject to obtaining a government licence or under bilateral agreements.

In the New Zealand EEZs, two types of fishing are allowed for foreign-flagged vessels – fishing under a charter arrangement with a New Zealand company and fishing under a foreign-licensed access arrangement. There are currently 48 vessels registered under charter arrangements and only United States purse seine vessels are entitled to fish under a foreign-licensed access arrangement. Foreign fishing access to the Australian EEZs is strictly regulated and limited to negotiated government agreements. In the process of granting foreign fishing licences, Australia takes into account previous IUU fishing offences by vessel and crew, history of flag State, as well as the 'genuine link' between the vessel and the flag State. In particular, the vessel master must also hold a foreign master fishing license issued by the Australian government.

Turkey, on the other hand, does not allow foreign vessels to fish within its EEZs. No foreign vessels may fish in the United States EEZs unless the flag State has concluded a "Governing International Fishery Agreement" with the United States, with the exception of the US-Canada treaty governing the Pacific albacore tuna fishery.

Penalties for illegal fishing by foreign fishing vessels within national EEZs include fines (see Table 3.3.), confiscation of catches, equipment and vessels, detention of vessels and crews. In most countries the specific action taken is decided by the courts. The maximum penalty has a wide range according to national laws, for example: USD 535 714 (Canada), USD +500000 (Norway), USD 84 745 (Japan), USD 3 600 (Turkey), USD 5 056 (minimum in the Netherlands), USD 84 034 (Korea), USD 112 360 (Belgium), USD 84 270 (Germany), USD 289 017 (New Zealand), USD 22 472 for vessel operator and USD 8 989 for captain (Poland) and USD 532 258 (Australia). Mexico, Australia, Korea and Japan have measures on the detention of vessels (including their crews) and application of sureties. Detained ships and their crews will be released immediately upon deposit of a surety or other guarantee. While there may be many legal reasons for the wide range of fines it would also seem that the national perceptions of the IUU problem may influence the level of fines applied.

Table 3.3. Some Examples of Penalty (Fines) for Offences by Foreign Flagged Vessels

(USD)

Canada	Australia	New Zealand	Belgium	Japan	Germany	Korea	Spain
535 714	532 258	289 017	112 360	84 745	84 270	84 034	335 900

Source: OECD Member countries

With regard to examples of national actions taken against foreign vessels engaged in IUU fishing activities, Australia apprehends over a hundred foreign vessels for IUU fishing within the Australian fishing zone each year (138 illegal fishing vessels in 2003). IUU fishing in the Australian EEZs is of two distinct types: artisan-level illegal fishing (mainly targeting reef shark in northern Australia) and industrial-scale illegal fishing (targeting Patagonian toothfish in the southern Ocean). Australia has set a penalty for fishing vessel masters taking dolphin. In 2003 two masters were sentenced to two months imprisonment for such offences, and a further three-month sentence for failing to pay fines.

Registration of fishing vessels

Generally, to be registered as a fishing vessel, *i)* a minimum size (ex, 5 net tonnes, 5 meters in length etc.), *ii)* fishing license, and *iii)* the fulfilment of additional requirements set by national laws are required. For vessel registration, many countries require the owners of fishing vessels to be nationals or to provide an economic connection (link) with the country. In this regard, it is considered difficult for foreigners to register their vessels in OECD countries due to very strict requirements. Required information on the registration normally includes (even though this differs country by country): ownership and name of vessel, gross tonnage, date of construction, former flag, and name and place of the vessel's construction company.

EU Member States must inform the European Commission of all data relating to the life of a fishing vessel in cases where such data is recorded in their national database. Since January 2003, the name and address of the agent and the place of construction of a vessel whose overall length is 15 meters or more, or whose length between perpendiculars is 12 meters or more, must be notified to the EU. With regard to the name and address of the owner, the applicable limits are an overall length of 27 meters and a length between perpendiculars of 24 meters. It became mandatory to supply such data for all vessels as from 2004.

Japan has established a fishing vessel registration scheme which sets the upper limit of the total number (and/or total gross tonnages) of fishing vessels. In Sweden, only active fishing vessels are listed in the National Board of Fisheries register (with permits issued by NBF). The requirements for a fishing vessel permit are: *i)* being listed in the Swedish Maritime Administrations register of shipping, *ii)* economic connection to Sweden, *iii)* that a fisher with a valid fishing licence can be registered as permit holder/ship operator of the vessel. In Portugal, the owners of fishing vessels must, on an annual basis, provide a proof of their economic link with Portugal.

In New Zealand, fishing vessels have two registration processes on the basis of registration under the Ship Registration Act (over 24 meters in length) and registration under the Fisheries Act. For foreign-flagged charter vessels and for New Zealand flagged vessels where the operator of the vessel is a foreigner, specific consent from government is required in the process of fishing vessel registration. Australia's application for vessel registration includes a declaration of ownership and nationality,[9] evidence of ownership, call sign licence and marking requirements. And all Australian-owned fishing vessels must be registered in order to fish beyond territorial seas.

All vessels of five net tons or greater that are owned by a US citizen or a corporation are required by US law to be federally documented through the US Coast Guard's National Vessel Documentation Center (NVDC) if the vessels are to be used in the fishery trade. US-flagged fishing vessels greater than five net tons must be US-built and wholly owned by a US citizen, a US corporation or a partnership that is at least 75% US-owned.

Regarding the re-flagging of national flagged fishing vessels, in most countries government permission is not needed except in Canada and Norway. In Canada, government permission is needed for re-flagging of national-flagged fishing vessels to

9 A strong genuine link is required for the registration of Australian vessels. Only Australian-owned vessels are authorized to fish under fishing permits or statutory fishing rights.

alternative registries outside of Canada. In Norway permission is required if a particular vessel has been involved in schemes for adjustment of fishing capacity.

As a general conclusion it can be said that in most OECD countries, with the exception of New Zealand, Australia and Norway, there is no clear mechanism to control fishing vessels that have a history of IUU fishing activities in the registration process. However, New Zealand only takes the offending history of its national-flagged vessels into account when the vessel operator is not a New Zealand national. Australia also takes the ship's history of compliance and history of IUU fishing into account in its vessel registration. And in Norway, the Norwegian Fisheries Authorities established a list of vessels in the 1990s to secure that no foreign vessel with a history of IUU is given permission or licence to Norwegian waters.

Economic measures

Investment rules

With respect to inward investment, fishing vessel ownership is subject to certain restrictions such as nationality, economic links, specific consent and share of capital. In reality, most countries have very strong restrictions on vessel ownership and flying their flag. Foreign investment in a fishing company can only be within a certain share of capital stock (in Mexico and Korea up to 49%; in the US and Iceland up to 25%). While there is foreign investment in New Zealand fishing companies, there are limits (up to 24.9%) on the degree of foreign ownership of companies that own fishing quotas.

In outward investment, there are no restrictions for most Member countries to invest in the fishery sector of foreign countries. Foreign investment is not restricted in Spain, but national investment in third countries is regulated, especially when government aids to reduce the fishing effort can be obtained. In Japan, foreign investment in the fishing area is subject to a report to the government. New Zealand has a rule that imposes restrictions on the ownership of foreign-flagged fishing vessels by its nationals. No New Zealanders may use a foreign-flagged vessel to take or transport fish on the high seas unless they do so in accordance with an authorization issued by a party state of the UN Fish Stock Agreement (including a signatory state) and the FAO Compliance Agreement.

Trade rule – Catch and Trade Documentation

Many countries require statistical and catch documents in accordance with the rules set by the relevant RFMOs as a mean to prohibit the flow of IUU catches. Japan and Korea require the submission of catch and statistical documents for import and export of bluefin tuna (ICCAT), southern bluefin tuna (CCSBT), bigeye tuna (CCAMLR), sword fish (ICCAT), and Patagonian toothfish (CCAMLR). The United States also implements a range of catch documentation and certification schemes through RFMOs such as ICCAT, CCAMLR and IATTC. New Zealand has also implemented trade measures consistent with their obligations under CCAMLR, CCSBT, ICCAT and IATTC.

Iceland is bound by trade documentation measures adopted by ICCAT, and Norway has implemented a catch documentation scheme for Patagonian toothfish (CCAMLR). Australia has implemented trade certification schemes set by CCAMLR, CCSBT and IOTC to prevent IUU fishing. Poland also applies agreed CCAMLR regulations. The EU also supports the use of trade documentation measures made by the ICCAT and CCAMLR; imports of bluefin tuna and exports of Patagonian toothfish, must be accompanied by statistical or catch documentation. Portugal complies with catch

documentation schemes for the species regulated by ICCAT and IOTC. Canada is implementing both trade measures and the statistical document programme prescribed by ICCAT. Canada is also in the process of implementing the CCAMLR catch document scheme on a voluntary basis.

In Turkey, IUU fish are confiscated but subsequently sold at auction. In the Netherlands, foreign parties placing fish on the market (auction, trade and processing) must provide the name of the vessel that caught the fish. When the vessel is not known, the fish is seized and confiscated. Mexico, on the other hand, does not support the application of trade sanctions on the basis that they are not a suitable and just means to promote the protection of species.

Rules regarding landings, transhipments and marketing

In the EU, third-country vessel owners are required to obtain prior authorization (72 hours before landing) to land fish in national ports, and, as a post-landing control measure, they should submit a declaration indicating the quantity of fish (by species) landed. To land fish caught on the high seas or in another jurisdiction from a foreign-flagged vessel at a New Zealand port, government approval is required prior to the departure of the fishing vessel and a fee must be paid. The master of the vessel must give 72-hours notice of the intention to bring the fishing vessel into internal waters. Maximum penalties for violations are up to USD 57 803 and the fish (or proceeds from sale), fishing gear and vessel may be confiscated. Australia also requires a port permit for foreign fishing vessels' landing and transhipment at its ports. This port permit is issued subject to consideration of vessels' compliance and IUU fishing history.

Japanese fishing vessel owners are required to obtain a general permit from the government for the transhipment of tuna species or landing such species at foreign ports. Permit holders should report in advance to the government on the volume of fish, time and venue of transhipment or overseas landing. In the case of non-Japanese fishing vessels, they should obtain a landing permit, along with a port-call permit, for the transhipment or landing of any fish species at Japanese ports. The maximum penalty for violating those provisions is 3 years imprisonment and/or a fine of USD 33 898. Canadian vessels are required to obtain licenses for transporting and/or transhipping fish and fisheries products at sea. The catch of all vessels is determined using catch reporting, the Dockside Monitoring Programme (DMP), and sales slips.

In Sweden, third-country fishing vessels can land their catches in only 13 selected ports. No national regulations forbid reloading from foreign vessels. In Spain, third-country fishing vessels should obtain prior government authorization to land or tranship, as well as proof of the origin of the catches. In Mexico, foreign-flagged fishing vessels need an authorization from the government for disembarking fisheries products or transhipments, and when unloading commercial fisheries products in Mexican ports. Norway also prohibits landings of IUU catches, regardless of their origin.

US law generally prohibits foreign vessels from landing or transhipping fish in US ports. The main exceptions to this rule concern ports in the US territories in the Pacific Ocean and landings of Pacific albacore tuna under a US-Canada treaty. The National Marine Fisheries Service (NMFS) boards some foreign vessels in US ports to examine and verify fish landings. The Coast Guard requires advance notice of arrival 96 hours prior to entry into US ports for all vessels over 300 gross tons. Foreign vessels operating fishing activities in the Korean EEZs under bilateral agreements have to obtain permission from the Korean government in order to transfer catches to another vessel or

land catches in Korean ports. Violations of the provision result in fines of up to USD 84 033.

Penalties, fees and restrictions to GFTs

With regard to penalties (see Tables 3.2 and 3.3), there is no differential treatment between national and foreign vessels in Spain, Portugal, Iceland, Sweden, Belgium, Germany and the Netherlands. Penalties cover fines, confiscation of catches and vessel, and detention of vessels and crews. On the other hand, Korea, Japan, New Zealand, Canada and Australia impose different penalties on national and foreign vessels for illegal fishing activities depending on specific conditions. In OECD Member countries, Canada and Australia impose the highest fines for foreign-flagged vessels. The maximum penalty for Canadian and Australian nationals is USD 357 142 and USD 35 484 respectively, and that for foreign fishing offences USD 535 714 and USD 532 258 respectively. Australia has recently increased the maximum penalty for foreign fishing offences from USD 354 838 to USD 532 258 to differentiate artisan-level IUU fishing from industrial-scale operations.

If the beneficiary of GFTs (such as fishery loans or tax-free petrol) has engaged in IUU fishing in Korea, the National Federation of Fisheries Co-operative entrusted with disbursing GFTs from the government can suspend the provision of or collect the already distributed GFTs. In the US, all federal loans or grants are subject to background checks, including but not limited to credit bureau reports, fines and penalties review. A loan or grant cannot be given if there is an outstanding fishing violation.

In relation to foreign fishing activities within national EEZs under bilateral agreements, some countries charge a fee. In the US, fees are charged when applying to fish (including transhipment) in the EEZs (USD 380 per vessel) and a fee schedule is maintained for quite limited directed fishing possibilities in the Northwest Atlantic. Vessels conducting directed fishing and/or joint ventures are required to pay for observer coverage. New Zealand charges foreign fishing licence fees for foreign-flagged vessels fishing in its waters. The fees depend on the species of fish being targeted.

Other measures

As a private-sector initiative, the OPRT (Organisation for Promotion of Responsible Tuna Fisheries) has been established in Japan to promote responsible tuna fishery. Members of OPRT include large-scale tuna longline fishery organisations from China, Chinese Taipei, Indonesia, Korea and the Philippines, as well as Japanese importers, distributors, and consumer organisations. The main activities of the OPRT are to disseminate information related to IUU problems in tuna fisheries, to keep records of landing statistics of tuna for cross-checking with reported catch data, and to implement a scrapping scheme for IUU vessels. It has been reported that OPRT initiatives noticeably contributed to reducing the trade in IUU tuna catches in international markets with the introduction of the Positive List Scheme on a global scale.

In Turkey, pressures on the fishing community from environment and nature groups, NGOs, press and the media are bringing more attention to IUU and over-fishing, damage to natural stocks, and the threat of extinction of some species. The Korean government seeks to persuade such civil organisations as the Deep-Sea Fishing Association to participate voluntarily in campaigns to prevent fishers from engaging in IUU fishing overseas.

The United States seeks to educate the US fishing industry about initiatives such as the International Monitoring, Control and Surveillance Network.[10] A variety of methods are used to provide outreach to industry to increase understanding of the requirements and need for MCS. Spain established the Fisheries Protected Zone (FPZ) in the Mediterranean Sea to control the activity of vessels of other flags beyond a 12-mile limit. This FPZ makes it possible to supervise and deny the rights to fish in that area of vessels from non-EU countries.

The Norwegian Fishermen Association (with Norwegian Federation of Fish and Aquaculture) has initiated a project that will give fishermen an ethical focus on resource utilization, and towards fellow fishers, buyers and other stakeholders. The project is co-financed by public and private-sector funds. The initiative seeks to explore the possibilities of establishing a certificate for fishers and/or fishing vessels that comply with a set of ethical standards, giving them "preferred customer status". The Norwegian government and the various industry organisations have also signed a co-operation agreement on how to fight illegal activities. It is also noted that Norwegian vessels can be sanctioned by the Norwegian Fisheries Authorities irrespective (in national or foreign waters or on the highs seas) of where an offence takes place.

Australia and New Zealand encourage their fishing companies to participate in international initiatives such as COLTO (the Coalition of Legal Toothfish Operators).[11] COLTO is comprised of industry members from several countries that have a direct commercial interest in the Patagonian toothfish fishery. COLTO launched an international 'Wanted' reward scheme in Brussels in May 2003. The Coalition is offering up to USD 100 000 for information leading to the conviction of illegal fishers. Australia and New Zealand also use greater media coverage to promote the apprehension of vessels suspected of IUU fishing to demonstrate their strong willingness to tackle IUU fishing issues.

Summary and key issues

Most OECD countries control and monitor national-flagged fishing vessels activities using such tools as fishing permits, catch quotas, reporting obligations, high technology based VMS and observer coverage. Increasingly, the information derived from VMS and catch reports is used to feedback into real-time fisheries management decisions. It should be noted that only Spain, Norway and New Zealand apply domestic sanctions to extra-territorial fishing activities by their nationals and national-flagged vessels. However, the level of penalties (especially fines) imposed by most OECD countries are considered to have little impact on deterring IUU fishing activities, compared to the high values of IUU catches.

OECD Member countries do apply very strict requirements for foreigners in vessel registration procedures. However, in that process, IUU history is not taken into account in most countries, except in New Zealand and Australia. With regard to re-flagging, only Canada and Norway have a control mechanism on the change of flag State. Therefore, it

10 The International MCS Network is an arrangement of national organisations/institutions in charge of fisheries-related MCS activities, which have been authorized by their countries, to co-ordinate and co-operate in order to combat IUU fishing. Participation in the network is voluntary and 16 countries (including 9 OECD countries) are now participating.

11 COLTO currently has 28 member companies from ten countries and has applied for CCAMLR observer status to improve its capacity to work with and assist member governments

is clear that the registration process serves a relatively limited filtering role in preventing IUU fishing activities and the "hopping" of vessels from registry to registry.

Increasingly, many Member countries are supporting trade measures (such as CDS and Trade Documentation) taken by RFMOs due to their success in curbing IUU fishing. With some notable exceptions, most countries are not actively using other measures such as encouraging private-sector movement or establishing non-economic and social mechanisms to discourage IUU fishing involvement by their nationals and national-flagged vessels.

Overall, it has been recognized that OECD Member countries have a wide range of perceptions of IUU fishing itself as well as their response in terms of policy priority, penalties and regulations against IUU activities. It is also noteworthy that private initiatives have been increasingly effective, in combination with positive government efforts to stop IUU fishing.

3. Inventory of RFMO Measures

Regional fisheries governance: an overview

A recurring issue of international fisheries is that regional fisheries management organisations should play a key role in managing and conserving world fisheries resources through concerted sub-regional and regional co-operation. This is because many fish stocks are transboundary in character and cannot be managed by a single country.[12]

A number of RFMOs have been established since the adoption of UN LOS Convention. Articles 116-120 of the LOS Convention provide the basis for the role of RFMOs through co-operation among States in the conservation and management of living resources on the high seas. With the adoption of UNCLOS, Chapter 17 of Agenda 21, the 1995 UN Fish Stock Agreement, the 1995 FAO Code of Conduct and the Compliance Agreement, the role of RFMOs in implementing management measures for long-term sustainable fisheries has been highlighted. These international instruments encourage States to establish RFMOs where appropriate, and strengthen existing RFMOs in order to improve their effectiveness in establishing and implementing conservation and management measures.[13]

Among the wide range of international instruments, the 1995 UN Fish Stock Agreement places regional fisheries governance in a crucial position in terms of its implementation; this Agreement adopted the concept of a precautionary approach and set out mechanisms for international co-operation on straddling and highly migratory fish species. It emphasizes that vessels flying the flag of non-members and non-participants should not be authorized to fish, and it also emphasizes co-operation between member and non-member states. It should be noted that the 1995 UN Fish Stock Agreement has brought about two new RFMOs. One is dealing with the management of straddling fish

12 According to the FAO, there are more than 500 maritime boundaries in the world between adjacent EEZs, and significant proportions of the world's fish stocks lie across these boundaries and are fished by two or more nations.

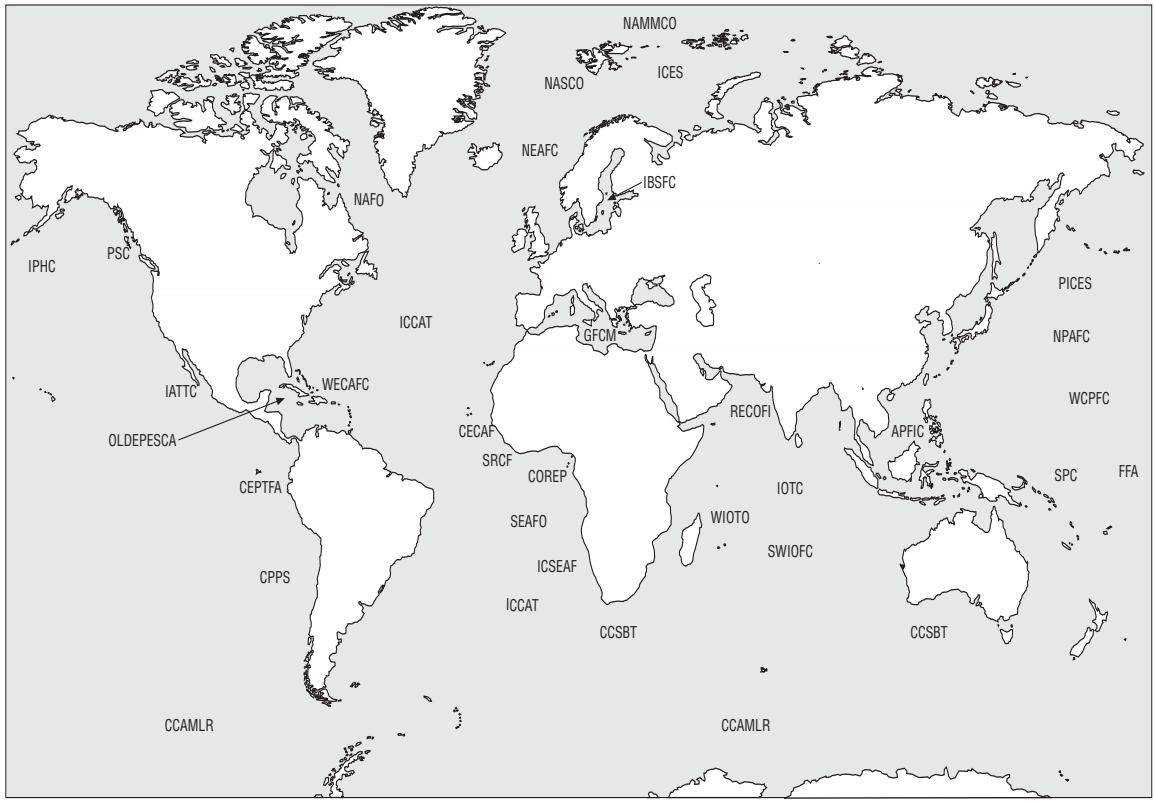
13 See Annex 2, which provides the status of OECD countries involvement in major RFMOs.

stocks in the Southeast Atlantic Ocean (SEAFO),[14] while the other deals with highly migratory fish stocks in the Western and Central Pacific Ocean (WCPFC).[15]

Current situation of RFMOs

As the map (Figure 3.1) shows, there are over 30 RFMOs operating in world fisheries. They were established under the FAO Convention or by international agreements among contracting parties. As described in Table 3.5., RFMOs can be categorised as management bodies, advisory bodies, or scientific bodies according to their functions.[16] The main focus of these organisations is to enhance international co-operative management of shared resources among coastal States and those stocks occurring on the high seas. Recently, the main issues and challenges faced by RFMOs can be summarized as conservation of resources, control of catches and effort, by-catch and discards, data collection and distribution, MCS and IUU fishing.

Figure 3.1. Indicative Map of RFMOs – Area Coverage



Source : Adapted from the FAO website – *http://www.fao.org/fi/body/rfb/Big RFB map.htm*

14 So far, seven States and the EU have signed up to SEAFO. SEAFO will manage straddling stocks such as orange roughy, wreckfish and deepwater hake in the Southeast Atlantic Ocean (FAO Statistical Area 47). Key aspects of the SEAFO Convention are the establishment of a commission, a secretariat, and compliance and scientific committees.

15 The WCPFC Convention entered into force on June 19, 2004.

16 While management bodies directly establish management measures, advisory bodies provide members with scientific and management advice and scientific bodies provide only scientific and data advice.

Table 3.4. RFMOs by Type

Function	RFMOs
Management	CCAMLR, CCSBT, CEPTFA, GFCM, IATTC, IBSFC, ICCAT, IOTC, IPHC, IWC, NAFO, NASCO, NEAFC, PSC, SEAFO, SWIOFC, WCPFC
Advisory	AAFC, APFIC, BOBP, CARPAS, CECAF, CIFA, COPESCAL, COREP, CPPS, EIFAC, FFA, LVFO, MRC, NAMMCO, OLDEPESCA, RECOFI, SEAFDEC, SRCF, WECAFC, WIOTO
Scientific	ACFR, CWP, ICES, NACA, PICES, SPC

Source: FAO

With respect to the magnitude of IUU fishing, the FAO has been informed that IUU fishing accounts for up to 30% of total catches in some important fisheries and that IUU catches, in one particular case, could be as high as three times the permitted catch level.[17] It is also recognized that both contracting and non-contracting parties to RFMOs are involved in IUU fishing activities, as well as flag vessels from open registers. This, of course, undermines the conservation and management measures of many RFMOs. In this context, many RFMOs have taken a number of actions over the past decade to address the problem of IUU fishing and a growing number of RFMOs are now promoting and implementing stronger management measures to curb IUU fishing activities.

Key pressures on IUU fishing vessels imposed by RFMOs include trade and trade-related measures, deregistration of vessels (as was the case of Belize in response to ICCAT pressure) and the imposition of fines (*e.g.,* Panama case against Panama-flagged vessels and eventual withdrawal from register). A list of recent actions taken by some open register States can be found in Annex 3.3. Such actions have had some success and persuaded States to become members of RFMOs or comply with conservation measures. For example, Panama joined ICCAT as a result of ICCAT measures.

Measures of selected RFMOs

From among the many RFMOs, this section has selected for review eight major RFMOs that have established measures against IUU fishing activities. The main emphasis will be put on regulatory measures. The section also reviews membership requirements with a view to assessing whether it may be considered as a cost-accruing element for newcomers. The selected RFMOs with regulatory functions included in this paper are ICCAT, IATTC, CCSBT, IOTC, CCAMLR, NAFO, NEAFC and WCPFC.

17 FAO Press Release 01/08, February 2001

Table 3.5. Selected RFMOs with Management Measures

Name	Established	No. of Members	Target Areas	Target Species	Estimates of IUU Catch
ICCAT	1969	38 (EU)	Atlantic Ocean/ adjacent area	Tuna and tuna-like species	Significant impact (10% of major catches); 1998/99 reported to FAO suggests 25 000 tons of bigeye tuna only
IATTC	1950	14	Eastern Pacific Ocean	Skipjack and yellowfin tuna	Possible, not important (5 000 tons reported to FAO)
CCSBT	1994	4	Southern hemisphere sea area at high latitudes	Southern bluefin tuna	Minimum 4000 tons, 1/3 of total annual catches (11 750 tonnes in 1999)
IOTC	1996	20 (EU)	Indian Ocean (FAO area[1] 51, 57)	Yellowfin, skipjack tuna, marlins and swordfish	10% of all tuna landings (120 000-140 000 tonnes)
CCAMLR	1982	24(EU)	The Antarctic (FAO area[1] 45, 48 and 88)	Antarctic marine living resources (euphausiid, toothfish, etc.)	25% (8418 tonnes) of total estimated catches
NAFO	1979	17(EU)	Northwest Atlantic Ocean	All marine living resources except salmon, tuna, whales	In 2001 some 10 000 tonnes of groundfish and 3 100 of Greenland halibut
NEAFC	1982	6(EU)	Northeast Atlantic (FAO area[1] 27)	Redfish, mackerel, herring, blue whiting, deep sea species	Redfish is the most important IUU species accounting for 20% of trade in redfish *i.e.,* some 20-25 000 tonnes
WCPFC	2000	20	Western and Central Pacific Ocean	All species of highly migratory fish stocks (except sauries)	Important but not quantified.

1. FAO Statistical Area.

Source: FAO, OECD and RFMOs.

ICCAT (www.iccat.es)

Membership

At present, the ICCAT has 38 Member countries including the European Community. Membership is open to any government which is a member of the UN, any specialized agency of the UN and any inter-governmental economic integration organisation constituted by States that have transferred competence over the matters governed by the ICCAT. Instruments of ratification and approval may be deposited with the Director

General of the FAO, and membership is effective on the date of such deposit. Member countries should make a financial contribution to the budget according to a contribution scheme. The total budget for the year 2004 amounts to EUR 1.9 million.

IUU catches and stock assessments

It is estimated that IUU catches constitute about 10% of the major Atlantic tuna species (bluefin, swordfish and bigeye). The effect of these catches on the fish populations is considered to be significant.

Stock assessment in the ICCAT area is prepared by SCRS (Standing Committee on Research and Statistics). SCRS also advises on the need for specific conservation and management measures and holds a meeting once a year.

Management measures

Regarding the Compliance Agreement, the ICCAT adopted a Resolution in 1994 which provides that the contracting parties should take the necessary measures to maintain a register of all high seas fishing vessels greater than 24 meters in length and submit this information to ICCAT annually. ICCAT also encourages non-contracting parties to do the same. In 1999, it published a list of around 340 longline tuna fishing vessels claimed to be involved in IUU fishing and flagged to countries operating open registers.

The ICCAT has adopted an action plan for enforcing regulatory measures for those vessels fishing in contravention of its conservation measures. This includes a step-by-step approach involving vessel sightings, formal warning to flag States and a request to rectify the situation and the prohibition of imports of bluefin tuna or swordfish. The ICCAT adopted a Resolution on vessel monitoring in 1995 encouraging satellite tracking and catch reporting systems under the responsibility of flag States; the ICCAT requires the co-operation of non-contracting parties to adopt a similar system.

The ICCAT adopted two resolutions in 1998 concerning *i)* landings and transhipments of vessels from non-contracting parties identified as having committed a serious infringement and *ii)* the unreported and unregulated catches of tuna by large-scale longline vessels in the Convention area. *Inter alia*, it requires port inspections and prohibitions by contracting parties on landing or transhipments. The Commission is to request contracting and co-operating importing parties in which the products are landed to collect and examine import or landing data and associated information and submit specified information to the Commission each year.

For the first time in RFMOs, the ICCAT adopted the Trade Documentation Scheme (TDS) to address the problems caused by IUU fishing for bluefin tuna. In 2002, this scheme was extended to include bigeye tuna and swordfish. It is believed that this scheme improved the reliability of data available to the ICCAT in determining the annual amount of exported products. However, the ICCAT faced new problems that made this scheme ineffective in the process of implementing a TDS, which was based on an IUU-blacklist of longline vessels as IUU vessels escaped easily from regulatory measures through tuna laundering and the use of forged trade documents. For these reasons, in 2003 the ICCAT adopted a new measure based on positive measures (white list approach). Now, the ICCAT has put in the public domain a list of approximately 3 100 vessels operating in the ICCAT Convention area.

IATTC (www.iattc.org)

Membership

Membership is only open to States subject to the approval of existing parties. A Protocol to the Convention was adopted in 1999 to allow regional economic integration organisations such as the European Community to become members, but so far progress towards the entry into force of the Protocol, which requires the approval of all State parties, has been slow. The IATTC Member countries contribute to the budget in accordance with a payment schedule taking into account a fund formula. The contribution of any new member is determined on the same basis as that of existing members. The budget for the year 2004 amounts to USD 4.9 million.

IUU catches and stock assessments

The IATTC suspects that IUU catches are not large in comparison to legal catches such as reported and monitored catches.

Management measures

In 1999, the secretariats of CCSBT, IATTC, ICCAT, IOTC and SPC decided that each commission should identify licensing requirements for tuna fishing vessels and establish a registry of such vessels active in their areas of competence, including documentation of licences held by the vessels. Subsequently, the IATTC implemented plans to develop a register of longline fishing vessels authorized to fish in the Eastern Pacific Ocean in order to combat IUU fishing. In July 2003, the IATTC also adopted a resolution on the establishment of a positive list of longline fishing vessels over 24 meters authorized to operate in the Eastern Pacific Ocean; as of August 2004, 1 237 large longline fishing vessels were registered as authorized to fish..

The IATTC maintains an independent scientific staff and offices in major fishing ports to collect information directly from vessels, managers and processing facilities. It also monitors catches made by the surface gear fisheries, to allow for statistical collection. All large purse seiners carry an observer.

In March 2003, the IATTC introduced a bigeye tuna Statistical Documentation Programme to assist in its efforts to eliminate IUU fishing activities. The IATTC recognizes that bigeye tuna is a main target species of IUU fishing operations and most of the bigeye harvested by such fishing vessels is exported to Member countries, especially to Japan.

CCSBT (www.ccsbt.org)

Membership

Membership of the CCSBT is open to any State whose vessels engage in fishing for southern bluefin tuna or to any coastal State through whose EEZs or fishing zone the tuna migrates. Regional economic integration organisations are not allowed to join. Each member contributes to the budget in accordance with the rules of Convention, *i.e.,* 30% of the budget is divided equally among all members, while the other 70% is divided in proportion to nominal catches of southern bluefin tuna. The budget for 2003 amounted to AUD 2.4 million.

IUU catches and stock assessments

With regard to estimates of IUU catches (especially unregulated catch), the CCSBT stated in 1999 that the annual catches of southern bluefin tuna by non-members were estimated to be at least 4 000 tonnes, which was one third of total allowable catches in 1999.[18] Actions taken by the Commission to estimate these catches include monitoring Japan's fish import statistics, and collection and review of information on tuna landings at selected Indian Ocean ports by representatives of Commission members.

Stock assessment in the CCSBT is conducted by SAG (Stock Assessment Group), which was established to separate the technical evaluation and advisory roles of its Scientific Committee. The CCSBT is scheduled to conduct a full stock assessment in September 2004.

Management measures

The CCSBT implemented a Trade Information Scheme (TIS) on 1 June 2000, to collect more accurate and comprehensive data on southern bluefin tuna fishing. The core of the TIS is the provision for all members of the CCSBT to require a completed CCSBT Statistical Document for all imports of southern bluefin tuna. The document must be endorsed by a competent authority in the exporting country. The document includes extensive details of shipment such as the name of each fishing vessel, gear type, area of catch, dates, etc. Member countries are also required to deny the landings in their ports of any tuna caught outside the zones or lacking appropriate documentation. Recently, the Scheme was amended to require the Document to include the country of destination and to set minimum standards for completion of TIS documents. The requirement to include destination country was made in the light of markets for southern bluefin tuna developing outside CCSBT membership.

In the recent past, the CCSBT reported that significant and increasing volumes of southern bluefin tuna were being taken by FONC vessels. This has been of major concern to the CCSBT where the stock needs to be carefully managed. The Commission has sought the co-operation of FONC countries in supporting their management and conservation measures. It has also advised them that if co-operation is not forthcoming, the Commission will consider measures, including trade restrictive measures, to be taken against them in accordance with the Action Plan adopted in 2000.

In accordance with a resolution adopted in 2003, on 1 July 2004 the CCSBT published a list of vessels over 24 meters which are authorized to fish for southern bluefin tuna. There are currently 781 vessels from five flag States on the authorized vessel lists. The list includes vessels from members and co-operating non-members and will be updated as new vessels are notified. Members and co-operating non-members will not import southern bluefin tuna which has been caught by a large-scale fishing vessel not on the CCSBT approved list.

[18] The CCSBT's agreed national catch limits for 2003-2004 are 14 930 tonnes; members (14 030 tonnes) and co-operating non-members (900 tonnes).

IOTC (www.iotc.org)

Membership

Membership is open to States and regional economic integration organisations, subject to two-thirds approval by existing parties. Each member contributes to the annual budget in accordance with a scheme adopted by the Commission which can only be amended by consensus. The 2003 budget amounted to USD 1.2 million.

IUU catches and stock assessments

The IOTC estimates that between 120 000 and 140 000 tonnes (about 10% of all tuna landings) of tuna are taken in the IOTC area by IUU fishing. The IOTC also reports that approximately 140 large freezer longliners, a large number of small wetfish longliners and about ten purse seiners have been involved in IUU fishing activities. Of special concern is the large longline fleet from Chinese Taipei.

The Scientific Committee of IOTC advises the Commission on research and data collection, on the status of stocks and on management issues. The Scientific Committee meets annually with the Commission.

Management measures

The IOTC adopted a recommendation in 1998 concerning registration and exchange of information on vessels, including flag of non-compliance vessels fishing for tropical tuna in the IOTC areas. It applies to vessels longer than 24 meters, and on a voluntary basis to those under 24 meters. Contracting parties must submit a list of all fishing vessels licensed to fish in their waters. In 1999, the IOTC adopted a resolution calling for actions against fishing activities by large-scale open register longline vessels, including the denial of fishing licences and more effective monitoring and reporting of such operations.

The IOTC introduced a bigeye tuna Statistical Documentation Programme in 2001 and adopted a recommendation in 2002 concerning measures to prevent the laundering of catches by large-scale tuna longline IUU fishing vessels. Contracting parties and co-operating non-contracting parties should ensure that their duly licensed large-scale tuna longline fishing vessels have a prior authorization for at sea or in port transhipment, and obtain the validated Statistical Document. They should also ensure that transhipments are consistent with the reported catch amount of each vessel when validating Statistical Documents and the reporting of transhipments.

As a complementary measure, the IOTC adopted a resolution in 2002 concerning the establishment of an IOTC Record of vessels over 24 meters authorized to operate in the IOTC areas. Large-scale fishing vessels not entered into the Record are not authorized to fish for, retain on board, tranship or land tuna and tuna-like species. Also in 2002, the IOTC adopted a resolution on establishing a list of vessels presumed to have carried out IUU fishing in the IOTC area. This applies to large-scale fishing vessels flying the flag of non-contracting parties, and is based on the information collected by contracting parties and co-operating non-contracting parties. The major measures by contracting parties and co-operating non-contracting parties against IUU fishing activities are:

- prohibition of imports, landing, and transhipment;
- prohibition of the chartering and refusal to grant their flag;

- encouraging importers, transporters and other sectors concerned to refrain from transaction and transhipment of catches by IUU-listed vessels.

CCAMLR (www.ccamlr.org)

Membership

Membership is restricted to those States which participated in the 1980 Conference on the Conservation of Antarctic Marine Living Resources and other States or regional economic integration organisations, which are engaged in research or harvesting activities in relation to the living resources to which the Convention applies. In October 2003, CCAMLR members agreed that the COLTO could be granted observer status at the CCAMLR. Each Member country contributes to the budget in accordance with the amount harvested. The budget for 2003 amounts to AUD 2.9 million.

IUU catches and stock assessments

The CCAMLR has a scientific committee to advise the Commission on harvesting levels and other management measures developed through consultation and the application of advanced scientific techniques. In 1999, the CCAMLR Scientific Committee had expressed grave concern over the virtual commercial extinction of some stocks of toothfish due to IUU fishing. The estimates of IUU catches are reviewed annually by the Working Group on Fish Stock Assessment to estimate total removals for stock assessment purposes. It has been reported that cumulative financial losses (USD 518 million) arising from IUU fishing in the Convention Area are likely to be substantial compared with the benefits (USD 486 million) enjoyed by legitimate operators.[19]

During the years 1997-2000, the amounts of toothfish taken by IUU fishing (by members and non-contracting parties) have been estimated at around 90 000 tonnes, which is more than twice the level of catches taken in the CCAMLR-regulated area. No IUU catches by members were reported in 2000. According to CCAMLR reports, estimated IUU landings have fallen sharply from 68% (1997) to 25% (2000), and total annual estimated catches have also declined noticeably by 67% over the same period (see Table 3.6).[20] In some sense, this decline is attributed to CCAMLR's management measures, including the introduction of a Catch Documentation Scheme in 1999. On the other hand, the CCAMLR recently estimated that IUU catches of toothfish (from both inside and outside the CCAMLR zone) were around 22 000 tonnes for the period January to October 2003. This is a slight reduction over previous years, but is considered a significant concern.

19 Denzil G. M. Miller, "Patagonian Toothfish – the Storm Gathers", in *Fish Piracy*, *Combating Illegal, Unreported and Unregulated Fishing* (OECD, 2004).

20 TRAFFIC Bulletin offprint Vol. 19 No. 1 (2001), "Patagonian toothfish, Are conservation and trade measures working?"

Table 3.6. The Trends of Estimated IUU Landings (within zone)

	1997	1998	1999	2000
Total estimated catch (tonnes, A)	100 970	54 967	53 955	33 660
Estimated IUU landings (tonnes, B)	68 234	26 829	16 636	8 418
B/A (%)	67.6	48.8	30.8	25

Source: CCAMLR.

Management measures

The CCAMLR has adopted comprehensive conservation measures to deter IUU fishing, including trade measures (catch documentation scheme), information exchange between contracting parties, political approaches such as diplomatic demarches to non-contracting parties and non-Parties, deployment of VMS and port State inspections.

Under Conservation Measure 118/VII, the CCAMLR requires that a non-contracting party vessel be inspected when it enters a port of any contracting party, and prohibits landings or transhipments without inspection. Information on the results of all inspections of non-contracting party vessels conducted in the ports of contracting parties, and on any subsequent action, is to be transmitted immediately to the Commission, which then transmits the information to all contracting parties and the flag State.

The CCAMLR adopted the Catch Documentation Scheme (CDS) in 1999 which became binding on all members on 7 May 2000. This Scheme is designed to track the landings and trade flows of toothfish caught in the Convention Area and, where possible, adjacent waters. It includes mandatory VMS. It also determines whether the toothfish were caught in a manner consistent with CCAMLR conservation measures. For this, all landings, transhipments and importations of toothfish into the territories of contracting parties must be accompanied by completed catch documents containing information relating to the volume and location of catch, and the name and flag State of the vessel.

Enforcement of CCAMLR measures[21] is undertaken through the system of observation and inspection, adopted in 1998, which is a nationally operated scheme whereby inspectors are appointed by and report to their own governments which, in turn, report to the Commission.

21 CCAMLR has taken several enforcement measures against violations made by FONC vessels. Belize deregistered vessels engaged in IUU fishing; Panama provided CCAMLR with a list of all its vessels licensed to fish on the high seas in the Southern Oceans; Vanuatu notified that vessels proved to have committed an offence will be considered for suspension or deletion from its registry.

NEAFC (www.neafc.org)

Membership

Six countries (including the EU) are members of the NEAFC. The Convention lists individual parties[22] which are eligible to participate in the Convention and the Commission. Any State referred to in this list (except a member state of the EU) may accede to the Convention, subject to the approval of three-fourths of all Contracting parties.

IUU catches and stock assessments

The Commission manages a number of high seas fisheries including herring, redfish, blue whiting and mackerel which, with the exception of redfish, are all fairly low-value species. Recommendation to contracting parties is mainly based on scientific advice from the International Council for the Exploration of the Sea (ICES); scientific advice from ICES does take into account that official catch statistics may not include provisions for IUU operations. ICES collects data through sampling landings of fish at fish markets, sampling the amount of fish discarded from fishing boats and by targeted surveys with research vessels. In 1999, the ICES expressed its concern about IUU fishing and its influence on the reliability of its assessment of fish stocks. Unreliable data due to IUU fishing make the ICES unable to provide reliable estimates of current stock sizes and forecasts that have been used to set TACs. In October 2003, the ICES made stronger recommendations to the NEAFC to reduce fishing pressure to conserve fish stocks in the North Sea area.

IUU fishing has been on the agenda of the NEAFC ever since October 2003 and some aspects have been delegated to its Permanent Committee on Enforcement and Control and the Working Group on the Future of NEAFC, which prepares policy proposals for the Commission. The NEAFC reports annually on IUU fishing in the regulatory area. The main problem is IUU fishing for Oceanic redfish. According to the NEAFC report, in 2002, 27% (20% in 2001) of the redfish catches in the regulatory area were taken by one non-Contracting party. In addition, a handful of IUU vessels have been spotted targeting redfish in that area. The major IUU problem relates to redfish; NEAFC reports that up to 20% of the redfish traded internationally in 2001 originates from the activities of IUU fishing vessels.[23] This would suggest that some 20-25 000 tonnes of redfish were taken by IUU vessels. Discussions on IUU-related issues are fairly new to NEAFC and began in earnest following the adoption of the FAO IPOA-IUU. However, discussions have so far only dealt with the IUU activities of non-contracting parties to the NEAFC convention.

Management measures

In 1998 the NEAFC adopted a Scheme of Control and Enforcement in respect of fishing vessels in areas beyond the limits of national fisheries' jurisdiction in the Convention area. This Scheme currently establishes five regulated resources (Oceanic

22 They include Denmark (in respect of the Faroe Islands and Greenland), the EU, Iceland, Norway, Poland and the Russian Federation.

23 Quoted in Agnew and Barnes (*Ibid*). The NEAFC has also begun to list the names of IUU vessels (see for instance NEAFC (2002) AM 2002/15 and 34. References to IUU activities appear in the NEAFC annual reports, including most recently the 2002 report. NEAFC Annual Reports are available at the following site: http://www.neafc.org/)

redfish, herring, mackerel, blue whiting, Rockall haddock) in the regulatory area. The Scheme involves satellite-based vessel monitoring and compulsory presence by contracting parties with more than ten vessels in the relevant sea areas, as well as a specific follow-up to serious infringements. Contracting parties have also agreed to permit inspection by a contracting party of the vessels of another contracting party on the high seas.

In 1999, a scheme of joint international inspection and surveillance was adopted, which closely followed the models provided by the UN Fish Stock Agreement and the NAFO. It sets out measures to deal with non-contracting party fishing in the area, including prohibitions of landings of catches taken contrary to the NEAFC recommendations.

In 2003, the NEAFC adopted a resolution on actions against non-contracting parties engaged in illegal, unregulated and unreported (IUU) fishing in the regulatory area. It urges contracting parties to take steps towards States identified as having vessels flying their flags engaged in IUU fishing in the regulatory area, by approaching the flag States concerned and requesting them to take all appropriate steps to halt the undermining of NEAFC management measures. NEAFC has so far only discussed the IUU problem with non-contracting parties. Possible unreported catches, quota overshooting or other activities by contracting parties have not been discussed. It is reported that some fisheries in the regulatory area are still not regulated satisfactorily, especially fisheries for deep sea species.

NAFO (www.nafo.int)

The NAFO was set up under the Convention on Future Multilateral Co-operation in the Northwest Atlantic Fisheries that was signed on October 24, 1978 and came into force on January 1, 1979. The NAFO is considered one of the most advanced RFMOs, with a well-developed institutional structure including a General Council, a Fisheries Commission, a Scientific Council and a number of sub-committees which report to these bodies, as well as a wide range of conservation and management measures.

Despite this, NAFO has been undermined in its operation by a number of problems such as non-compliance by vessels of some members, the lack of timely and effective follow-up by flag States to violations of NAFO measures, the lack of procedures for monitoring and controlling the fisheries, the absence of a dispute settlement procedure, and the lack of effective measures to respond to IUU fishing undertaken both by non-members as well as members.

Membership

As of January 1, 2005, NAFO had 13 contracting parties: Bulgaria, Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), European Union, France (in respect of Saint Pierre et Miquelon), Iceland, Japan, Republic of Korea, Norway, Russian Federation, Ukraine, and United States of America.

Membership of the Fisheries Commission is limited to contracting parties which either participate in the fisheries in the NAFO regulatory area, or which have provided satisfactory evidence that they expect to participate in such fisheries in the near future. Membership is reviewed annually by the NAFO General Council.

Stock Assessments

The NAFO Scientific Council conducts assessments of over 20 fish stocks in the NAFO Convention Area and provides its advice to the NAFO Fisheries Commission. Most stocks remain at low abundance except for 3LNO yellowtail flounder and 3L northern shrimp. As a result of Scientific Council advice regarding the 2+3KLMNO Greenland halibut stock, in 2003 the NAFO Fisheries Commission adopted a multi-year Greenland Halibut Rebuilding Plan that will progressively reduce the Total Allowable Catch and quotas during the period 2004-2007 with a 60% reduction by 2007 in order to halt the decline in the biomass of this stock.

In 2001 it was estimated that 10 000 tonnes of groundfish were illegally caught in the NAFO area, including plaice, cod and redfish. In addition, Greenland halibut quotas were also estimated to have been exceeded by 3 100 tonnes, and some parties were reported to have failed to submit observer reports in 2000 and 2001 (reported in OECD, *Review of Fisheries*, 2003).

Management Measures

The NAFO Conservation and Enforcement Measures include Total Allowable Catches and quota limits by contracting parties for most stocks, by-catch limits, gear requirements, minimum fish size requirements, and area and time restrictions for shrimp stocks.

The NAFO maintains a register of all fishing vessels of more than 50 gross tonnes authorized by their respective contracting party to fish in the NAFO regulatory area. Fishing vessels not entered into this register are deemed to be unauthorized to fish in the NAFO regulatory area.

The NAFO has a Joint International Inspection and Surveillance Scheme among contracting parties. Inspection and surveillance is carried out at sea by inspectors of the fishery control services of contracting parties following their assignment to this scheme. Inspectors issue citations to the master of the vessel for any infringements of the NAFO measures. The NAFO measures detail the procedures to be followed in case of serious infringements.

The also requires fishing vessels which have been engaged in fishing in NAFO stocks and making port calls in the port of a contracting party to be inspected in that port.

The NAFO also maintains a programme for 100% observer coverage for vessels in the regulatory area. In addition, fishing vessels operating in the regulatory area shall be equipped with a satellite tracking device allowing the continuous tracking of their position by the contracting party. The NAFO has undertaken a "Pilot Project on Observers, Satellite Tracking and Electronic Reporting" to test the feasibility of reducing observer coverage in the context of enhanced electronic reporting.

The NAFO adopted a Scheme to Promote Compliance by Non-Contracting Party Vessels. Any non-contracting party vessel that has been sighted engaging in fishing activities in the regulatory area is presumed to be undermining the effectiveness of the NAFO measures. Contracting parties shall ensure that their vessels do not receive transhipments of fish from a non-contracting party vessel which has been sighted and reported as having engaged in fishing activities in the regulatory area. Such vessels may be boarded by NAFO inspectors on the basis of their consent. Landings and transhipments of all fish from a non-contracting party vessel which has been inspected

shall be prohibited in all contracting party ports unless the vessel establishes that the fish was caught outside the regulatory area.

2004 NAFO Annual Meeting

The 2004 annual meeting resulted in a number of improvements to the NAFO conservation regime. The NAFO agreed to the regulation of three previously unregulated fish stocks: 3LNO thorny skate, 3O redfish and 3NO white hake.

The NAFO also agreed to the following modifications to NAFO measures: All processed fish products caught in the regulatory area must now be labelled; vessels must now keep stowage plans of the catch stored on board, in addition to the vessel capacity plans and production logbooks currently required; and when a vessel is cited for a serious infringement of the NAFO rules, at-sea inspectors will be allowed to remain on board while an inspector from the flag State conducts follow-up inspections, in order to maintain the continuity of the evidence that may be involved in the infringement. These measures will contribute to the increased effectiveness of at-sea and port inspections as well as improved compliance.

WCPFC (www.ocean-affairs.com)

Background

In September 2000, after four years of complex negotiations between the coastal States of the Western and Central Pacific and States fishing in that region, the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean was opened for signature. This Convention is one of the first regional fisheries agreements to be adopted since the conclusion in 1995 of the UN Fish Stocks Agreement.

IUU catches and stock assessments

The major management focus will be on the highly valuable and extensive tuna fisheries, given that around 40% of all tuna catches come from the Western Central Pacific Ocean. The estimates of IUU catches in this Convention area are not yet reported. According to the Convention, the Scientific Committee will review stock assessments and advise the Commission.

Meanwhile, the Forum Fisheries Agency (FFA), which supports the WCPFC while it is being set up, compiles information on IUU fishing in the region in its Violations and Prosecutions Database. Incidents of IUU fishing in the region are also reported by FFA in the MCS Newsletter.[24] Incidents of illegal fishing reported by the FFA are about evenly divided between the lack of compliance with the conditions of access agreements (such as incorrect information being recorded regarding catch and effort, lack of vessel markings, etc.) and vessels fishing without a licence. Unreported catches in the waters of SPC[25]/FFA countries and the adjacent high seas certainly occur, but the amount is considered to be low. It is reported that the greatest amount of illegal or unreported

24 Available from www.ffa.int

25 Secretariat of the Pacific Community (SPC) has an Ocean Fisheries Programme, a principal objective of which has been to establish a regional catch and effort database. More information is available on http://www.spc.int/oceanfish/.

fishing in the Western and Central Pacific Ocean occurs in regard to the non-SPC/FFA countries of Indonesia and the Philippines. A recent study by the SPC Oceanic Fisheries Programme[26] indicates that 100 000 t of tuna caught by Philippines purse seiners fishing outside the Philippines EEZ may go unreported in statistics published by the Bureau of Agricultural Statistics. The study also indicates that there are unlicensed catches by foreign vessels in Philippine waters, taken primarily by Taiwanese offshore longliners, which could represent an annual catch of 10 000 t. The extent of unreported catches in Indonesia is thought to be considerable, but the actual extent is unknown.

Membership

The Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean opened for signature on 5 September 2000. As of February 2004, the Convention had been signed by 19 and ratified by 13 States. The Convention entered into force on June 19, 2004. The Convention provides a balance between the interests of coastal States and those of distant water fishing nations in the Western Central Pacific Ocean

Management measures

Regarding management measures, the Convention provides for duties of the flag State, compliance and enforcement, a regional observer programme, boarding and inspection, port State measures, application of a precautionary approach, and regulation of transhipment. It is anticipated that more detailed regulatory and management measures will be adopted in due course.

Summary and key issues

Regionalisation of fisheries management through relevant RFMOs is considered to be an effective and cost-saving measure towards management of the high seas resources. To make this trend more effective and efficient in combating IUU fishing, more harmonization of legislation or creation of new regional initiatives such as vessel databases, or agreements on the minimum terms and conditions for the access of foreign vessels is needed. In this sense, it is of great importance that horizontal co-operation among RFMOs should be improved, in particular with regard to information sharing, linking and integrating their data on IUU fishing activities.

With regard to port state control as a complementary tool, it should be pointed out that an "open port loophole", (*i.e.,* that the countries with an open port tradition like 'port of convenience' states such as China, Singapore, Namibia, and Kenya are unable to inspect or have little willingness to control IUU trade effectively) contributes to making trade measures taken by RFMOs ineffective.[27]

At present, only a few RFMOs have applied CDS and Trade Documentation measures, and only for a limited number of species such as tuna and toothfish due to their high value. However, with the effect of trade documentation in curtailing IUU fishing, these measures could profitably be applied by a greater number of countries and RFMOs, and to a greater number of species. More RFMOs should consider publishing lists of

26 A.D. Lewis, "Review of tuna fisheries and the tuna fishery statistical system in the Philippines" (currently in draft).

27 *Rogues Gallery, The new face of IUU fishing for toothfish*, COLTO, October 2003.

companies and vessels engaged in IUU fishing and lists of vessels that are authorized to fish, as some RFMOs have already adopted the use of positive and negative lists of vessels.

4. Other Related Instruments that may be Useful to Combat IUU Fishing

OECD instruments

OECD Guidelines for Multinational Enterprises

The OECD Guidelines for Multinational Enterprises (the Guidelines) are recommendations addressed by governments to multinational enterprises. The Guidelines contain voluntary principles and standards for responsible business conduct in such areas as human rights, disclosure of information, anti-corruption, taxation, labour relations, environment, and competition, consistent with applicable laws. The Guidelines ensure that the operations of these enterprises are in harmony with government policies, strengthen the basis of mutual confidence between enterprises and the societies in which they operate, help improve the foreign investment climate and enhance the contribution to sustainable development made by multinational enterprises. The guidelines are part of the OECD Declaration on International Investment and Multinational Enterprises.

The Guidelines express the shared values of the 37 countries (OECD Member countries and 7 non-member countries) that have adhered to them. The adhering countries are the source of most of the world's foreign direct investment and are home to most major multinational enterprises. Although many business codes of conduct are now available, the Guidelines are the only multilaterally endorsed and comprehensive code that governments are committed to promoting.

The Guidelines contain a number of general corporate responsibility principles of potential relevance to the fight against IUU fishing activities. With regard to the IUU fishing problem, the most obviously relevant part of the Guidelines is the environmental chapter, which broadly reflects the principles and objectives contained in the Rio Declaration on Environment and Development (in Agenda 21).

OECD Code of Liberalisation of Capital Movements

The objective of the Code of Liberalisation of Capital Movement (the Code), which was adopted in 1961, is to provide a basis for the progressive non-discriminatory liberalisation of capital movements including the right of establishment in a foreign country for business purposes. The Code is a legally binding instrument of the OECD Member countries. It is also the only multilaterally binding instrument that seeks to further liberalise the movement of capital.

Under the Code of Liberalisation of Capital Movements, direct investment is defined as "investment for the purpose of establishing lasting economic relations with an understanding such as, and, in particular investments which give the possibility of exercising an effective influence on the management thereof". Direct investment may take several forms, in particular the creation or extension of a wholly-owned enterprise, subsidiary or branch, or the acquisition or participation in a new or existing enterprise. In fisheries this is regular practice, as vessels can be re-flagged easily and thus be the principal mobile capital investment.

The OECD Committee for Capital Movements and Invisible Transaction (CMIT)[28] has earlier considered fisheries as well as other natural resource-based industries. The CMIT has concluded that, in addition to measures directly restricting foreign investments, restrictions in the sense of the Code also include measures restricting foreign ownership of real property including ships. In applying this rule, the CMIT has also considered "ships" to include "fishing vessels".

Open Registers

The choice of flag is one of the most important decisions a ship-owner can make. Some countries have established what are known as "open registers",[29] accepting vessels from other countries that do not have a genuine link to the flag State. The problem is that these countries do not enforce the rules set by international instruments. Ship-owners' main incentives for flagging out are related to low registration fees, tax evasion, reduced safety requirements and freedom to employ cheap labour. With the influence of globalisation, labour cost is considered to be a key driver for ship-owners to consider the use of open registers.

Over the past few decades, as RFMOs adopted more and more stringent measures on high seas fishing, many ship-owners began to take advantage of open registers, knowing that the countries concerned had no intention (or no ability) of enforcing management measures. In most cases, these countries do not belong to the RFMOs and so are not bound by the regulations they adopt, as a basic principle of international law is that if a country does not adhere to a treaty, it is not bound by its provisions. This is recognized as a loophole in international law itself.

Regulations on ship registration (flagging and re-flagging)

Under Article 91 of the LOS Convention, a State determines the conditions for granting its nationality to ships, for the registration of ships in its territory, and for the right to fly its flag. The flying of a flag is evidence of nationality. It should be visible whenever required for the purpose of identification. Nevertheless, international law does not set an obligation for the national flag to be flown at all times by vessels on the high seas. The lack of an obligation to do so, and poor maintenance of marks such as those indicating the port of registry and name or number, is a constraint to the identification of vessels for both safety and fisheries management purposes. Due to the lack of international rules on ship registration, as mentioned above, each State applies its own domestic rules to ship registration, although many apply the IMO standards and regulations.

In most countries, fishing vessels are registered in much the same way as cargo ships. The competent authority for the registration of ships is usually different from that responsible for fisheries management matters. Unlike cargo vessels which come under one authority, dual responsibilities can lead to problems in relation to fisheries management since the allocation of the flag precedes the granting of an authorization to fish. Furthermore, in many countries, small fishing vessels are not registered. They are often exempt from the provisions of national laws governing the registration of merchant ships. Some studies point out that there is no universally accepted definition of small

28 The CMIT has since been merged with the former Committee on Investment and International Enterprises to form the Investment Committee.

29 As of July 2003, the ITF had declared 28 countries as FOC.

fishing vessels or what sizes should or should not be exempt from the registration process. This is a matter that needs further study since fishing vessels of all sizes are implicated in IUU fishing.[30]

The maintenance of fishing vessels' records is emphasized by the Code, the Compliance Agreement, UN Fish Stock Agreement, and IPOA-IUU. These instruments also stress the need for regional co-operation in this regard. However, there is no single and complete record of the world's fishing fleets. The IMO draws on the data held by Lloyd's Maritime Information Services for estimates of the number of fishing vessels of 100 GT and over in the world, and the FAO uses the same information. Although useful, it does not provide a complete record,[31] and it is flawed in many respects as it does not store fisheries-related information. To combat IUU fishing, information on fishing vessels and where they are authorized to fish is essential for effective flag State as well as port State control. Building an effective vessel register that can be used in combating IUU is thus an important avenue to be explored. The Compliance Agreement is specific in relation to how such records should be maintained and for the exchange of information.

Table 3.7. Fishing Fleet Statistics

	OECD	FAO	Lloyd
Source	National Fisheries Agency	National Fisheries Agency	National Ship Registers
Type of data	Aggregated statistics	Aggregated statistics	Individual vessels
Measurement	Length and GT	GRT but increasingly GT	GRT (90%), GT (10%)
Vessel Identifier	Not applicable	Not applicable	Lloyd's number
Size of vessel	All vessels	All vessels	Vessels above 100 GT[1]
History (*e.g.,* re-flagging)	No	No	Yes
Coverage	OECD Member countries	Most FAO Member countries	Weak data from some countries (China, etc.)
Total vessels	210 000[2] (2002)	4.1 million (1998)	22 900 (2001)

1. The lower limit of 100 tons in the Lloyd's database is very convenient for fisheries purposes, as it is recognized that most vessels over this size are capable of operating beyond EEZ limits. These are the vessels that are most likely to be covered by the Compliance Agreement, the UN Fish Stock Agreement and to be involved in changes to the nationality of the vessel (FAO Fisheries Circular No. 949, p.2).
2. Vessels with engine only.

Source: OECD, FAO, Lloyd.

30 John Fitzpatrick, "Measures to Enhance the Capability of a Flag State to Exercise Effective Control over Fishing Vessels", FAO Expert Consultation on IUU fishing, May 2000.

31 For example, fishing vessel statistics collected by OECD suggest that a total of 97% of fishing vessels are below 100 GRT or 24 meters in length.

United Nations Convention on Conditions for Registration of Ships

The UN Convention on Conditions for Registration of Ships, which was amended in 1986, provides for the registration of ships and sets out the conditions for the establishment and operation of a shipping register. This Convention was concluded under the auspices of the UN Conference on Trade and Development (UNCTAD), but because it is directed towards trade, fishing vessels are excluded.

A key objective of the Convention is to strengthen the "genuine link" between a State and the ship flying its flag. However, a major drawback of the Convention is that it is not in force. To enter into force the Convention requires ratification by 40 States, the combined tonnage of which amounts to at least 25% of world tonnage. Although it has not entered into force, it provides a sound model for registration requirements and flag State responsibilities.

FAO Compliance Agreement

Article VI of the Agreement requires States to exchange information on vessels authorized by them to fish on the high seas, and obliges the FAO to facilitate this information exchange. The FAO developed a prototype database (*HSVAR; High Seas Vessel Authorization Record*) and requested a number of States to provide data on vessel authorizations to facilitate testing. At present, only Canada, the United States, Japan, Norway and 13 EU countries have provided such vessels authorization data. There are now 5 517 vessels records available in the database.

FAO Code of Conduct for Responsible Fisheries

Article 8.2 (flag State duties) of the Code sets out obligations for States to maintain records of authorized fishing vessels, including detailed information on vessels and their ownership. Fishing vessels authorized to fish on the high seas should be marked in accordance with uniform and internationally recognizable vessel marking systems such as the *FAO Standard Specifications and Guidelines for Marking and Identification of Fishing Vessels*. Fishing gear also should be marked in accordance with national legislation with a view to being able to identify the owner of the gear. Gear marking requirements should take into account uniform and internationally recognizable gear marking systems.

IMO 1974 SOLAS Convention

Chapter XI-1[32] of the International Convention for the Safety of Life at Sea (SOLAS) provides for a "Continuous Synopsis Record" to be carried on board each ship. This document includes details of the flag State, identification number, name of ship, classification society and registered owner. Any changes to these and other details need to be shown on this record, so that a history of the ship is developed. The flag State will be responsible for ensuring that it is kept up to date and available for inspection at any time. In a further provision of the SOLAS, the company is made responsible for ensuring that information is available on board for port States to know who is responsible for appointing the members of the crew, who makes decisions about the employment of the ship and the parties to any charter party.

32. All passenger ships over 100 GT and above, and all cargo ships of 300 GT and above shall be provided with an identification number.

IMO Ship Identification Scheme

The IMO ship identification scheme was introduced in 1987 through the adoption of resolution A.600 (15), as a measure to enhance ship safety and security. It aimed at assigning a permanent number to each ship for identification purposes. That number remains unchanged if the ship transfers to another flag and is inserted in the ship's certificates. Following adoption of new SOLAS Chapter XI in 1994, the implementation of this scheme became mandatory for all ships as of 1 January 1996.

Safety related issues

Under the LOS Convention, Article 94 (Duties of the flag State) provides that "Every State shall effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag" (paragraph 1). It provides further safety issues saying that:

> "*Every State shall take such measures for ships flying its flag as are necessary to ensure safety at sea with regard, inter alia, to: (a) the construction, equipment and seaworthiness of ships; (b) the manning of ships, labour conditions and the training of crews, taking into account the applicable international instruments; (c) the use of signals, the maintenance of communications and the prevention of collisions*." (paragraph 3).

IMO Instruments[33]

1974 SOLAS Convention

The International Convention for the Safety of Life at Sea (SOLAS) specifies minimum standards for the construction, equipment and operation of ships compatible with their safety. Even though only Chapter V of the SOLAS applies to fishing vessels, it is regarded as the most important of all international treaties concerning the safety of vessels. Chapter V deals with safety of navigation and identifies certain navigation safety services that should be provided by contracting governments and sets forth provisions of an operational nature applicable in general to all ships on all voyages.

1977 Torremolinos Convention and 1993 Torremolinos Protocol

The Torremolinos International Convention for the Safety of Fishing Vessels was the first ever international convention on the safety of fishing vessels. The Convention contains safety requirements for the construction and equipment of new, decked, seagoing fishing vessels over 24 meters in length, including those vessels also processing their catch. But the Convention has not received sufficient ratifications to enter into force. In view of this, in 1993 the IMO adopted a Protocol to the 1977 Convention which included the requirements for protection of the crews.

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33 Some IMO instruments or part of them apply to fishing vessels, as defined by IMO, *i.e.* excluding vessels that only carry fish. This includes MARPOL (prevention of marine pollution), COLREG (collision regulations), SOLAS (Chapter V). Two instruments, which are however not in force, are specific to fishing vessels of 24m and above *i.e.*, the Torremolinos Protocol and the STCW dealing with the training of fishermen.

1995 STCW-F Convention[34]

The STCW-F Convention contains requirements concerning skippers and watch-keepers on vessels over 24 meters in length, chief engineers and engineering officers on vessels of 750 kw propulsion power or more, and personnel in charge of radio communications. Chapter III of the Annex to the Convention includes requirements for basic safety training for all fishing vessel personnel with port State measures.

ILO Instruments

The ILO formulates international labour standards in the form of Conventions and recommendations, setting minimum standards of basic labour rights such as wages, working hours, safety, training and employment. Fisheries-related ILO instruments include *5 Conventions*; 1959 Minimum (Fishermen) Age Convention, 1959 Medical Examination (Fishermen) Convention, 1959 Fishermen's Articles of Agreement Convention, 1966 Fishermen's Competency Certificates and 1966 Accommodation of Crews (Fishermen) Convention and *2 Recommendations*; 1966 Vocational Training (Fishermen) Recommendation and 1920 Hours of Work (Fishing) Recommendation.

The ILO held a Tripartite meeting on "Labour Standards for the Fishing Sector" in 2003 and is also considering new, comprehensive standards for the fishing sector on the premise that the current ILO fishing instruments are insufficient to reflect the social and technical changes that have taken place in the fishing sector since their adoption. The extent to which this may improve social conditions on IUU fishing vessels remains to be seen.

1966 Fishermen's Competency Certificates Convention

The Convention provides for ratifying States to establish standards of qualification for certificates of competency entitling a person to perform the duties of a skipper, mate or engineer on board a fishing vessel above 25 GRT. It also prescribes the minimum age for the issue of a certificate, as well as minimum years of sea service. Some of the principles contained in this Convention have also been included in the 1995 STCW-F Convention.

1966 Accommodation of Crews (Fishermen) Convention

This Convention sets out standards for the planning and control of crew accommodation (including plan approval, complaint procedures concerning non-compliance and inspections), crew accommodation requirements, and how these requirements apply to existing ships and new fishing vessels. In general, the Convention applies to vessels over 75 GRT or 24.4 meters in length.

1959 Minimum (Fishermen) Age Convention

The Convention stipulates that children under 15 years shall not be employed or work on fishing vessels.

34 STCW-F Convention means "Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel, which was adopted by IMO in 1995.

FAO Instrument

1995 Code of Conduct for Responsible Fisheries

The FAO works to improve safety in the fishing industry through the adoption of its own code, through joint preparation with the ILO and the IMO of safety and health codes and guidelines. The Code includes provisions that clearly link responsible fishing to the safety and health of fishermen:

> *"States should ensure that fishing facilities and equipment as well as all fisheries activities allow for safe, healthy and fair working and living conditions and meet internationally agreed standards adopted by relevant international organizations"* (paragraph 6.17); *"Flag States should ensure compliance with appropriate safety requirements for fishing vessels and fishers in accordance with international conventions, internationally agreed codes of practice and voluntary guidelines"* (subparagraph 8.2.5).

Joint Works of the IMO, ILO and FAO

FAO/ILO/IMO Code of Safety for Fishermen and Fishing Vessels-Parts A and B

Part A of the Code (Safety and Health Practice for Skippers and Crews) aims to provide information with a view to promoting the safety and health of fishermen. It is intended to serve as a guide to those concerned with framing measures for the improvement of safety and health on board fishing vessels. Its scope is limited to the basic information necessary for the safe conduct of fishing operations. Part B of the Code (Safety and Health Requirements for the Construction and Equipment of Fishing Vessels) provides information on the design, construction and equipment of fishing vessels with a view to promoting the safety of the vessel and the safety and health of the crew. It applies to new decked fishing vessels of 24 meters in length. Currently, work is underway to revise Part A of the Code.

FAO/ILO/IMO Document for Guidance on Training and Certification of Fishing Vessel Personnel

The Document for Guidance, prepared by a joint FAO/ILO/IMO Working Group in the early 1980s and published in 1985, takes account of the related ILO and IMO Conventions and FAO experiences and provides guidance for the institution, amendment or development of national programmes for the vocational training of any category of fisher. The revision of the Document for Guidance will incorporate the provisions of the 1995 STCW-F Convention and the FAO Code of Conduct for Responsible Fisheries.

Summary

As IUU fishing operations appear to be well organised and equipped, OECD instruments on corporate responsibilities could usefully be implemented through encouraging the use of the relevant provisions and asking Member countries to implement them. In terms of capital movements, national restrictions could also focus on outward investment to address the possibility of the movement of vessel capital into foreign registries where it may be easier to become involved in IUU fishing.

As noted above, there is no global data or information base on fishing vessels registration. While an international Convention to strengthen the genuine link of the

vessel exists, it has not yet entered into force. Strengthening the safety-related requirements and labour standards which are currently being discussed under IMO and ILO will be a helpful contribution in addressing the IUU fishing problem. It would therefore seem that co-operation among international organisations is needed now more than ever before.

5. Observations and Key Issues

In terms of international measures on IUU fishing, major instruments including the UN Fish Stock Agreement and the Compliance Agreement have now entered into force. Furthermore, comprehensive instruments, like the IPOA-IUU, have also been adopted internationally to address IUU fishing. However, a major challenge remains as countries not adhering to an international treaty are not bound by its provisions. The IPOA-IUU could play an important role in addressing IUU fishing activities if all relevant countries became actively involved in its implementation. It has been emphasized that the development of port State control as a complementary measure would noticeably contribute to a reduction in IUU fishing on the high seas with the full and effective implementation of flag State control.

With regard to national measures on IUU fishing, overall, the analysis suggests wide-ranging differences among OECD countries both in their perception of the IUU fishing problem and in their responses in terms of policy priority, penalties and regulations. It is also notable that some private initiatives are increasingly effective tools against IUU fishing. Most OECD countries control and monitor national-flagged fishing vessels activities by such tools as fishing permits: catch quotas, reporting obligations, and through high technology-based VMS, as well as observer coverage. Increasingly, the information derived from VMS and catch reports is used as feedback into real-time fisheries management decisions. The penalties (especially fines) imposed by most OECD countries have little impact on IUU fishing activities as IUU catches are of high value and the chance of being caught is slim.

OECD countries have very strict requirements for foreigners in the process of vessel registration but relatively weak regulations regarding the re-flagging of their own flag vessels. In most countries, IUU history is not considered in the vessel registration process and government control on re-flagging is often not in place. Consequently, the registration process serves a relatively limited filtering role in preventing IUU fishing activities and the "hopping" of vessels from registry to registry is therefore easy. With some notable exceptions, most countries are not actively using other measures such as encouraging private sector initiatives, establishing non-economic and social mechanisms to discourage IUU fishing involvement by their own nationals and national-flagged vessels.

The regionalisation of fisheries management through relevant RFMOs could be an effective and cost-saving measure towards management of the high seas resources. To make this more effective and efficient in combating IUU fishing, more harmonization of legislation, creation of new regional initiatives such as vessel databases, and agreements on the minimum terms and conditions for the access of foreign vessels are needed. In this vein, it is important that horizontal co-operation among RFMOs be improved, in particular in areas such as information sharing and linking and integrating data on IUU fishing activities. At present, only a few RFMOs have applied Catch Documentation Schemes and Trade Documentation measures, and only for a limited number of species such as tuna and toothfish. However, as trade documentation schemes have been shown

to be effective in curtailing IUU fishing, such measures could be applied by a greater number of countries and RFMOs, and to a greater number of species. It should be mentioned that traceability is already a s*ine qua non* in many markets and some synergies could perhaps be exploited between such traceability schemes and the tracking of IUU catches.

One of the major problems in dealing with IUU fishing stems from limited empirical evidence and unreliable estimates of IUU catches, IUU vessels, and information about company involvement. In this context, more RFMOs could consider publishing lists of companies and vessels engaged in IUU fishing and lists of vessels that are authorized to fish, *i.e.,* more use of positive and negative lists.

Annex 1.

Questionnaire for Reporting on National Measures against IUU Fishing Activities

The Committee decided to include an inventory of national measures in place against IUU fishing activities. To prepare this inventory, Member countries were asked to provide information on the following items. Chapter 4 of this Study contains national responses to this questionnaire.

1. Legal measures & regulations

a) Fishing activities by national vessels

The issues raised relate to the rules and regulations that your country has in place to deal with national flagged vessels' activities outside domestic EEZs.

- Legal measures against vessels and fishers involved in IUU fishing activities within other countries' EEZ and on the high seas (including sanctions such as withdrawal of fishing permits and prohibition of new fishing permits to vessels and fishers having a record of IUU fishing activities, etc.). The question we need to answer is: "What, if any, legal measures do your countries have that regulate your flag vessels' fishing activities outside your country's EEZ?" The question relates to fishing *activities* and not other formalities.

- Regarding national vessels' fishing outside national EEZs, what are the requirements (conferred by national law) on vessels and fishers engaged in fishing activities within other countries' EEZ and on the high seas (including implementation of MCS, installation of VMS, etc.), whether or not these vessels are engaged in IUU activities? This should provide background information to assess national authorities' capabilities to effectively control and monitor fishing *activities* of national flagged vessels outside national EEZs.

- Do you have examples (case material) involving IUU fishing activities by national vessels and national actions taken that could illustrate the situation?

b) Fishing activities by foreign vessels within EEZs

The issues raised relate to the rules and regulations that your country has in place to deal with foreign flagged vessels' activities inside domestic EEZs.

- What types of fishing activities (i.e., bilateral agreements, subject to fees, etc.) by foreign vessels are allowed within your country's EEZ, and under what conditions? The emphasis should be on *fishing.* Accessory activities (landings of fish, permission to seek harbour for fuel, etc.) will be covered under another question.

- What are the responsibilities of foreign vessels when engaging in fishing activities within your national EEZ (*e.g.,* port calls for inspection, notification of entering and departing EEZ, catch reporting, installation of VMS, etc.)? Are these responsibilities also conferred on national vessels? This will help identify if there are additional costs levied on foreign fishing vessels as compared to national ones.

- What are the national legal measures against IUU fishing activities by foreign vessels and fishers? Is the treatment of fishing permit holders vs. non-permit fishing activities the same?

And what are the penalties for non-complying foreign vessels? Note that this could also cover your country's measures for pursuing foreign-flagged vessels' IUU activities outside your own EEZ.

- Do you have examples (case material) involving IUU fishing activities by foreign vessels and national actions taken that could illustrate the situation?

c) Registration of fishing vessels

The issues raised here relate to rules and regulations regarding *vessel registration*.

- What are the general requirements regarding the registering of fishing vessels in your country?
- Does your legislation include restrictions on vessels that knowingly have engaged in IUU fishing activities (*i.e.,* denial of authorization)?
- What are the rules regarding genuine link (ship owner/ship operator to your country of registry) to be registered as fishing vessels? And what are the implications?
- Is governmental permission needed for re-flagging of national flagged fishing vessels to alternative registries outside your country?
- Are there measures in place to prevent flag hopping? What are they?

In considering these questions, you are encouraged to provide information concerning potential legal measures that are being considered within the framework of the development of a national plan of action on IUU fishing activities.

2. Economic measures

a) Investment rules

You are asked to submit information on investment rules regarding fishing vessel ownership including both inward and outward investment rules as applicable. With regard to inward investment rules, you are referred to the information submitted within the context of the Committee's work on "Liberalising Fisheries Markets: Scope and Effects". Perhaps more importantly, we are also looking for information, if applicable, regarding outward investment rules (ownership of foreign fishing vessels including vessel chartering).

b) Trade rules (including trade-related rules)

Countries are asked to submit information and describe trade measures that are currently applied or have been applied, on trade in fish and fish products of IUU origin; these measures may have been instituted unilaterally or on the basis of agreement under an RFMO. This section should also include a description of measures such as catch documentation and certification requirements as well as import and export controls or prohibitions that have a bearing on IUU fish.

c) Rules regarding landing, transhipments and marketing

You are requested to submit rules on your country's restrictions concerning foreign direct landings (including use of ports) and transhipments from foreign vessels; are there specific rules for fishing vessels that have been identified as being engaged in IUU fishing activities?

d) Penalties, fees and restrictions to GFTs

We are looking for information on:

- Penalties applicable to IUU fishing vessels and fishers; is there differential penalty structure/treatment according to nationality of vessel? Fishing permits vs. non-permit holders? (*E.g.*, financial sanctions, confiscations etc.). It would be useful to have case study material submitted as well that could illustrate practice with regard to sanctions on IUU fishing activities, whether national or not.

- Does your country apply any fees on foreign fishing vessels activities within national EEZs? Which activities are included? (fishing, transhipments, harbour visits, etc.)

- When applying for financial transfers are national flag vessels being probed with regard to potential past and future IUU activities? If so, are there any restrictions on the provision of GFTs?

3. Other measures (including moral /ethical)

Countries are encouraged to provide information on moral/ethical measures to prevent IUU fishing activities. These include largely non-economic and social mechanisms that discourage engagement in IUU fishing activities or the provision of services (banking, satellite services, insurance etc.) to vessels that have been engaged in IUU fishing operations. In this regard you may include comments on what domestic industry organisations, on a voluntary basis, may have been put in place to discourage such activity.

Annex 2.
OECD Countries' Involvement in Major RFMOs
(As of April 2005)

Countries (or Entity)	RFMOs (participation by Contracting Party)
Australia	CCAMLR, CCSBT, IOTC, WCPFC
Belgium	CCAMLR[35]
Canada	ICCAT, NAFO, NASCO
Denmark	NAFO[36], NASCO[40], NEAFC[40]
France	CCAMLR[39], GFCM[39], IATTC[40], NAFO[40], CECAF[39], IOTC[40], SWIOFC[40]
Germany	CCAMLR[39]
Greece	GFCM[39], CECAF[39]
Iceland	ICCAT, NAFO, NASCO, NEAFC
Italy	CCAMLR[39], CECAF[39], GFCM[39]
Japan	CCAMLR, CCSBT, GFCM, IATTC, ICCAT, IOTC , NAFO
Korea	CCAMLR, CCSBT, ICCAT, IOTC, NAFO, WCPFC
Mexico	IATTC, ICCAT
New Zealand	CCAMLR, CCSBT, WCPFC
Norway	CCAMLR, ICCAT, NAFO, NASCO, NEAFC, SEAFO
Poland	CCAMLR[39]
Sweden	CCAMLR[39]
Spain	CCAMLR[39], GFCM[39], IATTC[37], CECAF[39]
Turkey	ICCAT, GFCM
United Kingdom	CCAMLR[39], ICCAT[40], IOTC[40]
United States[38]	CCAMLR, IATTC, ICCAT, NAFO, NASCO
EU[39]	CCAMLR, GFCM, ICCAT, IOTC, NAFO, NEAFC, SEAFO, NASCO, WCPFC, CECAF, SWIOFC

Source: OECD Secretariat and Member countries.

35 Organisation to which the Community and EU Member states are Contracting Parties (joint membership).

36 Under the title of its overseas territories.

37 Awaiting membership by the Community.

38 The United States is not yet a contracting party to the WCPFC but ratification may possibly occur before the end of 2005.

39 Members of the European Union are noted above separately when participating also as individual Contracting Party.

Annex 3.

Recent Actions taken by Open Register States

Flag State	Offence	Location	Action
Belize	Non-compliance with ICCAT regulations	N/A	Deregistration
Belize	Illegal fishing of protected toothfish	Australia's EEZ	USD 50 000 fine
Belize	Illegal fishing of protected toothfish	Mauritius	USD 30 000 fine/deregistration
Belize	Longline fishing for tuna in violation of ICCAT regulations	780 NM West of Angola	USD 10 000 fine/deregistration
Belize	Illegal fishing in CCAMLR area	CCAMLR area	Deregistration after reports that vessel re-flagged to another registry without consent
Vanuatu	Operating in restricted area	CCAMLR area	3 vessels de-listed and removed from registry

Source: OECD Secretariat.

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CHAPTER 4

Inventory of National Measures Against IUU Fishing Activities

Introduction

As a core part of its study of IUU fishing activities, the Committee decided to develop an inventory of national measures in place against IUU fishing activities. This chapter outlines existing frameworks for measures in place in Member countries against IUU fishing activities on the high seas as well as in national EEZs. According to a questionnaire prepared by the Secretariat (reproduced in Annex 1 of Chapter 3), the country notes provide detailed information on individual OECD countries' national measures in place as well as other potential legal measures that are being considered within the framework of a national plan of action on IUU fishing activities, economic measures, and social/ethical measures.

In the section on legal measures, there is emphasis on the rules and regulations dealing with national flagged vessels' fishing activities within other country's EEZs and on the high seas. It also includes extra-territorial application of regulatory measures and regulations to foreign fishing vessels' activities. It includes information on the responsibilities of foreign vessels (such as installation of VMS, catch reporting etc.) and on the penalty structures including fines, confiscation of catches and vessels, and the detention of vessels and crews. Economic measures encompass investment rules regarding fishing vessel ownership. Trade rules on fish and fish products of IUU origin are included under economic measures. Restrictions on foreign direct landings (including use of ports) and transhipments from foreign fishing vessels are referred to in this section. Other moral/ethical measures to prevent IUU fishing activities focus particularly on largely non-economic and social mechanisms that discourage engagement in IUU fishing activities.

Australia

General Overview of Australia's fisheries regulatory framework

Following a review of Australia's fisheries in 1988, the Australian Fisheries Management Authority (AFMA)[1] was established in February 1992 as a statutory authority reporting to an independent board. AFMA deals with compliance and licensing services and manages Australian fisheries from the baseline from which the breadth of the territorial sea is measured to the edge of the 200 nm limit of the Australian Exclusive Economic Zone (EEZ). The Department of Agriculture, Fisheries and Forestry (DAFF)[2] remains the central point for policy development, advice and coordination on national and international fisheries management issues.

DAFF and AFMA work closely with industry, other Australian Government Departments, State fisheries agencies, the recreational fishing sector, environment and indigenous groups. While AFMA administers the *Fisheries Management Act, 1991* (FMA)[3], DAFF is responsible for legislative amendments and provides advice to the Australian Minister for Fisheries, Forestry and Conservation.

International Legal Measures and Regulations

Australia is committed to fulfilling its obligations under international law, in particular agreements and arrangements concerning fishing and the conservation and management of fish stocks and other living marine resources.

Australia has ratified the United Nations Convention on Law of the Sea, the United Nations Fish Stocks Agreement (UNFSA) the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR), the Agreement for the Establishment of the Indian Ocean Tuna Commission (IOTC), Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific (WCPFC) and the Convention on the Conservation of Southern Bluefin Tuna (CCSBT).

Australia is currently in the process of accepting the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas.

Australia has adopted the principles of the International Plan of Action on Illegal, Unreported and Unregulated (IUU) Fishing, the Food and Agriculture Organisation

1 Further information on the Australian Fisheries Management Authority can be located at their website (www.afma.gov.au).

2 Further information on the Australian Government Department of Agriculture, Fisheries and Forestry can be located at their website (www.daff.gov.au).

3 A copy of the *Fisheries Management Act, 1991* can be located at the Australian Fisheries Management Authority website (www.afma.gov.au).

(FAO) Code of Conduct for Responsible Fisheries and is currently in the process of developing a National Plan of Action on IUU under the IPOA-IUU.

Bilateral Arrangements relevant to the Commonwealth of Australia

Australia views regional cooperation as an important tool for effective management of its marine resources and has developed bilateral arrangements[4] with a number of like-minded States

- **Torres Strait Treaty:** The Torres Strait Treaty, ratified in 1985 between Australia and Papua New Guinea, defines the areas of jurisdiction for swimming and sedentary marine resources in the Torres Strait and established an area known as the Torres Strait Protected Zone (TSPZ). The Treaty sets out a framework to guide both countries in providing for the management, conservation and sharing of fisheries resources in and around the TSPZ. It also sets out guidelines for the enforcement of fisheries legislation;
- **Indonesian Memorandum of Understanding (MoU) Box:** Australian northern waters include areas within the Australian EEZ where traditional fishing by non-motorised foreign vessels operating from parts of the Indonesian archipelago has taken place for centuries. Under a 1974 MoU with Indonesia, Australia allows traditional fishing within a specified area (the 'MoU Box') around Ashmore and Cartier reefs;
- **New Zealand Orange Roughy MoU:** The South Tasman Rise Fishery is the major component of the Australian Orange Roughy industry. The fishery has undergone extensive development in the past five years including the signing of a MoU on management arrangements between the governments of Australia and New Zealand for waters of the fishery outside the Australian EEZ.
- **Treaty between the Government of Australia and the Government of the French Republic on cooperation in the maritime areas adjacent to the French Southern and Antarctic Territories (TAAF), Heard Island and the McDonald Islands:** The Treaty was signed on 24 November 2003 and facilitates cooperative surveillance for remote French and Australian Territories in the Southern Ocean, which are subject to a high level of IUU fishing activity targeting Patagonian toothfish. Australia is in the process of ratifying the Treaty.
- **Treaty on Fisheries between the Governments of Certain Pacific Island States and the Government of the United States of America:** This multilateral Treaty was developed to provide United States vessels access to fish within the waters of 16 Fisheries Forum Agency member countries in pursuit of migratory fisheries species (predominantly tuna) in exchange of licence fees. The Treaty came into force on 15 June 1988, since this time there have been several extensions of the Treaty.

Relevant Australian legislation

The following legislation is relevant to fisheries management and compliance.

[4] A copy of Australia's bilateral arrangements can be located at the Australian Treaties Database (www.info.dfat.gov.au/treaties).

- ***Fisheries Management Act 1991 (FMA)***: AFMA under the FMA manages commercial fishing activity by Australian and foreign nationals in the Australian EEZ and Australian nationals on the high seas.
- ***Fisheries Administration Act, 1991:*** Provides AFMA with functions and responsibilities relating to the management of fisheries on behalf of the Commonwealth; and establishes a
- ***Fishing Industry Policy Council***, which ensures that industry stakeholders are engaged in the development of fisheries management.
- ***Shipping Registration Act 1982 (SRA***)5: Registration of ships is undertaken by the Australian Maritime Safety Authority (AMSA) in accordance with the SRA. The SRA sets out provisions and associated regulations for the registration of vessels.
- ***Torres Strait Fisheries Act, 1984:*** Gives effect to the Torres Strait Treaty.
- ***The Fishing Levy Act 1991,*** Foreign Fishing Licences Levy Act 1991 and Fisheries Agreements ***(Payments) Act 1991*** enable the imposition of management levies and access fees payable by Australian and foreign fishermen, foreign governments and foreign commercial interests. ***The Statutory Fishing Rights Charge Act 1991*** enables a charge to be levied on the grant of new fishing rights**.**

Other Acts such as those for quarantine, customs, crimes and environmental protection and biodiversity conservation also assist in the regulation of Australia's fisheries.

The States and Territories also manage Australian State and Territory fisheries under laws relevant to the fisheries in their jurisdiction.

1. Legal Measures and Regulations

a) Fishing activities by national vessels

The FMA gives Australian fisheries officers the right to order Australian flagged vessels to move to an appropriate place at sea and/or stop to facilitate boarding and inspection to ensure that the vessels activities are not in contravention of the concession or temporary order that the vessel holds. AFMA may also authorise officials of a party to the UNFSA to board Australian vessels and investigate alleged breaches of domestic or international laws when the vessel is outside the Australian EEZ.

Where there are reasonable grounds to believe that a breach of the fishing concession has occurred, AFMA may revoke the vessels authorisation to fish and the vessel can be ordered back to port. A maximum of 500 penalty units or AUD 55 000 (Currently 1 penalty unit = AUD 110) can apply to the Master and each of the crew members of an Australian flagged ship with fish or fishing equipment on the high seas or in foreign waters (includes a foreign EEZ, territorial sea, archipelagic waters or internal waters) without or in contravention of an appropriate concession or scientific permit.

While fishing the high seas Australian nationals must also comply with regulatory measures established by Regional Fisheries Management Organisations (RFMO) of

5 A copy of the *Shipping Registration Act, 1982* can be located at the Australian Maritime Safety Authority website (www.amsa.gov.au).

which Australia is a member. There is a provision within the FMA that allows Australia's Attorney General to authorise a foreign country to take specified action, against an Australian flagged vessel, to enforce a law of the foreign country in response to a contravention of a RFMO conservation or management measure on the high seas.

If an action is authorised by the Attorney General and a person is convicted or acquitted of an offence in a foreign country, the FMA precludes the offending person from being convicted for the same offence under Australian law.

Control of Australian nationals

The Australian Government introduced legislation to Parliament, which came into effect in December 2001 that requires Australian-flagged fishing vessels to be authorised to fish in waters outside the Australian EEZ on the high seas and in foreign waters (includes a foreign EEZ, territorial sea, archipelagic waters or internal waters). It is an offence for an Australian-flagged fishing vessel to operate on the high seas without the appropriate authorisation.

According to FMA regulations, operators using Australian-flagged vessels on the high seas are required to mark their vessels in accordance with the United Nation's FAO standard specifications, facilitate the carriage of observers, complete catch and effort logs, notify the relevant authority when departing and entering the Australian EEZ and operate a vessel monitoring system (VMS), which reports to AFMA. In addition, Australian-flagged vessels are required to operate in a manner that does not contravene Australia's obligations under international conventions, regional fisheries management organisations and other agreements to which Australia is a party.

To fish outside the Australian EEZ, an operator must apply for a concession from AFMA that is relevant to the area they are seeking to fish. The Government may revoke the concession if there is a breach of a condition of the concession or if the operator is convicted of an offence under the FMA.

The FMA states that AFMA must not authorise an Australian fishing vessel to fish on the high seas for straddling or highly migratory fish stocks in the period where a court has convicted an individual for a fisheries offence, which is in contravention of a regional management measure. AFMA can authorise the vessel to resume fishing once the penalty has been posed, in most cases the payment of a fine.

Compliance tools to control high seas fishing

There have been no examples of IUU fishing activities by Australian flagged vessels on the high seas or in other countries exclusive economic zone.

b) Fishing activities by foreign vessels within EEZ

Foreign fishing vessels (FFVs) are not permitted to fish within the Australian EEZ without appropriate authorisation and the granting of a foreign fishing licence. It is believed that Australia's fish resources are either fully exploited or there is sufficient capacity within domestic operations for the resource to be fully utilised. Foreign fishing access to the Australian EEZ is strictly regulated and limited to negotiated government to government agreements. If a foreign fishing vessel wishes to apply to fish in the Australian EEZ, they must apply for a foreign fishing licence from AFMA and provide any information that AFMA requires for proper consideration of the application.

AFMA has discretion when considering foreign fishing licence applications and takes into account previous IUU fishing offences by vessels and crew, the history of the flag State and its control over its vessels in terms of ensuring that vessels are fishing to appropriate standards, the 'genuine link' between the vessel and the flag State, the level of fishing and any benefits of the activity for Australia. If a licence is approved the holder must comply with any obligations, including relevant management plans of fisheries, imposed by AFMA for the fishery to which the licence applies.

Responsibilities of foreign vessels when entering Australian EEZ

There are minimum terms and conditions that apply to a holder of a foreign fishing licence, these include a requirement to mark their vessels in accordance with the FAO standard specifications, carry observers if requested, complete catch and effort logs and operate a VMS which reports to AFMA, port calls for inspection and notification of departing and entering the Australian EEZ the payment of a fee or levy. The vessel master must also hold a current foreign master fishing licence, and the ship must meet any requirements specified in the fishing licence.

The *Foreign Fishing Licences Levy Act, 1991* outlines provisions for the payment of a levy by a person seeking a foreign fishing licence to fish in the Australian EEZ. Where there is an agreement in force that contains a provision stating that licences shall be granted, a levy will not apply. The amount of the levy imposed on the grant of a licence is the amount prescribed by the FMA regulations or as is calculated in accordance with the regulations.

To obtain a foreign master fishing licence an application must be made to AFMA. The application should include such information as is reasonably required for proper consideration (similar process to obtaining a foreign fishing licence). The holder of the foreign fishing master licence must comply with any obligations imposed by AFMA as outlined in relevant plans of management and other specifications of the licence. A foreign master fishing licence must be held by the person in charge of a foreign ship that is being used for commercial fishing in a specified managed fishery under a foreign fishing licence.

Responsibilities conferred on national vessels

Most of the responsibilities that AFMA requires of FFVs are consistent with those of Australian ships that fish within the Australian EEZ, however some are obviously unnecessary such as the notification of entering and exiting the Australian EEZ (although this does apply for Australian vessels that access fishing grounds beyond the AFZ). Also, Australian ships are not required to participate in routine port calls for inspection although, they may be requested to return to port for an inspection if a fisheries officer believes that the vessel may have acted in contravention of the concession or licence held by the vessel.

As stated previously, it is believed that most of Australia's fish resources are either fully exploited or there is sufficient capacity within domestic fishing operations for the resources to be fully utilised. As such, the maximum numbers of concessions or statutory fishing rights are in circulation to fishers. As the body responsible for management of the fisheries AFMA cannot allow the number of ships that access the fishery to increase by granting further concessions, hence for a fisher to obtain access rights through a concession they must purchase existing concessions from current holders. Prices paid for fishing concessions are a commercial matter. Applications to approve the transfer of

concessions must be submitted to AFMA for consideration, an application fee of AUD 300 applies.

The costs of managing a fishery are shared between the government and the operators who hold an entitlement for the fishery, according to the level of benefit attributed. They include costs for Management Advisory Committees, logbooks, registers, monitoring programs, compliance, AFMA overheads and research. The contribution is collected as a management levy each financial year. Similarly to the *Foreign Fishing Licences Levy Act 1991* there is also a *Fishing Levy Act 1991,* which outlines provisions for the payment of levies for domestic fishers wishing to access a managed fishery. The amount of the annual levy varies between fisheries depending on the costs of management.

Levies for species in the Southern and Eastern Scalefish and shark fisheries are collected based on the number of permanent quota units (number of kilograms) that an operator holds. The number of kilograms an operator holds is directly related to permanent quota units and the proportion of levy each operator pays is not affected by this change.

National legal measures against IUU fishing activities by foreign vessels and fishers

There are a variety of legal measures against IUU fishing activities by foreign vessels and fishers that range from financial penalties, forfeiture of vessels, revoking of concession and imprisonment for repeat offenders.

Treatment of permit versus non-permit holders

According to the FMA, any fishing offence either by a permit or non-permit holder is dealt with as a foreign or domestic fishing offence, therefore the same penalties apply for permit and non permit holders following a conviction of an offence.

Penalities for non-complying foreign vessels

Under the FMA it is an offence to use foreign ships for fishing in the AFZ without appropriate authorisation. Offenders (vessel master and crew) are prosecuted under domestic legislation in Australian courts. The maximum penalty for a foreign fishing offence in the AFZ under the FMA is currently 7 500 penalty units or AUD 825 000.

Examples involving IUU fishing activities by foreign vessels and national actions taken

Australia usually apprehends over a hundred foreign vessels for IUU fishing within the Australian fishing zone each year. IUU fishing in the Australian EEZ is of two distinct types: artisanal level illegal fishing, mainly targeting reef shark, trepang and trochus in northern Australia and industrial scale illegal fishing, targeting Patagonian toothfish in the Southern Ocean.

Illegal fishing in northern Australia generally results in fishers, once apprehended, being brought on their vessels to the nearest port in Broome or Darwin where investigations are conducted. Charges are usually laid against the master of the vessel and any repeat offenders with remaining crew members repatriated. If the vessel is bonded, crews sometimes stay in detention until the vessel is released.

Fifty-two foreign fishing vessels have been apprehended inside the Australian Fishing Zone (AFZ), for illegal fishing between 1 January and 31 March 2005. This follows a record 138 illegal fishing vessel apprehensions in 2003 and 161 apprehensions in 2004.

The Australian Government has to date secured three convictions against fishing vessel masters for taking dolphin, which is a protected species under the *Environmental Protection and Biodiversity Conservation Act, 1999* (EPBC Act). In the first case, on 20 January 2003, a master was sentenced to two months jail for this offence, and a further three months jail for failing to pay fines for fishing offences. The vessel was originally apprehended on 28 November 2002.

The master of a vessel apprehended on 7 February 2003 was also convicted and jailed for two months for the EPBC Act offence of killing a dolphin while in the Australian Whale Sanctuary. On 14 May, a skipper was jailed for one month for taking dolphin, and a further eight months for defaulting on payment of fines for fishing offences.

Recent examples of apprehensions in the Southern Ocean:

Viarsa 1 Case

A Uruguayan flagged longline fishing vessel, the *Viarsa 1,* was sighted allegedly fishing illegally inside the Australian Exclusive Economic Zone around Heard Island and McDonald Islands on 7 August 2003, at which time an Australian patrol vessel initiated hot pursuit. After a 21 day, 3 900 nautical mile chase – the longest in Australia's maritime history – through some of the most inhospitable sea and weather conditions, Australian Customs and Fisheries officers boarded the *Viarsa 1*. The boarding was supported by armed South African enforcement officers and occurred on Thursday 28 August 2003. The South African ocean-going tug *John Ross* and the United Kingdom fisheries patrol vessel *Dorada* provided support at the apprehension scene, over 2 000 nautical miles (3 900 km) from Cape Town in the South Atlantic.

Australia has formally seized the vessel, its catch and equipment under the FMA. The owners have indicated their intention to challenge the seizure. AFMA's investigations resulted in charges being laid against the captain and master of the vessel and three other crewmembers. The crewmembers that were not charged have been repatriated. The five charged crewmembers have been released on bail and remain in Australia until trial. AFMA is negotiating with the owners of the *Viarsa 1* regarding the bond for the vessel.

The Lena and Volga Cases

In February 2002, the *HMAS Canberra* apprehended the Russian-flagged vessels the *Volga* and *Lena* for allegedly illegally fishing in the AFZ around HIMI. The *Lena*, its catch and gear, were forfeited to the Commonwealth and the criminal prosecution of its master and two crewmembers concluded in favour of the Commonwealth. The *Lena* has been scuttled in Western Australia for use as a dive site. Australian authorities have detained the Volga until the bond is paid. The Russian Federation took Australia to the International Tribunal on the Law of the Sea (ITLOS) in December 2002 to challenge the bond set for the *Volga*. The outcome of the hearing was announced on 24 December 2002. ITLOS found that the bond should be set at the full value of the vessel, AUD 1.92 million and rejected Russia's offer of AUD 500 000. The *Volga* is currently subject to further litigation.

The owners of the *Volga* are contesting its apprehension and subsequent forfeiture to the Commonwealth. On 8 July 2002, lawyers for the Volga's owners filed in the Federal Court an amended statement of claim. The statement claims misfeasance on the part of AFMA in the apprehending of the ship and the vessel owners are now seeking to sue the Commonwealth for unlawfully apprehending the *Volga*. The Federal Court dismissed an application by the owners of the Volga to have the hearing postponed until after the criminal trial. The owners have now raised another procedural point saying that the legislation is invalid in providing for forfeiture of the vessel without a criminal conviction and are seeking a separate preliminary hearing on this point. The Federal Court hearing occurred between 8 and 12 September 2003 and the judge is yet to make a ruling.

c) Registration of fishing vessels

Requirements of fishing vessel registration

The SRA states that every Australian owned ship shall be registered under the SRA, however exemptions from compulsory registration are provided for, which include Australian owned fishing vessels. There are safeguards and benefits available for registered vessels, even if exempt from registration under the SRA. Such benefits include "good title" and ownership confirmation.

To register a vessel an application for registration and application fee is required to be submitted to AMSA[6]. An application should include, among other things, a declaration of ownership and nationality, evidence of ownership, demise charter party (if applicable), call sign licence, tonnage measurement and the vessel must clearly meet marking requirements.

It is an offence of strict liability, under the SRA, for an unregistered ship to depart from an Australian port to "a place outside Australia", meaning a place beyond the outer limits of Australia's territorial sea. Therefore all Australian-owned fishing vessels *must* be registered in order to fish beyond the territorial sea. These fishing vessels have Australian nationality and are entitled to fly an Australian flag. Accordingly, they are also Australian-flagged ships as defined by the FMA and are subject to comply with the FMA and any related legislation and regulations that operate to ensure Australian-flagged fishing vessels do not engage in or support IUU fishing.

The FMA defines fishing to include a broad range of fishing-related activities, including any operations at sea directly in support of, or in preparation for, any other activity described in that definition. The SRA, however, defines fishing vessel more narrowly, so that Australian-owned support vessels are not exempt from compulsory registration.

The Registrar cannot register a ship under the SRA if it is registered under the law of a foreign country. Where, a ship that has at any time been registered under the law of a foreign country and a application is made for the registration of the ship under the SRA, the application must be accompanied by evidence that establishes that the ship is no longer registered under the law of that country or that steps have been taken, to close the registration of the ship under the law of that country.

6 Further information on the Australian Maritime Safety Authority can be located at their website (www.amsa.gov.au).

AFMA has discretion when providing a high seas fishing licence in that it may stipulate that any Australian vessel wishing to leave the Australian EEZ must be Australian flagged and registered under the SRA. Minimum terms and conditions also apply to an Australian ship fishing outside the AFZ, these are outlined above under Legal measures and regulations.

Restrictions on vessels engaged in IUU fishing

Where AFMA has discretion when considering a ship licence application or concession transfer of statutory fishing rights, one of the factors considered is the ship's history of compliance and IUU fishing. If identified to have a history of IUU fishing AFMA will not approve the application.

Rules regarding fishing vessel genuine link (ship owner/ship operator to your country of registry)

The SRA outlines provisions for registering a vessel to Australia. It is the first step in a series of steps that a fishing vessel must complete to demonstrate a strong 'genuine link' between the ship operator and Australia. The following ships can be registered: Australian owned ships; small craft wholly owned or operated by residents of Australia nationals; and ships on demise charter to Australian-based operators.

Secondly, only an Australian owned ship is authorised to fish under a fishing permit or statutory fishing right granted by AFMA. AFMA defines and Australian ship if it satisfies one of the three following conditions:

- the ship is operated from Australia and is wholly owned by an Australian resident or company and was built in Australia; or
- the ship is listed on the Australian Shipping Register, except if it is owned by a foreign resident and under a demise charter arrangement; or
- the ship has been declared by AFMA to be an Australian ship under FMA conditions (further requirements relating to the genuine link).

A foreign ship may be registered under a demise charter under the SRA, if two or more persons who include an Australian national in a position to control the exercise of the rights and powers of the charterers are included in the chartering company.

The FMA allows a ship on a demise charter to be declared by an Australian ship. AFMA may declare that, during a certain period, the ship is taken to be an Australian ship for the purpose of the Act following consideration of the application. Factors taken into consideration include IUU history of Master and crew, export and import of catch and be satisfied that the extent of participation of citizens or residents of Australia, either directly or indirectly (either through holding shares or otherwise), in the control of the operations of the ship in the Australian EEZ, during that period, and the nature of those operations.

If an Australian flagged ship under the FMA, wished to obtain a flag from another country, Australia has no process in place to prevent flag hopping, Australia believes that it is the responsibility of the flag State to ensure that vessels are legitimate and that all international obligations are fulfilled.

2. Economic Measures

a) Investment rules

For a foreign entity wishing to buy into an Australian fishing company an application is not required to be made to the foreign investment review board (FIRB) unless the sale is greater that AUD 50 million. Any sales greater than this value require the submission of an application to the FIRB that includes a detailed description of the sale.

AFMA does not impose restrictions on a foreign person or company holding an Australian fishing permit. The critical link is the ship, as only an Australian ship can be nominated to a fishing permit or a statutory fishing right. The FMA definition of an Australian ship can be found in the above sub-section entitled *Rules regarding fishing vessel genuine link (ship owner/ship operator to your country of registry).*

b) Trade rules

Australia is a signatory State to a number of RFMOs, including CCAMLR, IOTC, WCPFC, and CCSBT. A number of these Commissions have implemented regulations, quotas and trade certification schemes in an attempt to prevent IUU fishing. As a signatory to these Conventions, Australia implements these trade regulation regimes.

Australia adopted the CCAMLR catch documentation scheme (CDS) following increased concern over the level of IUU fishing for Patagonian toothfish. The key element of the CDS is that the scheme applies within and beyond the CCAMLR Convention Area. It requires CCAMLR members to ensure that their vessels and authorities complete and verify documentation for landing and transhipment of all toothfish catches.

Australia implements the CCSBT trade information scheme (TIS), which commenced 1 June 2000. The aim of the scheme is to collect more accurate and comprehensive data on southern bluefin tuna (SBT) fishing through monitoring trade. The TIS also deters illegal fishing by effectively denying access to markets for illegally caught SBT (with or without false documentation). Implementation of the TIS revolves around all members of the CCSBT requiring all imports of SBT to be accompanied by a completed CCSBT Statistical Document. The Document must be endorsed by an authorised competent authority in the exporting country and includes extensive details of the shipment such as name of fishing vessel, gear type, area of catch, dates, etc. Shipments not accompanied by this form must be denied entry by the member country. Completed forms are lodged with the CCSBT Secretariat and used to maintain a database for monitoring catches and trade and supporting scientific assessment.

Similarly the IOTC requires that any big eye tuna imported by a party to the convention into the territory of a contracting party to be accompanied by an IOTC statistical document.

c) Rules regarding landing, transhipments and marketing.

To obtain access to an Australian port a FFV is required to obtain a port permit from AFMA. In general, FFV port permits are only issued when the Minister gives a written exemption to allow the landing or transhipment of fish. This is predominantly due to threats to Australia's bio-security.

An application for a port permit requires the provision of the following information: proposed port of entry, ship name and nationality, international radio call sign, registration number in country of origin and International Maritime Organisation number, descriptions of authorisations to fish, the name of the master of the ship, the person or contact point of the company or individual that owns the ship will be responsible for the conduct of the ship as the approval holder and a crew list.

While in the Australian EEZ, the foreign fishing vessel that holds the port permit is subject to conditions outlined in the permit, these include:

- the ship's nets, traps or other equipment used for searching for or taking fish are to be stowed and secured while the ship is in the Australian EEZ and in port;
- the ship must transit to and from port by the most direct route towards its proposed destination;
- the master or agent must provide AFMA with at least 24 hours notice of intention to enter the Australian EEZ and depart port;
- the master of the ship shall maintain the operation of the 'inmarsat C' VMS, reporting to AFMA at all times whilst in the Australian EEZ, unless transitional or other ad hoc communication arrangements have been approved by AFMA;
- the ship's freezer plans are to be made available to the inspecting Fisheries Officer on request;
- a copy of the ship's declaration of catch in total weight, and weight and number by species must be provided to AFMA;
- all fish and fish products are to be stowed and secured inside the ship; and
- no fish or fish product is to be unloaded for any purpose, including sale, own consumption, donation or gift, unless separate permission is obtained.

In considering applications for port permits, AFMA takes into account Australia's obligations under international law and assesses whether the ship, master and fishing company will abide by the terms and conditions of a port permit, this is based on their previous behaviour, such as compliance and IUU fishing history.

Australia is currently in the process of reviewing its port access and catch-landing regime. This involves updating its port access guidelines and revising our approach to catch landings and transhipments from FFVs.

d) Penalties, fees and restrictions to GFTs:

There is no differential penalty regime under the FMA for vessels according to nationality; however, the FMA does contain separate regimes for foreign and domestic vessels.[7]

The maximum penalty for a fishing offence by an Australian licensed fishing vessel under the FMA is currently 500 penalty units or AUD 55 000 on the high seas and 250 penalty points or AUD 27 500 in the Australian EEZ (see above under Legal measures and regulations).

7 It should be noted that offences are based on the nationality of the vessel and not the nationality of the individuals involved. Australian and foreign nationals on a foreign licensed fishing vessel would receive the same penalty.

The maximum penalty for a fishing offence by a foreign licensed fishing vessel in the Australian EEZ under the FMA is currently 5 000 penalty units or currently AUD 550 000 for vessels under 24 metres in length (see above under Penalities for non-complying foreign vessels).

Australia has recently increased the maximum penalty for foreign fishing offences from 5 000 to 7 500 penalty units or from AUD 550 000 to AUD 825 000 for foreign vessels of, or exceeding 24 metres in length. This differentiates between the artisanal level illegal fishing in northern Australia and industrial scale illegal fishing in the Southern Ocean.

Fishing permit versus non-permit holders

AFMA may suspend or cancel a concession if there is a breach of a condition specified in the concession or if an operator is convicted of an offence under the FMA or a required levy is not paid.

Fees regarding a port permit are AUD 750 charged by AFMA for each successful application to visit an Australian port. The fee is charged for each visit that is requested in the application. In the event that an application is denied a refund of AUD 360 per visit will be provided to the applicant.

The *Foreign Fishing Licences Levy Act, 1991* outlines provisions for the payment of a levy to a person seeking a foreign fishing licence to fish in the Australian EEZ. Where there is an agreement in force that contains a provision stating that licences shall be granted, a levy will not apply. The amount of the levy imposed on the grant of a licence is the amount prescribed by the FMA regulations or as is calculated in accordance with the regulations.

3. Other Measures

The Coalition of Legal Toothfish Operators (COLTO), of which Australia's toothfish companies are members (Austral Fisheries, Everfresh Seafoods, HIMI Longline Management Pty Ltd, and Petuna Sealord), launched an international 'Wanted' campaign in Brussels on 7 May 2003. The Coalition is offering up to USD 100 000 for information leading to the conviction of illegal fishers. COLTO is comprised of industry members from several countries that have a direct commercial interest in the well being of Patagonian toothfish and the ecosystems that support them. Australia encourages its industry members to provide information on illegal fishing activity. This information is useful in the development of a clear picture of IUU fishing structures and a historical database of fishing vessels involved in IUU fishing.

Australia also uses media coverage to promote apprehensions of vessels suspected of IUU fishing to demonstrate Australia takes this issue seriously.

Belgium

1. Legal framework

a) Fishing activities by national vessels

The Belgian legal framework which is applicable to the fisheries outside the waters under national sovereignty and/or jurisdiction consists of "*Wet van 12 april 1957 waarbij de Koning wordt gemachtigd maatregelen voor te schrijven ter bescherming van de biologische hulpbronnen van de zee, zoals gewijzigd – Loi du 12 avril 1957 autorisant le Roi à prescrire des mesures en vue de la conservation des ressources biologiques de la mer, tel que modifié*", which gives the power to the King to take the necessary measures for the conservation of biological resources in the high seas, the EEZ and the territorial sea.

The vessels of the Belgian fishing fleet have a fishing licence in application to the relevant regulations of the Community law. Licensing formalities are described in " *Koninklijk besluit van 21 juni 1994 tot het instellen van een visvergunning en houdende tijdelijke maatregelen voor de uitvoering van de communautaire regeling voor de instandhouding en het beheer van de visbestanden – Arrêté royal du 21 juin 1994 instituant une licence de pêche et portant des mesures temporaires pour l'exécution du régime communautaire de conservation et de gestion des ressources de pêche*".

To our knowledge no Belgian fishing vessels are involved in fisheries outside the community waters, with the exception of some fisheries inside the Norwegian EEZ.

b) Fishing activities by foreign vessels within EEZ

The Belgian EEZ lies completely inside the community waters. Fishing vessels (national, EU and non-EU vessels have to comply with Community regulations).

There are no bilateral agreements with third countries covering fishing activities inside waters under Belgian national sovereignty and/or jurisdiction.

All masters of fishing vessels are subject to a logbook registration, V.M.S and pre-notification of catches when landing in a foreign port.

Concerning penalties there are no different treatments foreseen by law, with the exception of the mooring of vessels in order to start procedure. Penalties concerning infringements are foreseen in above mentioned law, i.e. €1 500 to €100 000, confiscation of catch, gear and vessel.

c) Registration of fishing vessels

All vessels have to be registered by competent authorities of Ministry of Transportation. Fishing vessels have to submit a "zeebrief" (registration document in

Belgian register) and a "meetbrief" (document stating characteristics of the vessel, *inter alia* tonnage and engine power).

The Belgian legislation foresees specific provision concerning the economic link. (cfr. art. 15 of the above-mentioned royal decree). If the economic link is not proven by owner the fishing licence can be withdrawn. There is no governmental permission needed for reflagging of national flagged fishing vessels.

2. Economic measures

a) Investment rules

The Community legislation is applicable.

Regional investment rules (seafisheries is of regional competence of the Flemish region) are described in "*Decreet van 13 mei 1997 houdende oprichting van een Financieringsinstrument voor de Vlaamse visserij- en aquicultuursector*" and in a number of decrees of the Flemish government.

b) Trade rules

The Community legislation is applicable.

3. Other measures

There are no other measures.

Canada

1. Legal measures and regulations

a) Fishing activities by national vessels

Canada has implemented a regulatory requirement whereby Canadian vessels must obtain a licence to fish in waters other than Canadian fishery waters *i.e.*, international waters or the waters of another country. Canadian vessels that fish outside Canadian waters without a licence or in violation of their licence conditions may be prosecuted under Canadian law, with resulting penalties (e.g., forfeiture of licence, seizure of catch and/or vessel).

As noted in the previous response, Canada has implemented a regulatory requirement whereby Canadian vessels must obtain a licence to fish in waters other than Canadian fishery waters i.e., international waters or the waters of another country. Conditions can be applied to the licence to ensure pertinent conservation and management measures as well as MCS requirements (e.g., VMS) are respected. Fishing activities in the waters of other countries must be authorised by competent authorities from that country. Licenses are also required for Canadian vessels transporting and/or transshipping fish and fisheries products at sea. Catch of all vessels can be determined using catch reporting, the Dockside Monitoring Program (DMP) and, for species not covered by DMP, sales slips. Under the DMP, landed fish are recorded and catch reports verified against landings.

There are no examples concerning Canada involving IUU fishing activities by national vessels and national actions taken.

b) Fishing activities by foreign vessels within EEZ

The Coastal Fisheries Protection Act and Regulations provide the legal framework for foreign vessels to be permitted to conduct activities within Canadian waters and ports. These activities range from fishing to transshipment, processing, and provisioning. Some activities, such as port access, are supplemented by government policy. In addition, Canada has a bilateral treaty with the US (the Canada-US Albacore Treaty) which allows US vessels to fish that stock in the Canadian EEZ. Canada also has a bilateral treaty with France (in respect of St. Pierre and Miquelon) respecting shared groundfish stocks in NAFO division 3Ps. As the capacity of the Canadian fleet currently outstrips the available stocks in many fisheries, there are no foreign vessels currently licensed to fish in Canadian waters except those under bilateral agreements.

Foreign fishing vessels that are authorized pursuant to the Coastal Fisheries Protection Act and Regulations are required to abide by the conditions of this authorisation. The license will include things like the type of gear that may be used. Pursuant to the Coastal Fisheries Protection Regulations, masters of a foreign fishing

vessel operating in Canadian waters must, *inter alia*, notify Canadian authorities of their entry into and departure from Canadian waters, stow gear while in an area of Canadian waters in which they are not licensed to fish, permit observers to board and take samples, permit a protection officer to board and facilitate his/her work, record fishing and production activities in a logbook and transmit the information to Canadian authorities, and, on request, proceed to a designated place at-sea or a port for inspection.

See previous answer regarding the legal measures available against IUU fishing activities by foreign vessels allowed to operate in Canadian waters. Foreign vessels entering Canadian waters conducting fishing activities without a licence or breaching conditions of licence or relevant Canadian legislation (the Coastal Fisheries Protect Act and Regulations and the Fisheries Act and Regulations) would be prosecuted under that legislation. Penalties for non-compliance vary with the offence and range up to CAD 750 000 plus forfeiture of the catch and/or vessel. Regarding actions that can be taken against IUU activities by foreign vessels outside Canadian waters, note: 1) Under the Coastal Fisheries Protection Act, Canada can take urgent action *vis a vis* vessels of flag states specified in the Regulations to prevent further destruction of straddling stocks off Canada's east coast; 2) Canada has implemented the 1995 United Nations Agreement on Straddling and Highly Migratory Fish Stocks, including those provisions relating to boarding and inspection and 3) The Coastal Fisheries Protection Act provides for Canada to take enforcement action against vessels without nationality under specified circumstances.

In the past, Canada has closed its ports to members of NAFO that have fished in a manner that undermines NAFO conservation measures. Canada has made a major commitment to ensure unauthorized fishing operations are not conducted within its jurisdiction. Comprehensive surveillance, monitoring, and control programs have been implemented to detect and prevent illegal fishing by both domestic and foreign fishers.

c) Registration of fishing vessels

All commercial vessels are required to be registered, licensed or certified by the Department of Transport (Transport Canada)—please refer to Canadian Ship Registration Guidelines below. To operate in commercial fisheries, vessels must be registered with Fisheries and Oceans Canada (DFO) and pay the registration fee of CAD 50.00. Foreign vessels that would be exceptionally allowed to fish in Canadian waters for Canadian operators are not required to be registered with DFO.

Canadian Ship Registration Guide

In order to register a vessel in Canada:

Every owner must be a "qualified person". You are a qualified person if you are:

- a Canadian citizen or a permanent resident within the meaning of subsection 2(1) of the Immigration Act, or
- a corporation incorporated under federal or provincial law.

Required registration

You must register any vessel in Canada that:

- exceeds 15 gross tons;
- is owned only by Canadian citizens, residents, or companies incorporated in Canada (called qualified persons); and
- is not registered in a foreign country.

Documentation for first-time registration

To complete the registration of a vessel or shares in a vessel, you will have to establish legal title. To apply to register a vessel, you must send the following documents to the registrar at the Port of Registry:

- Application for Registry;
- Declaration of Ownership - Each owner must complete a separate form;
- Appointment of an Authorized Representative - This must be completed by the owners. This is required if there is more than one owner or if the vessel is owned by a foreign corporation. It does not apply to any pleasure vessels;
- Notice of Name for a Ship; and,
- the appropriate fee - refer to the table of fees in the Annex.

For a vessel built in Canada, you will also need:

- Builder's Certificate - This is issued by the builder and made out to you or the corporation registering the vessel; and,
- if you are not named on the certificate, you will need all Bills of Sale showing the sequence of title from the builder to you, the applicant.

For a foreign built vessel, you will also need:

- either the original notarized Bill of Sale (or a certified or notarized true copy having an original stamp) selling the vessel from the last foreign owner to you, duly authenticated by a Canadian or an acceptable consular office; or, if you are not the first Canadian owner, all Bills of Sale showing the sequence of title up to you. If the Bill of Sale has the seal of either a Canadian or foreign notary, consular authentication is not required; and,
- proof of closing of foreign registry, free and clear of all encumbrances.

Authorised representative

Every Canadian vessel, other than a pleasure vessel, must have a person who is responsible for acting in all matters relating to the vessel. This person is called the authorized representative. In the case of a Canadian vessel that is owned by more than one person, the owners must appoint one of themselves as the authorised representative. Because corporations are legally persons, a corporation may be the authorized representative. The authorised representative of a vessel owned by a foreign-owned subsidiary corporation must be:

- a subsidiary of the corporation that is incorporated under the laws of Canada or a province;
- an employee or director of any branch office of the corporation that is carrying on business in Canada; or

- a ship management company incorporated in a province or according to federal law.

Further to the Coastal Fisheries Protection Act and Regulations, Canada has developed a Policy for Access by Foreign Fishing Vessels to Canadian Fisheries Waters and Ports. Pursuant to this Policy, a foreign fishing vessel may apply for a licence for a variety of activities. Three of the criteria specified in the Policy to aid in the decision making process are that:

- The vessel is flagged to a country Canada regards as having fulfilled its flag state duties in controlling the activities of its fleet and ensuring compliance with relevant conservation and management measures and relevant international fisheries treaty obligations;
- The vessel is flagged to a country that adheres to international fisheries instruments, notably the UN Fish Stocks Agreement, the FAO Compliance Agreement, the Code of Conduct for Responsible Fisheries and the International Plan of Action on Illegal, Unreported and Unregulated Fishing
- The Minister of Fisheries & Oceans is satisfied that the vessel applying for a licence has not engaged in IUU fishing (as per criteria and timeframes developed by the National Port Access Committee).

We do not allow owners other than Canadian citizens, permanent residents or Canadian corporations to register their vessel in Canada.

Governmental permission is needed for reflagging of national flagged fishing vessels to alternative registries outside Canada.

Requirements that owners other than Canadian citizens, permanent residents or Canadian corporations cannot register their vessels in Canada assist in preventing flag hopping.

2. Economic measures

a) Investment rules

Commercial fishing licenses are not issued to Canadian enterprises that have a foreign ownership level of more than 49%.

b) Trade rules (including trade-related rules)

Canada is a member of ICCAT, which both prescribes trade measures and employs statistical document programs. Canada is also in the process of voluntarily implementing the CCAMLR catch documentation scheme.

c) Rules regarding landing, transhipments and marketing

Following on the provisions of the Coastal Fisheries Protection Act and Regulations, Canada has identified several criteria under its Policy for Foreign Fishing Vessels to Canadian Fisheries Waters and Ports, which applies*, inter alia*, to foreign direct landings and transhipments from foreign vessels. They are as follows:

- Whether the Flag State of the vessel is on the list of countries (see below);
- The vessel has been appropriately authorised/licensed by the Flag State;

- The Minister is satisfied that the vessel is in compliance with relevant conservation and management measures and relevant international fisheries treaty obligations (as per criteria and timeframes developed by the national Port Access Committee);
- The Minister is satisfied that the vessel has not engaged in IUU fishing (as per criteria and timeframes developed by the national Port Access Committee);
- The Minister is satisfied that, if granted, the purposes for which the licence is being sought would be consistent with relevant conservation and management measures and relevant international fisheries treaty obligations (as per criteria and timeframes developed by the national Port Access Committee); and
- Such access does not put pressure on the fishery and fish stocks by potentially creating excess harvesting or processing capacity.

In determining whether a country should be on the list, the Minister will consider the following factors:

- Does Canada have a major fisheries dispute with the country?
- Does Canada regard the country as having fulfilled its flag state duties in controlling the activities of its fleet and ensuring compliance with relevant conservation and management measures and relevant international fisheries treaty obligations?
- Does the country adhere to international fisheries instruments, notably the UN Fish Stocks Agreement, the Compliance Agreement, the Code of Conduct for Responsible Fisheries and the International Plan of Action on Illegal, Unreported and Unregulated Fishing?
- Would the country provide reciprocal access should it be requested by Canada?
- Any other relevant criteria decided by the Minister.

It is recognised that such a list would not be exhaustive and that amendments may be made.

d) Penalties, fees and restrictions to GFTs

Maximum penalties for foreign vessels are set out in the Coastal Fisheries Protection Act (section 18) and Coastal Fisheries Protection Regulations. There is no distinction made for the nationality of the vessel. Examples of maximum penalties are:

- fishing in Canadian waters without a license – CAD 750 000 (if convicted on indictment), CAD 150 000 (summary conviction)
- unauthorized entry into Canadian waters – CAD 550 000 (indictment), CAD 100 000 (summary conviction)

Although these are maximums, the actual fines are set by the court, and rarely approach the maximums. However, penalties can also include forfeiture of catch, fishing gear and vessels, depending on the seriousness of the offence.

The maximum penalties for domestic offences are set out in the Fisheries Act (section 78).

- Summary conviction – CAD 100 000 for the first offence and CAD 100 000 and/or imprisonment for one year for subsequent offences
- Indictment – CAD 500 000 for the first offence and CAD 500 000 and/or imprisonment for two years for subsequent offences.

Fees for commercial fishing, including for vessels supporting the fishing activities are provided in regulations (Coastal Fishery Protection Regulations). No fee is charged for access to Canadian ports.

DFO does not provide any financial support for the acquisition of fishing vessels. Very few vessels are purchased in other countries annually.

3. Other measures

The Canadian fishing industry has developed and widely adopted a Canadian Code of Conduct for Responsible Fishing Operations. The Canadian Code sets out basic principles and guidelines, consistent with the International Code, for the conduct of sustainable fisheries in Canada.

Denmark

Additional information can be found in the section submitted by the European Union.

Economic measures

a) Investment rules

Fishing vessel ownership, including inward and outward investment rules

With respect to inward investment, fishing vessel ownership in Denmark is subject to rules concerning establishment as a commercial fisherman in Denmark. The rules are laid down in the Law on Saltwater Fishery (LBK 803 of 11/11/98), according to which the fisherman (vessel owner):

- must be of Danish nationality or have lived in Denmark for a continuous period of two years, and
- has been employed as a commercial fishermen for the previous 12 months, and
- has earned at least 3/5 of personal income in the previous 12 months from commercial fishery.

In addition, according to a Government Order on the right of establishment and the free movement of labour to carry out commercial fishery (nr. 266 of 1966), it must be documented that the activity has a link to the Danish fishing industry, for example by:

- having a permanent place of business in Denmark from where the fishery is planned and run,
- at least 50% of the landing value within a calendar year of overall landings is landed in Danish ports.

With respect to chartering, foreign vessels cannot be chartered in to fish on Danish quotas. According to Danish fisheries law Danish fishing vessels must have a Danish flag.

There are no specific rules with respect to outward investment. Whether Danish citizens can buy into foreign vessels depends on the legislation of the flag state.

Finland

Additional information can be found in the section submitted by the European Union.

Fishing vessel ownership and economical connection to Finland - inward investment

According to the national Law on Enforcement of the Common Fisheries Policy in European Union (1139/1994, amended by 1008/2002) commercial fishing vessel in Finnish Fishing Registry must have an economic connection to Finland as follows:

at least 50% of the value of the annual catch must be landed into Finnish ports;

at least 50% of the fishing journeys must begin from a Finnish port;

at least 50% of the vessels crew must be citizens of European Union and they must have a permanent address in Finland.

A registered vessel that no longer fulfills the above mentioned criteria can be removed from the registry.

Outward investment

There are no specific rules. Investment depends on the legislation of the flag state.

France

The measures taken to combat illegal fishing activities in the European Community EEZ were developed by the European Commission. The French authorities also face this problem in the EEZ of the French Southern and Antarctic Territories (FSAT), which do not come under EU jurisdiction.

Illegal fishing in FSAT waters targets two stocks: lobster in Saint Paul and Amsterdam, where there is a latent poaching problem, and toothfish with the advent of widespread illegal fishing in the Crozet EEZ and then in the Kerguelen EEZ in 1996. This report addresses the second of these, and lists the **regulatory and economic measures introduced by the French authorities**.

1. Vessels in the EEZ of the French Southern and Antarctic Territories

There are currently no bilateral fishery agreements covering the French Southern and Antarctic Territories (FSAT). Consequently, only vessels flying the French flag are authorised to fish there, subject to licence.

The harvesting of fishery resources in the French Southern Territories is regulated at two levels, i.e. nationally and internationally.

National and territorial regulations are based on Act No. 66-400 of 18 June 1966 on sea fishing and the harvesting of marine products, and Decree No. 96-252 of 27 March 1996, implemented by territorial orders. These instruments lay down the rules governing resource management, in particular the setting of TACs, their allocation to fishing firms, and the technical requirements applying to fisheries. These national and territorial regulations also reflect the rules of international law.

For instance France, as a member of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), implements the controls required by that organisation.

2. Example of Measures against Illegal Fishing Practices

The illegal harvesting of toothfish is a problem in the EEZs of France (Kerguelen and Crozet Islands), Australia (Heard and MacDonald Islands) and South Africa (Marion and Prince Edward Islands). The culprits are long-liners flying the flags of countries which are either members or non members of the CCAMLR. Some 30 vessels have been identified as participating in these illegal fishing activities. The firms involved always use foreign subsidiaries or front companies, which shows just how organised the illegal fishing networks are. Up to now, illegal catches were taken to ports close to fishing zones and paying little attention to the origin of the products. These products are either accompanied by falsified CCAMLR documents or misnamed. Currently, as a result of the recent improvements on control made by these countries, pirates are using more and more transshipment at sea and then send toothfish to distant ports, mainly located in Asia. Such a technique makes controls very difficult.

To combat illegal fishing, France has implemented three measures (paragraphs 2.1, 2.2 and 2.3):

Enforcement measures

Act No. 66-400 of 18 June 1966 on sea fishing and the harvesting of marine products in the French Southern and Antarctic Territories, as amended and strengthened by the Outline Act on sea fisheries and marine aquaculture of 18 November 1997, specifies for instance that:

> "**Section 2**: No one shall fish for or hunt marine animals or harvest marine products, either on land or from vessels, without obtaining a licence.
>
> […] Any fishing vessel […] entering the Economic Zone of the French Southern and Antarctic Territories shall notify the authorities of its entry and declare the tonnage of fish held on board."
>
> "**Section 4**: A fine of EUR 150 000 and 6 months' imprisonment, or one of these two penalties, shall be imposed on anyone who fishes without the prior authorisation required under Section 2 or who has failed to notify the authorities of his entry into the economic zone or failed to declare the tonnage of fish held on board."
>
> There is an equivalent penalty for fishing in a closed area or during a closed season. The fine of EUR 150 000 increases by EUR 75 000 for every tonne fished over 2 tonnes. The offence of receiving illegally fished products is subject to the same penalties.
>
> **Sections 5 and 6:** A fine ranging from EUR 7 500 to EUR 22 500 and imprisonment ranging from 10 days to 3 months, or one of these two penalties, shall be imposed on anyone holding aboard a fishing vessel, without permission, explosive substances or substances/bait liable to destroy animal species. The penalties shall be a fine ranging from EUR 7 500 to EUR 22 500 and imprisonment ranging from 6 months to 18 months if such substances or bait are actually used.
>
> **Section 7**: A fine ranging from EUR 7 500 to EUR 22 500 and imprisonment ranging from 10 days to 3 months shall be imposed on anyone who has knowingly received, shipped, marketed or sold illegally fished products.
>
> **Section 9**: Anyone who commits both an offence under Section 4 and one of the offences under Sections 5 to 8 may be subject to a fine of EUR 150 000 for each of the offences under Sections 5 to 8.

Ongoing improvements to procedures have also led to the confiscation of numerous vessels and fishery products, and to the imposition of fines by the French courts (see list below).

Tighter controls

The current surveillance arrangements, based on the presence of the French navy, have led to the interception and rerouting of over 20 vessels caught in the area. The latest was the "Lince", an illegal trawler from the Seychelles, rerouted to Reunion Island in January 2003. The vessel was confiscated by court order and will be used for enforcement purposes.

However, owing to the size of the areas under surveillance, the harsh weather conditions and the limits on what the Navy is able to do, the operational, regulatory and diplomatic arrangements have had to be tightened. The following changes have been introduced:

Introduction of satellite monitoring

A dual surveillance system operates in FSAT waters, comprising an active system (VMS : vessel monitoring system) using an on-board satellite transmitter (e.g. Inmarsat, Emsat or Argos) for the real-time monitoring of French vessels engaged in regular fishing activities, plus a passive system ("Radarsat") providing radar images of the echoes emitted by every vessel in the area.

Co-operation agreement with Australia

Toothfish is fished illegally in both the French EEZs (Kerguelen/Crozet Islands) and the Australian EEZs (Heard/MacDonald Islands). This shared problem has prompted the French and Australian authorities to draw up a co-operation agreement to police the fisheries.

3. Economic Measures

Trade (or related) measures: use of a documentation/certification scheme

Documentation/certification systems are becoming a vital tool in fishery management regimes, and most regional fishery organisations are planning to introduce them. In 1999 the CCAMLR adopted a catch documentation scheme for *Dissostichus spp.* The scheme makes it compulsory to monitor international trade in toothfish and determine the origin of any species imported to, or exported from, CCAMLR Member countries. The scheme also makes it possible to determine whether toothfish has been fished in the zone covered by the Convention, in line with the conservation measures laid down by the CCAMLR, and to gather the catch data required to facilitate scientific stock assessment. It covers all toothfish catches, both inside and outside the area covered by the Convention. France implements this documentation/certification scheme.

Within the framework of ICCAT, French imports and exports of southern bluefin tuna must also be accompanied by the necessary statistical document or importer/exporter certification.

Table 4.1. Sanctions Imposed by French Courts in Cases of Illegal Fishing in FSAT Waters

Number	Year of offence	Place of offence (E.E.Z.):	Name of offending vessel (year of construction)	Flag	Fishing firm	Nationality of captain
1	1997	CROZET	**BELGIE 111 L: 52.40m (1986)**	BELIZE	LUBMAIN SINGAPORE PTE LTD	CHINESE TAIPEI
2	1997	CROZET	**MAR LARGO L: 32.60 m (1991)**	PORTUGAL	GOMES ect	PORTUGAL
3	1997	KERGUELEN	**KINSHO MARU L: 48.20 m (1991)**	ARGENTINA	COMPANA PESQUERA ARGENTINA SA	ARGENTINA
4	1997	KERGUELEN	**ARBUMASA XXV L: 58.71 m (1979)**	BELIZE	Banco Aliado (Panama)	SPAIN
5	1997	KERGUELEN	**MAGALLANES L: 52.80 m (1970)**	ARGENTINA	ARGENOVA SA (subsidiary of PESCANO VA) LERMITAR (Mauritius)	SPAIN
6	1998	KERGUELEN	**PRAIA DO RESTELLO L: 61.00 (1958)**	PORTUGAL	ALUSHIP (Capetown) (link with PESCALONGA in Portugal)	PORTUGAL
7	1998	KERGUELEN	**MAR DELSUR DOS L: 52.91 m (1966)**	BELIZE	TRADE WINDS COMMERCIAL CORP (Panama)	SPAIN
8	1998	KERGUELEN	**EXPLORER** (formerly "KRILL") **L: 49.96 m** (1942)	PANAMA	EUREX LIMITED (Liberia/Panama/ South Africa; previously JERSEY address): formerly ATLANTIC FISHING ENTERPRISES	DENMARK
9	1998	KERGUELEN	**SUMA TUNA L: 43.63 m** 298 GRT (1979)	BELIZE	Company: SATECO Manager: Jesus JUEZ Las Palmas, Canary Islands, SPAIN	SPAIN
10	1998	KERGUELEN	**GOLDEN EAGLE** L: 41 m (formerly "CELINE", formerly "BORDO-YARNES")	VANUATU	HOKOTA LIMITED (Hong Kong)	DENMARK
11	1998	KERGUELEN	**ERCILLA** L : 40 m (1987)	CHILE	PESQUERA DE LOS ANDES (Punta Arenas CHILE)	CHILE
12	1998	KERGUELEN	**ANTONIO LORENZO L: 50 m** 500 t (1960)	CHILE	PESQUERA CONCAR SA (Punta Arenas CHILE)	CHILE
13	1998	KERGUELEN	**MAR DEL SUR DOS L: 52.91 m** 730 GRT (1966)	BELIZE	TRADE WINDS COMMERCIAL LEADER	SPAIN
14	1997	KERGUELEN	**VIEIRASA DOCE L : 46.2 m** 369 GRT (1990)	ARGENTINA	VIEIRA ARGENTINA	UNKNOWN

Number	Year of offence	Place of offence (E.E.Z) :	Name of offending vessel (year of construction)	Flag	Fishing firm	Nationality of captain
14	1998	KERGUELEN	**VIEIRASA DOCE** **L: 46.2 m** 369 GRT (1990)	ARGENTINA	VIEIRA ARGENTINA	ARGENTINA
15	1998	KERGUELEN	**MAR DEL SUR UNO** **L: 48 m** 690 GRT (1970)	CHILE	PESQUERA MAR DEL SUR SA Punta Arenas in Chile	CHILE
16	1999	CROZET	**CAMOUCO** **L: 48.01 m** 571 GT (1986)	PANAMA	MERCE PESCA Panama (subsidiary of Merce Pesca Esp)	SPAIN
17	2000	KERGUELEN	**MONTE CONFURCO** L: 51 m (1985)	SEYCHELLES	Monteco Shipping Corporation (Seychelles)	SPAIN
18	2000	KERGUELEN	**VEDRA**	SAO TOME and PRINCIPE	Inversiones Pesqueras (Belize)	SPAIN
19	2000	KERGUELEN	**GRAND PRINCE** L 32.67 m	BELIZE	José NOGUERA PAIK COMMERCIAL CORPORATION (Belize)	SPAIN
20	2001	KERGUELEN	**CAST0R** L 57.23 m (1970)	Saint Vincent and Grenadines	Consignataria Beira Mar (Sp)	SPAIN
21	2002	KERGUELEN	**ETERNAL** L 48 metres (1986)	Dutch Antilles	Merce Pesca SA (Panama) Chartered by Global Longliners (Dutch Antilles)	URUGUAY (navigation captain) SPAIN (fishing captain)
22	2003	KERGUELEN	**LINCE** L 53 metres (1988) modernised in 1998	SEYCHELLES	Arcosmar Fisheries Corporation Panama	CHILE (navigation captain) SPAIN (fishing captain)

Germany

1. Legal measures and regulations

a) Fishing activities by national vessels

To engage in fishing activities in waters of third countries or for stocks under management in international waters, German fishing vessels need a fishing licence. For stocks under management in international waters, there is an obligation to respect the individual quotas as well as relevant technical rules which are part of the permit. When fishing in third countries' waters (i.e. outside the EU) the obligation to respect relevant legislation of the third country in which waters the fishing takes place is part of the permit. Fishing in violation of the terms of such a permit is an infringement and subject to a fine of up to EUR 75 000 and to the possible withdrawal of the licence depending on the gravity of the case in question.

All vessels engaging in fisheries in third countries' waters or on the high sea are obliged to have VMS on board and to maintain a fishery logbook. Entries in the logbook are regularly cross-checked with VMS data. If there is any reason to doubt the correctness of the data in the logbook, observers are placed on board the vessel in question.

b) Fishing activities by foreign vessels within EEZ

Germany is a Member state of the EU. Access to the German EEZ is negotiated by EU Commission on her behalf, as for all EU Member states. Agreements giving access to the German EEZ exist with Norway, the Faeroe Islands, Lithuania, Latvia and Estonia. These agreements are based on reciprocal access arrangements.

According to EU legislation, foreign vessels are subject to a permit and a prior notification of landings in EU ports. A similar requirement exists for the German fishery in the Baltic Sea and for the cod fishery in the North Sea. Foreign vessels also have to be equipped with VMS, the data of which are communicated via the Fisheries Monitoring Centre of the Flag State. German vessels larger than 24 m (as from 2004: 18 m, as from 2005: 15 m) must also be equipped with such a device in line with the relevant EC legislation.

Foreign vessels fishing illegally in the German EEZ are likewise subject to a fine of up to EUR 75 000. The fact that a vessel does not hold a valid permit has as such a bearing on the amount of the fine imposed.

c) Registration of fishing vessels

EU Community law regulates the whole fishery sector, including the registry of fishing vessels, for all Member states.

The rules and requirements under which a fishing vessel under the flag of a Member state can be registered are the following:

- Regulation (EC) No. 2930/86 (definition of tonnage and motor performance);
- Regulation (EC) No. 3259/94 (regulation amending regulation (EC) No. 2930/86;
- Regulation (EC) No. 3690/93 (fishing licences);
- Regulation (EC) No. 2090/98 (fishing vessel registry of the Community and nationally);
- Regulation (EC) No. 839/2002 (regulation amending regulation (EC) No. 2090/98);
- Regulation (EC) No. 2371/2002 (basic fisheries regulation);
- Regulation (EC) No. 2792/1999 (regulation on fisheries structures).

There are generally no restrictions for investments in the German fishery sector. However, to run a fishing vessel somebody from outside the European Union would need to set up a company or at least a registered office in Germany. Somebody from another Member state of the European Union needs to have a contact person in Germany. By this requirement a genuine link between the vessel and the flag state is assured. Furthermore a genuine link is established by the fact that a vessel needs a national licence to fish and a quota for regulated species inside and outside EC waters and is subject to fisheries control mechanisms like VMS. A fishing vessel having left the Community fishery for good is not allowed to be registered again under the flag of an EU Member state unless a fishing vessel with at least the same tonnage and motor performance leaves the fleet of the Member state in question. The same holds true for new vessels entering the German fishery. This prevents the German flag being chosen for flag hopping purposes. Given the rigorous conditions by which a vessel can enter the German fishery, there is no governmental permission needed for reflagging of national flagged fishing vessels to other countries. There are no concrete restrictions preventing a fishing vessel with an IUU background to enter the German fishery if the other conditions are met.

2. Economic measures

a) Investment rules

Nobody is prevented from investing in the German fishery. However, when somebody wants to run a fishing vessel on his own, he needs at least a registered office (for non-EU citizens) or a contact person (for EU citizens). For entering a new fishing vessel at least an equivalent capacity must leave the German fleet.

There are no restrictions for Germans to invest in the fishery sector of foreign countries. Mention should be made, though, that Article 23 paragraph 2 and Article 24 paragraph 1 of Regulation (EC) No. 2371/2002 (new EU basic fisheries regulation) provide that EC Member states are obliged to control fishing activities of their nationals outside Community waters. This would include the combat of IUU activities of EU nationals.

b) Trade rules (including trade-related rules)

The EU determines trade rules for its members. For the time being there are no precise trade rules prohibiting the trade in fish and fish products of IUU origin with the exception of imports and exports of Patagonian toothfish (*dissostichus spp*.) and red tuna. Imports and exports of this species must be accompanied by a catch documentation or a statistical document. Without such a certificate the import and export are prohibited.

c) Rules regarding landing, transhipments and marketing

The landing of foreign vessels in German ports is regulated by Community law. There are prohibitions of landings and transhipments in force for illegal catches by non-contracting vessels from the areas of the NAFO (Northwest Atlantic Fisheries Organisation) and the NEAFC (Northeast Atlantic Fisheries Commission) and for illegal catches of Patagonian toothfish from the area of the Commission of the Conservation of Antarctic Marine Living Resources (CCAMLR). These EU-wide prohibitions were introduced in order to implement relevant decisions by these organisations. The marketing of these products is likewise prohibited.

d) Penalties, fees and restrictions to GFTs

There is a difference in penalties for IUU fishery between national and foreign vessels insofar as a possible sanction for national vessels can include the withdrawal of the fish licence. A vessel's holding or not of a licence when engaging in IUU fishing activity has a bearing on the magnitude of the penalty. For the remainder of a sanction, there is no differential penalty treatment according to the nationality of the offender.

Germany does not apply any fees on foreign vessels' activities in her EEZ.

The German fishing fleet is constantly under surveillance. Past IUU activities as well as the likelihood of a future engagement in IUU activities would have a bearing on the approval of an application for a financial transfer.

3. Other measures

In regular meetings of the Ministry with representatives of the fishing industry pressure would be put on the industry if it should turn out that German interests are involved in any form of IUU fishing besides the imposition of fines and withdrawal of licences in cases of any concrete involvement in any such activities.

Greece

1. Legal measures and regulations

a) Fishing activities by national and foreign vessels

The Greek legislation gives the right of imposition, on behalf of the port authority, of administrative penalties to Greek vessels, which are not in possession of the appropriate fishing licence for open sea, as required by national legislation. Fishing activities inside the exclusive area of a foreign country can take place only with the agreement of this country. The measures that are taken against the offenders consist of two categories:

Administrative penalties (fine and confiscation of fishing licences of the fishing vessel and fishermen, for a specific time period)

Criminal penalties, which are imposed by the court, for use of specific fishing methods, e.g. fishing with the use of chemicals and explosive materials, illegal fishing in waters used for aquaculture or illegal fishing of corals, that anticipates punishment.

In the case that the offender has committed an offence on the fishing regulation for a second time in a period of less than two years after his administrative penalties, the penalty is doubled.

The same penalties are imposed when fishing activities take place from vessels holding foreign flags inside territorial waters, without the licences required by the Greek legislation.

Community and national legislation requires that fishing vessels above 15 m of total length, which are fishing inside and outside territorial waters, are equipped with a system of satellite observation (VMS), in order to get monitored 24 hours per day, from the Fisheries Monitoring Center of the member country. The system is expected to be implemented gradually until 1-10-2005. In addition, the fishing activity is monitored through the fishing logbook, in which the captain is obliged to record the species and quantities caught by the vessel. The logbook is consequently submitted to the appropriate authorities of the flag country. In the Fisheries Monitoring Center databases concerning all of the fishing fleet are kept, particularly data on fishing vessels, ownership regime, fish catch and security certificates.

So far Greece has not determined an Exclusive Economical Zone. In the future, according to an EU regulation draft, fishing vessels provided with the necessary fishing licences for fishing inside territorial waters should also be equipped with satellite recording position equipment. Besides, the General Port Regulation requires that vessels intending to use Greek harbors, in order to get fuel or landings, should inform the authorities at least 24 hours before arrival.

b) Registration of fishing vessels

The Greek registration regime is common for all kinds of vessels eligible to fly the Greek flag. Thus, vessels eligible for registration under the Greek flag shall be at least 50% and owned by Greek, EU, or EEA natural or legal persons. In addition, the ship owning EU or EEA entity is required to have a form of establishment in Greece according to art 43 of the EEC treaty (Presidential Decree no 11 of January 2000). Moreover a fishing licence must have been previously authorized by the Hellenic Ministry of Agriculture.

In case that a ship is going to be taken off the Greek registry due to its sale to foreigners and before the eradication takes place, the interested party must ask for the issue of an approval by the Ministry of Mercantile Marine with regard to the ship's eradication.

Subject to the above condition (in case of eradication) a ship can register or be eradicated from the Greek registry according to the will of the legitimate owner.

2. Economic measures

a) Investment rules

Non-EU ownership of Greek flag vessels, including fishing vessels, is limited to 49%.

Companies that seek to invest in Greek vessels need prior authorization by competent national authorities.

Fishing activity in Greek territorial waters is possible only for vessels holding the Greek flag, owned by Greek or EU subjects (+50% ownership) and provided with fishing licence by the relevant Greek authorities

According to the Greek national legislation, fishing by third countries' nationals is possible only in a framework of reciprocity.

b) Trade rules (including trade-related rules)

Concerning trade measures, community as well as national legislation imposes bans on the trade of specific species on certain time periods throughout the year, as happens for example for swordfish.

At the same time, planning has been completed and a system of Control Checks is expected to be fully applied shortly. The specialized control teams consist of officers of the Prefectures and are expected to hold extensive regular and on the spot checks of fisheries products up to the point of the first sale. With these checks the legitimacy of fishery products concerning their origin, size, landing documentation, logbooks etc. can be determined. In case of infringement, a system of administrative penalties is in operation.

According to regulation Reg (EC) 2847/93 of the Council, as amended, a system of technical monitoring system for application, monitoring and inspection of fisheries products is directly applied. This system requires the cooperation of all responsible bodies: MCN, Port Authorities, Landing Auctions, ETANAL (Authority responsible for the supervision of Landing Auctions), General Directory for Fisheries of the Ministry of Agriculture and Prefectures. Hence, a cross-checking of the data that are imported to the system will be possible.

c) Rules regarding landing, transshipments and marketing

Fishing vessels holding foreign flags are required to land fisheries products exclusively into designated (10) import ports so that a better monitoring of imported landings is achieved.

d) Penalties, fees and restrictions to GFT s

There is a unified rate of penalties, concerning infringements of fishing legislation by national and foreign fishing vessels, depending on the offence and the extent of illegality.

Fees are applied on foreign fishing vessels activities only in the case that the vessel uses anchoring facilities.

Iceland

1. Legal measures and regulations

a) Fishing activities by national vessels

Fishing by Icelandic vessels outside Icelandic waters is governed by the "Act concerning fisheries outside Icelandic national jurisdiction" (no. 151, 1996). The law includes *inter alia* a provision that bans fishing within the jurisdiction of other states without permission from the competent authorities of the state in question. Based on this law, fishing by Icelandic vessels outside Icelandic waters is closely controlled using tools such as fishing permits, catch quotas, reporting obligations, vessel monitoring systems (VMS), obligations to undergo inspections and limits on what ports can be used for landing the catches.

Fishing by Icelandic vessels outside Icelandic waters is predominantly carried out either within the management area of a regional fisheries management organisation or in accordance with bilateral and trilateral agreements. The operations are therefore generally subject to management measures. This includes both special measures for individual fishing operations and general measures that that apply to all operations in the relevant area. The "Act concerning fisheries outside Icelandic national jurisdiction" (no. 151, 1996) gives Icelandic authorities the right to make such regional rules legally binding for the fishing vessels and invoke penalties for non-compliance.

All Icelandic vessels that engage in fishing operations outside Icelandic waters are equipped with satellite-based VMS and report their catches regularly. Therefore, Icelandic authorities have at all times real-time information on the vessel's location, speed and heading in addition to recent information on the catches on board.

b) Fishing activities by foreign vessels within EEZ

Fishing activities by foreign vessels within Icelandic waters are governed by the "Act concerning fishing and processing by foreign vessels in Iceland's exclusive fishing zone" (Act No. 22, 1998). This law limits the right to engage in fishing operations within Icelandic waters to Icelandic vessels only, with the only exception being fishing pursuant to international agreements that Iceland has entered into. The "Act on fishing in Iceland's exclusive fishing zone" (Act No. 79, 1997) furthermore gives the Minister of Fisheries the authority to give foreign vessels temporary fishing permits regarding experimental fishing operations and scientific research.

Iceland has entered into agreements with a number of foreign states and the EU, which give foreign vessels the right to engage in fishing within Icelandic waters. In all cases, the operations are carefully monitored, including through catch reporting, VMS and inspections. The Directorate of Fisheries has the authority to place an inspector on board any foreign vessel that conducts fishing within Icelandic waters.

Any foreign vessel that conducts fishing within Icelandic waters without a valid permit, or is not in compliance with one or more provision in its fishing permit, can be subjected to penalties.

The "Act concerning fishing and processing by foreign vessels in Iceland's exclusive fishing zone" (Act No. 22, 1998) has provisions that enable Icelandic authorities to effectively use port state measures to deter IUU fishing. In addition to port inspections, there are provisions that limit access to Icelandic ports for landing catches and/or seeking provisions. Foreign vessels that fish or process catches which violate agreements on the utilisation and preservation of living marine resources to which Iceland is a party may not enter port in Iceland. This applies regardless of whether the violation occurred inside or outside Icelandic waters.

The law furthermore gives the Minister of Fisheries the authority to refuse vessels entry into Icelandic ports if the vessel's flag state is not a party to an agreement concerning the management of the fishery pursued by the vessel in question or which does not abide by the rules set in accordance with such an agreement and to which Iceland is a party. The law also gives the Minister of Fisheries a broad authority to refuse vessels entry into Icelandic ports if that is considered necessary to protect living marine resources.

Icelandic Coast Guard vessels conduct inspection operations outside Icelandic waters, in accordance rules set out within regional fisheries management organisations. Such international cooperation regarding inspections is useful to ensure that the rules governing the relevant fishery are complied with. One limit to the cooperation's usefulness is that vessels whose Flag State is not bound by the relevant regional inspections scheme can, and regularly do, refuse to be inspected.

c) Registration of fishing vessels

Registration of fishing vessels is governed by the "Act on the registration of ships" (Act No. 115, 1985). This law deals with the registration of all ships but it has specific provisions regarding fishing vessels, which are stricter than the general rules. The said provisions include limits to the nationality of the owners of a vessel that is eligible for registration as a fishing vessel. Only Icelandic citizens or Icelandic legal persons can get their vessel registered as a fishing vessel. The extent of possible foreign ownership over the eligible Icelandic legal persons is discussed under the item "investment rules" below.

Limiting ownership of fishing vessels registered in Iceland to Icelanders increases the control that Icelandic authorities have over the vessel's activities. It also limits the opportunities of those engaged in IUU fishing while flying the Icelandic flag to escape penalties by re-flagging their vessel. While the vessel can be moved into the jurisdiction of a foreign state, the owner can be more easily dealt with if it is an Icelandic citizen or legal person.

This results in it being very difficult to use the Icelandic flag as a flag of non compliance and ensures that there is at all times a genuine link between the fishing vessel and the flag state.

The "Act on the registration of ships" (Act No. 115, 1985) includes provisions regarding bareboat charter of fishing vessels. Bareboat charter of Icelandic vessels into foreign ship registries is subject to many conditions, many of which are set specifically to prevent bareboat charter registration from being used as a tool for IUU fishing. This

includes: limits on what foreign registries vessels can be registered on; prohibition on conducting fishing that undermines management measures set in accordance with international law; prohibition on conducting fishing that goes against the conservation of relevant living marine resources even if no management measures limit the activity; and, the flag state fulfils its duties, including control and enforcement duties.

If any of the conditions set for bareboat charter registration are breached, the permit for the registration is revoked and the vessel goes back to having the Icelandic flag. This makes it possible for Icelandic authorities to stop any IUU fishing and penalise offenders, as appropriate.

2. Economic measures

a) Investment rules

Investment in fishing vessels by non-residents of Iceland is subject to certain restrictions. Only the following may conduct fishing operations within Icelandic fisheries jurisdiction or own or run enterprises engaged in fish processing:

- Icelandic citizens and other Icelandic persons.
- Icelandic legal persons which are wholly owned by Icelandic persons or Icelandic legal persons which:
  - i. are controlled by Icelandic entities;
  - ii. are not under more then 25% ownership of foreign residents calculated on the basis of share capital or initial capital. However, if the share of an Icelandic legal person in a legal person conducting fishing operations in the Icelandic fisheries jurisdiction or fish processing in Iceland is not above 5%, the share of the foreign resident may be up to 33%;
  - iii. are in other respects under the ownership of Icelandic citizens of Icelandic legal persons controlled by Icelandic person.

b) Trade rules (including trade-related rules)

Iceland implements various trade related rules as a result of its membership of regional fisheries management organisations. Cooperation within NAFO and NEAFC, for example, results in a prohibition of using Icelandic ports for the transfer of fish that has been taken in a manner that undermines relevant management measures.

Furthermore, as a member of ICCAT Iceland is bound by trade related rules that have been agreed to within that forum. This includes *inter alia* documentation schemes and commitments not to import relevant products from certain states.

c) Rules regarding landing, transhipments and marketing

There are several measures in place in Iceland regarding landing, transhipment and marketing. The most important measures have already been discussed under other items and will not be repeated under this item.

d) Penalties, fees and restrictions to GFTs

Penalties for identical fishing violations are the same for Icelandic and foreign fishing vessels.

Iceland does not collect fees from foreign vessels for their access to Icelandic waters. All such access is on the basis of agreements between Iceland and the fishing vessel's flag state. Foreign fishing vessels pay the same as Icelandic fishing vessels do in harbour fees, etc.

Iceland does not give any direct financial transfers to fishing vessels. The question regarding the relationship between financial transfers and a vessel's history of IUU fishing is therefore not applicable to Iceland.

3. Other measures (including moral/ethical)

The Fisheries Association of Iceland is an association representing the industry as a whole including vessel owners, fish processing plant owners, fishermen and fish processing workers. The Association has been working on making an Icelandic Code of Conduct for Responsible Fisheries. Drawing from the FAO Code of Conduct, the idea is to make an Iceland-specific Code that will focus on issues that are most important in Iceland. Like the FAO Code of Conduct, this document will be of a voluntary nature. It will include measures that mobilise the industry itself in efforts against IUU Fishing.

Ireland

1. Legal measures and regulations

As a Member State of the European Community, Ireland is responsible for the implementation of all Community legislation concerning IUU activities and otherwise (as detailed separately in the section on the European Union). These legislative requirements emanate primarily from the CFP Framework Regulation 2371/2002 and the associated fisheries control Regulation 2847/1993 as amended.

The Sea Fisheries Acts 1959 to 2004, and secondary legislation made thereunder, are the primary legislative instruments deployed in controlling the activities of (a) Irish flagged vessels **wherever they operate in the world** and (b) fishing vessels of all third countries operating within the EEZ of Ireland, as may be authorised under bilateral agreement between the EU and the third county concerned.

The measures and regulations in place embrace the requirements of the Common Fisheries Policy and include in particular provisions concerning VMS installation and operation, catch reporting, acceptance on-board of inspectors and observers and landing controls. These requirements apply to all fishing activities by Irish flagged vessels within Ireland's EEZ, in other countries' EEZ and on the high seas. They are enforced through extensive patrolling both within Ireland's EEZ and on the high seas in the context of control activities undertaken within the framework of Regional Fisheries Organisations such as NEAFC and ICCAT. These provisions also apply to third countries operating within Ireland's EEZ.

Legal provisions exist in Irish law that enable the Irish authorities to institute legal proceedings against any Irish flagged vessel committing IUU or other fisheries offences. Irish flagged vessels are required by national law to comply with all of the provisions of the Common Fisheries Policy in all EEZs and on the high seas. These provisions also apply to third country vessels operating within Ireland's EEZ.

Penalties available to the Courts for such offences reflect the requirements of the Common Fisheries Policy and thus include, for example, gear and catch forfeiture, licence withdrawal, substantial financial penalties etc.

There have been no instances to date of Irish flagged vessels engaging in IUU activity.

Registration/licensing is required by the Irish authorities for all commercial sea-fishing vessels. The licensing authorities have legal discretion to refuse the issue of licences on any grounds that it sees fit and licences may also be suspended or revoked.

2. Economic measures

With regard to inward investment rules on fishing vessel ownership, economic linkage is the critical component. It is a requirement that vessel owners are from the EU, it is necessary to establish a business base in Ireland and insofar as vessel crews are concerned a minimum of 50% must be from the EU.

With regard to outward investment, permission is required from the Irish authorities to export a fishing vessel outside the State. There are no specific rules precluding the ownership of foreign fishing vessels by Irish citizens – relevant requirements would be for the flag State concerned.

In relation to commercial or trade-related rules, the requirements of the Common Fisheries Policy apply (see the section on the European Union for further details).

Landings, transhipment and marketing of fish and fish products are also governed by European Community legislation. In particular, landings by third country fishing vessels are subject to strict rules on permission to land, prior notification of intention to land and the confining of any permitted landing to designated ports. The Irish authorities have specific legal powers to refuse any vessel permission to land.

3. Other Measures

During Ireland's Presidency of the European Union in the first six months of 2004, it strongly advocated the need to fast-track the development of environmentally-friendly fishing which culminated in the European Fisheries Council adopting a set of Conclusions in June 2004, which includes an Action Plan.

This initiative has been widely welcomed by fishers from many countries and given that IUU fishing is, by definition, anathema to environmentally-friendly fishing, it can be asserted that it has encouraged fishers to increasingly recognise the need to work against those involved in IUU activities that are so evidently harmful and damaging to the legitimate interests of the vast majority of responsible fishers.

Italy

1. Legal measures and regulations

a) Fishing activities by national vessels

The Italian legislation gives the right of imposition, on behalf of the port authority, of administrative penalties to Italian vessels, which are not in possession of the appropriate fishing licence for the high seas, as required by national legislation. Fishing activities inside the exclusive area of a foreign country can take place only with the agreement of the Italian authorities. The measures that are taken against the offenders consist of two categories:

1. Administrative penalties (fine and confiscation of fishing licences of the fishing vessel and fishermen, for a specific time period);
2. Criminal penalties, which are imposed by the court, for use of specific fishing methods.

In the case that the offender has committed an offence on the fishing regulation a second time in a period of less than two years after his administrative penalties, the penalty is doubled.

The same penalties are imposed when fishing activities take place from vessels holding foreign flags inside territorial waters, without the licence required by the Italian legislation.

Community and national legislation requires that fishing vessels above 15 m of total length, which are fishing inside and outside territorial waters, are equipped with a system of satellite observation (VMS), in order to get monitored 24 hours per day, from the Fisheries Monitoring Centre of the Member country. The system is expected to be implemented gradually up to 1st October, 2005. In addition, the fishing activity is monitored through the fishing logbook, in which the captain is obliged to record the species and quantities caught by the vessel. The logbook is consequently submitted to the appropriate authorities of the flag country. In the Fisheries Monitoring Centre, databases concerning all of the fishing fleet are kept, particularly data on fishing vessels, ownership regime, fish catch and security certificates.

So far Italy has not determined an Exclusive Economical Zone (EEZ). In the future, according to an EU regulation draft, fishing vessels provided with the necessary fishing licences for fishing inside territorial waters should also be equipped with satellite recording position equipment. Besides, the General Regulation requires that vessels intending to use Italian harbours, in order to get fuel or landings, should inform the authorities at least 24 hours before arrival.

c) Registration of fishing vessels

The Italian registration regime is common for all kinds of vessels eligible to fly the Italian flag. Thus, vessels eligible for registration under the Italian flag shall be at least 50% owned by Italian, EU, or EEA natural or legal persons. In addition, the ship owning EU or EEA entity is required to have a form of establishment in Italy according to art. 43 of the EEC treaty. Moreover a fishing licence must have been previously authorized by the Italian Ministry of Agriculture.

In the case that a ship is taken off the Italian registry due to its sale to foreigners and before the eradication takes place, the interested party must ask for the issue of an approval by the Ministry of Transports and Infrastructures with regard to the ship's eradication.

Subject to the above condition (in case of eradication) a ship can register or be eradicated from the Italian registry according to the will of the legitimate owner.

2. Economic measures

a) Investment rules

Non-EU ownership of Italian flag vessels, including fishing vessels, is limited to 49%.

Companies that seek to invest in Italian vessels need prior authorization by competent national authorities.

Fishing activity in Italian territorial waters is possible only for vessels holding the Italian flag, owned by Italian or EU subjects and provided with fishing licence by the relevant Italian authorities.

According to the Italian national legislation, fishing by third countries' nationals is possible only in a framework of reciprocity.

b) Trade rules (including trade-related rules)

Concerning trade measures, community, as well as national legislation, imposes bans on the trade of specific species on certain time periods throughout the year.

At the same time, planning has been completed and a system of Control Checks is expected to be fully applied shortly. The specialized control teams consist of officers of the Prefectures and are expected to hold extensive regular and spot checks of fisheries products up to the time of the first sale. With these checks, the legitimacy of fishery products concerning their origin, size, landing documentation, logbooks etc. can be determined. In case of infringement, a system of administrative penalties is in operation.

According to Reg. CE 2847/93 of the Council, as amended, a technical monitoring system for monitoring and inspection of fisheries products is directly applied. This system requires the cooperation of the responsible bodies: Port Authorities, Landing Auctions, General Directory for Fisheries and Aquaculture of the Ministry of Agriculture. Hence, a cross-checking of the data are imported to the system will be possible.

c) Rules regarding landing, transhipments and marketing

Fishing vessels holding foreign flags are required to land fisheries products exclusively into designated (10) import ports so that a better monitoring of imported landings is achieved.

d) Penalties, fees and restrictions to GFTs

There is a unified rate of penalties, concerning infringements of fishing legislation by national and foreign fishing vessels, depending on the offence and the extent of illegality.

Fees are applied on foreign fishing vessels activities only in the case that the vessel uses anchoring facilities.

Japan

1. Legal measures and regulations

a) Fishing activities by national vessels

- Japan has a fishery licensing system in place to manage its fisheries. Any person, who intends to operate fishery outside of Japan's EEZ, shall obtain a national fishery license issued by the Minister of Agriculture, Forestry and Fisheries. The license specifies the name of owner/fishing company, one for each fishing vessel. Consequently, one fishing license corresponds to one fishing vessel.
- Detailed rules and regulations of fishery operations are set forth in the relevant provisions of the national laws and government orders of Japan in order to incorporate international rules into domestic legislation to ensure proper management of domestic fishery.
- The maximum penalties for the violation with the above provisions are 3 years imprisonment and/or a fine of JPY 2 000 000. In addition, the Government may confiscate fish, fishing gears, and fishing vessels used for the infraction. Also, the Government may revoke or suspend the license.
- Information related to the vessel's position and catch data shall be reported to the Government without delay when the vessel is on fishing grounds on the high seas. The government dispatches patrol vessels and aircrafts for monitoring and surveillance of the fishing operation. Inspections at landing sites are also duly conducted. Monitoring activities using VMS are also carried out in major fishing grounds.

b) Fishing activities by foreign vessels within EEZ

- The Government of Japan may issue a permit for foreign fishing vessels to operate within Japan's EEZ, if the total catch can be kept within the limit set by the Government. Any foreign person, who intends to operate a fishery within Japan's EEZ, shall obtain a national fishery license issued by the Minister of Agriculture, Forestry and Fisheries. The Government may levy a license fee in this case. The license specifies the name of the owner/fishing company of each fishing vessel. Consequently, one fishing license corresponds to one fishing vessel.
- The maximum penalty for the violations against the above provision (i.e., illegal operation without the license) is a fine of JPY 10 000 000. In addition, the Government may confiscate fish, fishing gears, and fishing vessels used for the infraction.

- Both Nationals of the Republic of Korea and the People's Republic of China can operate fishery in certain areas in Japan's EEZ without the license from the Japanese Minister of Agriculture, Forestry and Fisheries based on the bilateral fishery agreements between Japan and these countries.
- No foreign vessels may operate a fishery within Japan's territorial waters (within 12 nautical miles from the baseline).
- Any foreign fishing vessel, which intends to make a port-call in Japan, shall obtain the port-call permit by the Minister of Agriculture, Forestry and Fisheries.
- The Government applies the same standard of monitoring and surveillance activities for foreign and Japanese vessels within its EEZ. The government dispatches patrol vessels and aircrafts for monitoring and surveillance of the fishing operation. The Governmental fishery inspectors, if necessary, shall order an immediate halt of cruising and conduct on-board inspection for both Japanese and foreign fishing vessels in the EEZ.
- Monitoring activities using VMS are also carried out for fishing vessels of certain countries (as a measure based on reciprocity principle).

c) Registration on fishing vessels

- The Minister of Agriculture, Forestry and Fisheries shall, if necessary, set the upper limit of the total number of and/or total gross tonnages of fishing vessels. To this end, the Government of Japan has established the fishery vessel registration scheme.
- Only registered vessels under this scheme may be used as fishing vessels.
- Information required for the registration includes: ownership of the vessel, the name of the vessel, gross-tonnage, the date of the construction, the name and place of the vessel's construction company.
- The owner shall receive a seal of inspection of the vessel registered every five years by the governor of the local prefecture government.
- The vessel registration shall be expired when the registered vessel is scrapped, when the ownership of the vessels is changed, or when the place of home port is changed.
- The vessel registration ID number shall be displayed clearly on the vessel.

2. Economic measures

a) Investment rules

- Only Japanese vessels may fly the flag of Japan. The definition of Japanese vessels is: (i) vessels owned by Japanese nationals, or (ii) vessels owned by Japanese entities established in accordance with Japanese laws or regulations and whose representatives are 100% Japanese nationals. Among Japanese vessels, only vessels registered under the fishery vessel registration scheme may be used as fishing vessels.

- Any Japanese national, who intends to make a foreign investment in the areas of fishing, weapon manufacturing, or drug producing activities, shall report such intent to the Minister of Finance prior to the actual investment. If the Minister of Finance deems that such investment can cause adverse effect in keeping public order, the Minister shall recommend cancellation or alteration of the investment plan.

b) Trade rules

- Any person, who intends to import bluefin tuna, southern bluefin tuna, big-eye tuna, sword fish, patagonian-toothfish or Antarctic toothfish, shall submit required statistical documents or catch documents in accordance with the rules set by the relevant international fisheries organizations.
- The Government of Japan may suspend the import of the above fish species, in accordance with decision by such organizations, if the fish was harvested in a manner to undermine conservation and management measures adopted by such international fisheries organizations.

c) Rules regarding landing, transhipments, and marketing

- Any owner of Japanese fishing vessel, who intends to tranship tuna species or to land such species at foreign ports, shall obtain general permit issued by the Minister of Agriculture, Forestry and Fisheries. The permit holders shall report to the Minister on the volume of the fish, time and venue of transhipment or overseas landing, prior to each landing or transhipment of fish species managed under international resource management programs.
- Any non-Japanese fishing vessel, which intends to tranship or to land any fish species at Japanese ports, shall obtain the landing permit, along with the port-call permit, by the Minister of Agriculture, Forestry and Fisheries, Japan. The maximum penalty for the violations with the above provisions is 3 year imprisonment and/or a fine of JPY 4 000 000.

d) Penalties, fees and restrictions to GFTs

- The information on the maximum penalties in each infraction is provided above.
- No difference exists on the maximum penalties between the flag countries of the vessels in the case of infraction of foreign vessels.

3. Other measures

- As a private sector initiative, the OPRT (Organization for Promotion of Responsible Tuna Fisheries) has been established in Japan in a view to promote responsible tuna fishery.
- The member of the OPRT includes large-scale tuna long-line fishery organizations from China, Chinese Taipei, Indonesia, Japan, Korea, and Philippines, as well as Japanese importer, distributor, consumer organizations.
- Activity of the OPRT includes (i) to disseminate information related to the IUU problems in tuna fishery, (ii) to calculate the landing statistics of tuna by vessel by vessel using the data obtained from Japanese import documentation materials and to report back such figures to the vessels' flag states for their cross-checking of reported catch data, and (iii) to implement scrapping of IUU vessels.

Korea

1. Legal measures and regulations

a) Fishing activity by national vessels

Korea has a legal system to ensure effective fishery management over a range that covers international waters including the high seas and waters outside the EEZs. The system is based on domestic laws such as the Fisheries Act, Fisheries Enforcement Ordinance, and Fisheries Permission and Report Regulations.

National fishing vessels that conduct fishing activities in international waters shall obtain fishery licences from the Ministry of Maritime Affairs and Fisheries (MOMAF). Fishery licenses shall specify the person owning the license, type of fishing, fishing gear and method, vessel name, area of fishing, license period and kind of catches.

Fishing vessels conducting fishing activities without a license of deep-sea face up to 3 years imprisonment or a fine of from KRW 2 000 000 to KRW 20 000 000. Also fish, fishing gear and fishing vessels may be confiscated, depending on the severity of the violation.

If a Korean fishing vessel violates both laws set by coastal states within EEZs and rules set by regional fishery management organisations (RFMOs) while on the high seas and subject to the jurisdiction of RFMOs and relevant Korean national laws, the penalties of the state and RFMOs are assessed simultaneously.

One fishery license corresponds to only one fishing vessel. The government has not allowed the number of licensed deep-sea fishing vessels to increase since the acceptance of the recommendation from the FAO or regional fishery management organizations.

Detailed regulations on fishing activity adopted by the international Organizations and regional fisheries management organizations (RFMOs) were reflected in domestic law as follows ; Notification No. 2002-35, 2003-26 and 2003-38 of the Ministry of Maritime Affairs and Fisheries regarding enforcement of fishing regulations suggested by RFMOs, and confirmation of exports and imports of swordfish and southern bluefin tuna.

In accordance with the Fisheries Act and Ordinance of reports on fishing situations in coastal and deep-sea fishing activities, each deep-sea fishing vessel returning to port shall report within 60 days its fishing period, locations, catches and water temperatures to the Minister of MOMAF. Additionally, deep-sea fishing vessels targeting high-migratory species shall be equipped with VMS systems so MOMAF can monitor their activities.

b) Fishing activity by foreign vessels within EEZ

Foreign fishing vessels intending to conduct fishing activities within EEZs shall obtain a fishery license from MOMAF in accordance with Article 5 of the Exercising Sovereignty on Foreign Fishing within EEZs Act.

The license will specify the type of fishery, size of fishing vessel, the number of subsidiary vessels, fishing quotas and species of fishery for harvesting.

The licensed foreign vessels shall report the in-out of the Korean EEZs to the Korean government in advance. The report must include the type of fishery, the number of fishery licenses, the name of vessel and the amount of catch.

The domestic vessels also have the similar requirements imposed on foreign vessels. The government may levy fees on foreign vessels operating in the EEZs.

The government may enforce surveillance activities using VMS on foreign vessels fishing in EEZs on the basis of reciprocal principle.

Foreign vessels fishing in EEZs without a license face fines of up to KW 100 000 000 (Korean Won). Also fish, fishing gear and fishing vessels may be confiscated, depending on the severity of the violation.

Foreign vessels fishing in EEZs without a license are dealt with according to domestic law while those with a license are dealt with according to the bilateral agreement and the corresponding penalty for the infraction.

c) Registration on fishing vessels

In accordance with the Fishing Vessel Act, fishing vessels built for the purpose of fishing, fishery research or fishery enforcement shall be registered with local governments after measuring their gross tonnage.

In registering vessels, the following information shall be provided: name of vessel, material of hull, port of registry, where built, name of builder, date of launch and gross tonnage.

Under the current registration system, there are no sanction measures for domestic IUU fishing vessels. If a fishing vessel owning a fishery license participates in IUU fishing, such sanction measures as suspension, restriction or cancellation will be applied in accordance with the Fishery Act.

Registration system corresponds to owner of fishing vessels.

The vessel registration shall be canceled when a fishing vessel is used for non-fishery purposes, when the owner of nationality is lost or changed or when the vessel is scrapped or submerged. When the owner of a Korean fishing vessel tries to change his nationality into another nationality, he needs no government permission.

In accordance with the Fishing Vessel Act and Fisheries Act, the name of vessel, the place of home port and official number shall be marked on the surface of the vessel as well as a certificate of the vessel's nationality so that the vessel can be identified while navigating.

2. Economic measures

a) Investment rules

Only Korean nationals and corporations established in accordance with Korean law can possess ownership of Korean vessels.

Local governments shall consult with the Minister of MOMAF in advance before issuing fishery licenses to foreigners or foreign corporations.

When foreigners or foreign corporations invest with Korean nationals or in Korean corporations for the purpose of fishery activities, their investment percentage or voting rights should be at least 50% and they require permission from the Minister of MOMAF.

Foreigners and Foreign Corporations may be prohibited or restricted from the acquisition of fishery licenses on the basis of reciprocal principal.

b) Trade rule

Anyone who intends to export or import bluefin tuna (ICCAT), southern bluefin tuna (CCSBT), big-eye tuna (CCAMLR), swordfish (ICCAT), patagonian-toothfish (CCAMLR) or Antarctic toothfish (CCAMLR) shall submit the required statistical documents or catch documents in accordance with the rules set by the relevant international fisheries organisations.

The government may prohibit or suspend the import of fish species harvested in violations of rules set by such Regional Fisheries Management Organisations (RFMOs) as ICCAT, CCSBT and CCAMLR

c) Rule regarding landing, transhipments, and marketing

Foreign vessels operating fishing activities in EEZs under bilateral agreements shall get permission from the Korean government in order to transfer catches to another vessel or land catches in Korean ports.

Ships transporting fisheries and seeking to enter ports must have relevant documentation issued in accordance with international agreements.

For the purpose of transporting fish or fishery product to another vessel or landing them to port, the owner of the vessel or the company of the vessel shall submit documentation required for export or import related with the concerned state.

d) Penalties, fees and restrictions to GFTs

Regarding penalties or restrictions imposed on foreigners or foreign vessels for violation of IUU prevention measure regulations, these are based on the Fisheries Act.

Penalties imposed on Korean vessels and foreign vessels for illegal fishing activities are different, depending on specific conditions.

If the beneficiary of a fishery loan or tax-free oil is found to have identified as engaged in IUU fishing, in violation of relevant laws or regulations, National Federation of Fisheries Co-operative entrusted with GFTs from government can suspend or collect such GFTs

3. Other measures

The National Federation of Fisheries Co-operative will establish implementation measures for responsible fisheries in coastal fisheries for the prevention of IUU fisheries every year.

It includes voluntary legal fishery campaigns, enforcement against sales of illegal catches, encouragement of transition from illegal fisheries to legal fisheries, educating about and publicizing IUU-prevention activities and so on.

The government is trying to persuade such civil organisations as the Korean Deep Sea Fisheries Associations to participate voluntarily in campaigns that prevent fishers from engaging in IUU fishing overseas.

Mexico

1. Legal Measures and Regulations

a) Fishing activities by national vessels

In accordance with the Fisheries Law and its Regulations, published in the Official Gazette of the Federation on June 25, 1992, the provisions regulating fisheries activities outside the Exclusive Economic Zone by vessels flying the Mexican flag, are the following:

The provisions of the Fisheries Law shall be applicable in federal territorial waters and in vessels flying the Mexican flag that carry out fisheries activities on the high seas or in foreign territorial waters, under concessions, permits, authorizations or any other similar juridical act granted by some foreign government to Mexico or its nationals (Article 2).

Likewise, Article 3 provides that the application of this Law corresponds to the Ministry of Fisheries (today CONAPESCA), without detriment to the powers attributed to other agencies of the Federal Public Administration, "to oversee, in coordination with the competent authorities, compliance with the regulations in force in operations of transshipment, landing and change of crew in fisheries vessels flying the Mexican flag or registered in the Mexican Flag Register, in the exclusive economic zone or on the high seas" (paragraph X).

Article 15 establishes that the Ministry of Fisheries (CONAPESCA) may authorize in a non-transferable manner only to individuals or corporations of Mexican nationality, fishing on the high seas or in foreign territorial waters, with vessels of Mexican registration and flag.

With regard to infringements, Article 24 indicates that it is an infraction of the provisions of the Fisheries Law to practice fishing on the high seas or in foreign territorial waters, with vessels of Mexican registration and flag, without the corresponding authorization, with the exception of sports-recreational fishing.

Moreover, in accordance with the provisions of Article 4 of the Navigation Law, Mexican vessels and naval craft shall be subject to compliance with Mexican legislation, even when they are outside Mexican territorial waters, without detriment to observance of foreign laws, when they are in waters subject to another jurisdiction.

According to the Regulations of the Fisheries Law, those interested in obtaining authorization to fish on the high seas or in foreign territorial waters with vessels of Mexican registration and flag, should comply with the following requirements and obligations (Article 52):

- Accredit before the Ministry of Fisheries (CONAPESCA) the availability of vessels, fishing gear, technical and financial capacity, and of trained personnel to carry out the catches;

- Exclusively use vessels flying the Mexican flag or registered as part of a Flagging Program, in the terms of the Navigation Law, and
- Respect and strictly comply with international navigation and fisheries provisions, especially those established by foreign governments in their territorial waters.
- The respective authorizations will be granted by the Ministry of Fisheries (CONAPESCA) only to persons of Mexican nationality.

Furthermore, the quotas granted to the country by foreign governments for the utilization or development of their fisheries resources will be administered by the Ministry of Fisheries (CONAPESCA). Should the governments themselves permit private parties to directly acquire licenses or permits for commercial fishing, the interested parties, at the request of the Ministry of Fisheries (CONAPESCA), will prove that the catches made were affected under said licenses or permits.

Moreover, in accordance with the provisions of Article 53 of the Fisheries Law, those authorized to fish on the high seas or in foreign territorial waters, with vessels of Mexican registration and flag, are obliged to present the notice of putting into port, in keeping with the following requirements:

- Number, date and term of the concession, permit or authorization under which the catch was made;
- Place, date, time of arrival, time of docking, landing of the catch and the period covered by the notice of putting into port;
- Name and number of the vessel's registration;
- Name of the permit-holder, licensee of person authorized, as applicable;
- Place of disembarkation where the operation was carried out;
- Areas in which the fishing was effected;
- Total kilograms of each of the species caught and landed, indicating specifically the information corresponding to the species' common name, variety and presentation, and
- Estimated sales value of the products caught, for statistical purposes.

In relation to follow-up and control of fishing vessels, implementing the use of the satellite tracking system on fishing vessels in tuna, swordfish, shark and shrimp fisheries is being considered.

To that end, the Federal Government will sign an Agreement with the productive and social sector for the implementation of this system, which is scheduled to begin operating in 2004.

b) Fishing activities by foreign vessels within EEZ

Under a Fisheries Agreement signed between Mexico and Cuba in 1976, Cuban vessels carry out fisheries activities within the Mexican Exclusive Economic Zone.

By means of said Agreement, catch quotas from the fisheries of grouper, red snapper, sierra, sawfish, shark and related species are assigned annually to the Government of Cuba.

In accordance with the provisions of the Fisheries Agreement, the Fisheries Authorities of both governments meet every year alternately in Mexico and in Cuba, in order to carry out Annual Consultations on Application and Fulfillment of said Agreement. At these consultations, among other matters annual catch volumes are set, including the species and the Fishing Permits that Mexico will authorize and grant the Cuban fleet for its operation in Mexican territorial waters in the Gulf of Mexico and the Caribbean.

In general terms, the Fisheries Agreement with Cuba regulates not only the species, volumes, number of vessels and the fishing tackle and equipment to be used, but also the manner of operation of the fleet, as well as the mechanisms whereby the results of the operation of the Cuban vessels are verified.

It should be underscored that administrative control of the Cuban fleet's operations is carried out on the basis of:

- Notices of vessels' putting into port.
- Monthly catch reports.
- Fishing logs (established as of 1981).
- Monitoring actions by the Ministry of the Navy.

It should also be mentioned that foreign vessels located in Mexican inshore waters and marine zones are subject, due to that fact alone, to Mexican jurisdiction and to compliance with Mexican legislation.

Furthermore, Mexico grants permits to carry out scientific research and collection in its national territory to research institutions, technicians and scientists, mainly from the United States, with the aim of broadening biological knowledge of the different species that the country has.

To that end, the Fisheries Law clearly establishes the requirements to be met by the institution or requesting scientist, who should fill out an application form and turn it over to the Ministry of Fisheries (CONAPESCA), through the Ministry of Foreign Affairs, with the following data:

- Name of person responsible;
- Objectives;
- Practical application of the results;
- Participants, materials, vessels and equipment to be used, as applicable;
- Operations to be carried out, with their schedule;
- Areas and depths of operation;
- Determination of species that are the subject of the study or research, and
- Amount of samples to be collected.

Likewise, applicants for permits for development fishing, for purposes of experimentation or exploration on board oceanographic or research ships, should provide, in addition to the data referred to in the preceding article, the data indicated below:

- Characteristics of the vessel and its installations on board;
- Manoeuvres to be carried out;
- Crew and routines;
- Description of the fishing methods and tackle to be used, as well as the intended experimentation or exploration program;

- Data on fishing capacity and expected catch;
- Cruiser plan, including map and network of stations, and
- Future availability of project results.

In both cases a preliminary report should be presented to the Ministry of Fisheries (CONAPESCA), and subsequently the final report on the result of the studies made under the permits, which should indicate, among other aspects, the content, time frames and manner of delivery of the reports, according to the project in question.

It is important to mention that the granting of said research permits requires authorizations from different government agencies (Ministries of the Interior, of the Navy and SAGARPA-CONAPESCA), so that the viability and approval of said research permits are determined within their spheres of competence.

In accordance with the provisions of Article 14 of the Fisheries Law, the fisheries authority, in keeping with the national interest and the international treaties and agreements to which Mexico is a party, shall determine and if applicable shall declare whether there are surpluses by species; if so, it shall permit, as an exception, foreign vessels to participate in said surpluses in the exclusive economic zone and by means of compliance with the requirements and conditions established for each case by the agency itself. In any case, the most rigorous reciprocity shall always apply.

The respective permit shall be non-transferable and subject to the signing of agreements with the States requesting it and, in the case of individuals and corporations of foreign nationality, with prior request and compliance with the requirements established in the regulations.

In the case of Cuban vessels, these must comply with the provisions of the Fisheries Agreement signed in 1976, which indicates that Cuban vessels should show the Fishing Permit issued by the Government of Mexico, together with the form of the National Fisheries Register, which should contain the conditions and restrictions applicable to each vessel's fishing operations.

In general terms, the Fisheries Agreement with Cuba regulates not only the species, volumes, number of vessels and fishing gear and equipment to be used, but also the fleet's manner of operation, as well as the mechanisms by means of which the results of the operation of Cuban vessels are verified.

National scientific observers take part in this verification on board said vessels in order to evaluate the biological effects of the Cuban fleet's catches by means of random sampling and collection and exchange of technical-biological data on the resources, used to determine permissible levels of utilization.

Likewise, a statistical register of the catches is taken and information is exchanged through a detailed follow-up of the movements and operation of the Cuban fleet, for which purpose a series of mechanisms for compiling and analysis of information, such as:

- Calendar of arrivals and departures of the ships of the Cuban fleet
- Catch forecasts
- Notices of putting into port
- Monthly reports on vessels' catches, and
- Fishing logs

As indicated in Article 25, infringements of the provisions of the Fisheries Law shall be sanctioned by the Ministry of Fisheries (CONAPESCA) according to the gravity implied by the fault committed by the offender and without detriment to the corresponding penal sanctions, if applicable.

In this context, and in the case of foreign vessels detained for fishing illegally in federal territorial waters, the international obligations undertaken by our country should be observed, based on the strictest reciprocity. The admonition will be applied in any case to the offenders and will serve as support to increase economic sanctions for second offenders.

In the case of the Fisheries Agreement with Cuba, various measures are envisaged with regard to compliance with the provisions for Cuban vessels, among them:

The naval authorities of Mexico have the right to stop and board for inspection any boat flying the Cuban flag that is fishing in the area.

The Government of Mexico can impose measures and sanctions in the terms established by its law on Cuban ships that infringe Mexican legislation. The measures and sanctions could include seizure of the catch and fishing tackle, fines, detention of the vessels and application of sureties.

The ships detained and their crews will be released immediately upon deposit of a surety or other guarantee.

Sanctions for violations of fisheries regulations applicable to vessels of the Republic of Cuba do not include the penalty of prison, nor any other type of corporal punishment.

In the annual consultations, the Government of Mexico takes into account the violations that have taken place by Cuban fishing vessels in previous years.

It should be mentioned that the Mexican fisheries authorities have the intention of implementing an Observers Program on board the Cuban fishing fleet which is currently in the process of appraisal.

At present there is no legal provision at national level that takes into account measures aimed at vessels without nationality that sail the high seas practicing IUU fishing. National legislation only includes provisions when this type of vessel is found fishing in areas under national jurisdiction.

However, at regional level, within the framework of regional conservation and ordering agencies in which Mexico participates as a full member, such as the Inter-American Tropical Tuna Commission (IATTC) in the Pacific Ocean and the International Commission for the Conservation of Atlantic Tuna (ICCAT) work has begun, and progress has been made in the establishment of provisions against ships without nationality.

It is worth mentioning the particular case of Cuban vessels, the only vessels permitted to fish in the Mexican Exclusive Economic Zone within the framework of the Fisheries Agreement between the two countries, signed in 1976, which among its provisions includes various measures on compliance with provisions for Cuban vessels, as well as their sanctions, and which has already been dealt with in the above sections.

c) Registration of fishing vessels

In accordance with the Fisheries Law and its Regulations, a National Fisheries Register (RNP) was established in which individuals or corporations pursuing this activity under a concession, permit or authorization must register compulsorily. Likewise, vessels engaging in fisheries activities must register in the National Maritime Public Register (Ministry of Communications and Transportation), as must aquaculture development units, fisheries schools and centres devoted to research or teaching in aquatic flora and fauna.

Through said Register, with the updating work, the status and control of licensees, permit-holders and persons authorized to carry out fisheries activities can be verified. Also, it is important to point out that registrations in the RNP are done only once and any change in the circumstances that gave rise to registration must be notified to the fisheries authority by those who possess the registration certificate, in order to update it or resolve on its cancellation when this is in order.

Within this framework, and with the same objective of facilitating inspection and monitoring work, another of the tasks that has been undertaken is the preparation and publication on the CONAPESCA Internet page of a database on permits and concessions registered in the RNP for small and large vessels (CONAPESCA Internet page, in compliance with the Federal Law on Transparency and Access to Government Information).

Likewise, vessels engaging in fisheries activities must register in the National Maritime Public Register, as must aquaculture development units, fisheries schools and centers devoted to research or teaching in aquatic flora and fauna. CONAPESCA is in charge of issuing the corresponding certificate of registration.

Furthermore, the information corresponding to Mexico is being prepared to be submitted to FAO in order to comply with the provisions of the Compliance Agreement, in effect as of April 24 this year with respect to vessels authorized to fish on the high seas.

The data being considered are the following:

1. name of the fishing ship, registration number, previous names (if known), and port of registration;
2. former flag (if applicable);
3. international radio call sign (if applicable)
4. name and address of owner or owners;
5. place and date of building;
6. type of ship;
7. length;
8. name and address of shipbuilder or shipbuilders (if applicable);
9. type of fishing method or methods;
10. moulded depth;
11. beam;
12. gross tonnage;
13. horse power of main engine or engines.

Article 14 of the Navigation Law indicates that the Ministry of Communications and Transportation is in charge of the **National Maritime Public Register**, in which will be registered, among other elements, the certificates of registry of Mexican vessels and naval craft and Mexican ship owners and agents, as well as operators, for whose

registration it will suffice to include a copy of their articles of association or birth certificate, as applicable.

In order to act as a ship owner or Mexican shipping company it is necessary:

- To be Mexican or a company incorporated according to Mexican laws;
- To have a registered office in national territory; and
- To be registered in the National Maritime Public Register.

It is presumed that the owner or co-owners of the vessels are its operators, unless there is proof to the contrary.

The ship owner that assumes the operation or exploitation of a vessel that is not its property must make a shipbuilder's declaration before the maritime authority of the port of registration. Said declaration will be annotated in the margin of its registration in the National Maritime Public Register and when that capacity ceases, the cancellation of said annotation should be requested. This declaration may also be made by the owner of the vessel.

The captains, naval pilots, skippers, naval engineers, mechanical operators and, in a general manner, all the personnel who crew any Mexican merchant vessel must be Mexican by birth, not acquire another nationality and have full enjoyment and exercise of their civil and political rights.

On fishing vessels, the personnel on board who only carry out functions of instruction, training and supervision of activities related to catching, handling or processing of the fisheries resources are not considered crew.

In accordance with the provisions of the Navigation Law, the indispensable requirement for reflagging a national vessel in favor of another Nation State is to cancel the vessel's certificate of registration. Article 13 of said Law explains the cases in which the certificate of registration of a vessel is cancelled by the maritime authority, and among these, for this case the following are pertinent:

(Paragraph IV). When its owner or possessor ceases to be Mexican, except in cases of recreational or sports vessels for private use;

(Paragraph V). Due to its sale, acquisition or transfer in favor of foreign governments or persons, with the exception of recreational or sports vessels for private use;

(Paragraph VIII). For resignation of flag by the owner or holder of the certificate of registration.

Likewise, it mentions that the maritime authority will only authorize the resignation of flag and the cancellation of registration of a vessel or naval craft when the payment of labor and fiscal credits is covered or guaranteed, and there is proof of freedom from liens issued by the National Maritime Public Register, unless there is an agreement to the contrary between the parties.

In this same context, with regard to infringements, Article 140 (F) mentions that the Ministry of Communications and Transportation will impose a fine of between ten thousand and fifty thousand days of wages on those who "Flag or register a vessel or naval craft in another State, without having previously obtained the resignation of the Mexican flag."

In this case, the measures indicated in the preceding paragraph also apply. Furthermore, work is under way in regional agencies to prepare lists of vessels authorized to fish, and this in some way avoids reflagging.

In considering these questions, you are encouraged to provide information concerning potential legal measures that are being considered within the framework of the development of a national plan of action on IUU/FOC fishing activities.

The Legal Department is working on elaboration of this item.

2. Economic Measures

a) Investment rules

The Fisheries Law does not provide for the issuing of licenses to foreign vessels. Foreign participation can only take place through joint investment companies, incorporated under Mexican legislation, in which the share of foreign investment cannot exceed 49% of the company's capital stock. In companies engaged in aquaculture, industrialization or marketing of fisheries products, foreign investment may be up to 100%.

Article 7 of the Law on Foreign Investment specifically establishes that in the economic activities and corporations mentioned below, foreign investment may participate up to 49% in:

- Fresh water and coastal fishing and in the exclusive economic zone, without including aquaculture;
- Port piloting services for vessels to carry out inland navigation operations in the terms of the Law on the matter;
- Shipping companies engaged in commercial operation of vessels for inland and coastal navigation, with the exception of tourist cruisers and the operation of dredgers and naval craft for port construction, conservation and operation;
- Supply of fuels and lubricants for vessels, aircraft and railroad equipment.

The limits on participation of foreign investment indicated in this article cannot be exceeded directly, nor through trust funds, agreements, social or statutory pacts, pyramid schemes, or any other mechanism that grants control or a greater share than that established.

Similarly, Article 8 of this same Law indicates that a favourable resolution is required from the National Foreign Investment Commission (which is made up of the heads of State Ministries, and those authorities and representatives of the private and social sectors who are related to the matters to be dealt with are invited to participate in its sessions, but will not have the right to vote), so that foreign investment participates with a percentage greater than 49% in the economic activities and corporations mentioned below:

1. Port services for vessels to carry out their inland navigation operations, such as towage, mooring of ropes and lighterage.
2. Shipping companies engaged in operating vessels exclusively in offshore trade.

b) Trade rules (including trade-related rules)

Mexico does not support the application of trade sanctions, since it is considered that they are not a suitable and just means to promote the protection of species. Nonetheless, Mexico participates in regional forums in which sanctions or measures are applied to vessels that carry out INDNR fishing activities, as is the case with the International Commission for Atlantic Tuna Conservation (ICCAT), and we also take part in schemes for the certification and documentation of catches, as is the case with IATTC.

For some years ICCAT has been applying sanctions to vessels carrying out activities that impair the established ordering and conservation measures. Under these provisions, prohibitions have been applied to imports of some species from countries such as Belize, Cambodia, Honduras, Saint Vincent and the Grenadines, as well as Equatorial Guinea, for not reporting information on catches by ships under their flags, not complying with the ordering and conservation measures agreed upon by the Commission, and for fishing in the area regulated by the Commission without having a quota assigned by the latter.

This body establishes that when a Contracting Party carries out this type of activities, any necessary new measure will be applied to guarantee compliance, and when non-Contracting Parties are involved, it is established that "effective measures" will be applied, including non-discriminatory restrictive trade measures on the affected species, consistent with international trade obligations.

The application of trade sanctions has been the main coercive measure applied within the framework of ICCAT to combat INDNR fishing, and although it is already an accepted practice, Mexico has fought for its application to be considered only in cases in which all possible means to call upon countries to cease carrying out this type of activities have been exhausted, and that such measures are applied in a non-discriminatory and justified manner, adhering to the rules agreed upon in pertinent international trade forums such as the World Trade Organization.

In keeping with this policy, CONAPESCA, in coordination with the Mexican environmental authorities, participates in the work of the International Convention on Trade in Endangered Wild Flora and Fauna Species (CITES), so that the decisions taken in this forum on fisheries species are balanced as regards their protection and development.

Although we share CITES' objective of promoting international cooperation to reduce the risk, by means of trade regulation, in this case of marine species of commercial importance, as a measure to avoid INRND fishing activities through the implementation of its provisions, it is considered that these should not become restrictions to trade in fisheries species.

With regard to schemes for certification and documentation of catches, in 2001 a certification system and a label called "Dolphin Safe APICD" tuna were approved, based on a regional program for dolphin protection in the Eastern Pacific Ocean which promotes tuna fishing associated with dolphins under rigorous protection measures.

Dolphin Safe APICD tuna certification is the only one in the world backed by a far-reaching multilateral system, with a transparent system for tuna follow-up, and which in addition includes broad participation by countries through an international instrument.

This certification program is based on a system of follow-up and verification whose purpose is to document at all times, from the catch up to the process (landing, processing and marketing) that all the tuna is caught and finally marketed in accordance with the rules established within the framework of regional management agencies that administer said fishery, such as CIAT and the Agreement on the International Program for Dolphin Conservation (APICD) and that this product does not come from non-regulated or non-reported fishing.

The ICCAT, for its part, applies "Statistical Document Programs" whose purpose is to provide statistical and commercial data on the species and, above all, to have an effective control instrument to eliminate INDNR fisheries operations.

At present, statistical documents are managed for big-eyed tuna, swordfish and blue-fin tuna when they are going to be imported into the territory of a Contracting Party of ICCAT. Said document has a pre-established format and must be validated by a government official or other duly authorized person or institution; it should contain the following information: Country or flagging fisheries entity, name of the ship and registration number, point of departure of export, catch area, description of fish, exporter's certificate (in which the information provided is validated), Government validation and import certificate (in which the importer validates the shipment he is receiving and provides his data).

Likewise, a certificate of re-export is used for big-eyed tuna, which is basically required by the Japanese government and whose format is very similar to the statistical documents.

For validation of these certificates, all the Contracting Parties or Entities involved in the exportation and/or importation of the species in question must send the seals and original signatures of the officials empowered to issue said statistical documents or certificates to the ICCAT, and they must also keep them updated. Subsequently, the Secretariat of the agency turns over a copy of said documents to all the interested parties, so that they are apprised thereof and can verify that the validation is correct.

These statistical and certification Programs make it possible to compare species' export and import data, which increases the credibility of the statistical data, and also importing countries can avoid the unloading of shipments stemming from INDNR fishing activities, in this regard, and in view of the usefulness of this mechanism in ICCAT.

A certification programme of this nature has been adopted within the framework of CIAT for big-eyed tuna imports.

c) Rules regarding landing, transhipments and marketing

According to the Navigation Law, navigation in Mexican marine zones and arrival at Mexican ports will be open, in peacetime, for vessels of all countries, in the terms of international treaties.

Despite the above, the same Navigation Law points out that navigation in Mexican marine zones and arrival in Mexican ports may be denied by the maritime authority when there is no reciprocity with the country of registration of the vessel, or when so demanded by the public interest, and that vessels navigating in Mexican marine zones should be flagged in a single country, fly their flag and have their name and port of registration clearly marked.

Finally, it points out that the Maritime Authority may, as a result of an act of God, declare at any time, provisionally or permanently, certain ports closed to navigation, in order to safeguard persons and assets.

For this case, Article 24 of the Fisheries Law indicates that the following are infringements of the provisions of this Law: i) Disembark fisheries products abroad or transship them without having the authorization of CONAPESCA, except in case of catastrophe (Paragraph X) and ii) Unload in Mexican ports commercial fisheries products from foreign vessels, without the authorization of CONAPESCA, except in case of a catastrophe (Paragraph XI).

In this context, and in accordance with the Regulations of the Fisheries Law Articles 66 to 68 establish the measures that foreigners must observe for unloading in Mexican ports, as described below:

Article 66. Those interested in obtaining authorization so that fishing vessels flying a foreign flag can unload fresh, iced or frozen fisheries products in Mexican ports should submit their request in writing, with the following requirements:

1. Name of vessel:
2. Species caught, volume and presentation;
3. Place of the catches, attaching if applicable an informal copy of the fishing log or its equivalent;
4. Species to be unloaded, volume and presentation;
5. Date and port where unloading is to take place;
6. Destination of the products to be unloaded, and
7. Show the corresponding title under which the fisheries activity was carried out, issued by the competent authority of the country of origin.

Article 67. The Ministry shall resolve the request for authorization referred to in the preceding article, in the following terms:

- To disembark fresh or iced products within a period of 3 working days, under the following procedure:
    1. The Ministry shall prepare the file within a period of 1 working day, during which it will require the interested party to provide any missing information or documentation. If it does not require the interested party to remedy any deficiencies that may exist, the file shall be considered complete, and
    2. Having prepared the file, within the following 2 working days the Ministry shall resolve by granting or denying the authorization requested, and
- To disembark frozen products within a period of 6 working days, under the following procedure:
    1. The Ministry shall prepare the file within a period of 2 working days, during which it will require the interested party to provide any missing information or documentation. If it does not require the interested party to remedy any deficiencies that may exist, the file shall be considered complete, and

2. Having prepared the file, within the following 4 working days the Ministry shall resolve by granting or denying the authorization requested.

In both cases, if the respective periods have elapsed without the Ministry having issued the resolution, the request shall be considered granted.

Article 68.- Fishing vessels flying a foreign flag are forbidden from disembarking fisheries products from commercial fishing in Mexican ports, except in case of a catastrophe or in cases in which the Ministry expressly authorizes it.

d) Penalties, fees and restrictions to GFTs

As mentioned previously, in the case of foreign vessels detained for fishing illegally in federal territorial waters, the international obligations contracted by our country should be observed, based on the strictest reciprocity. The admonition will be applied in any case to offenders and will serve as support to increase financial sanctions on second offenders.

In accordance with the Fisheries Agreement signed with Cuba in 1976, it was established that the Cuban authorities must make a payment to the Government of Mexico for the granting of each annual permit issued to a Cuban fishing vessel.

Likewise, during the consultations held annually the reconciliation of catches is carried out and the payment of taxes to be covered by the Cuban party for catches within the Mexican EEZ.

Similarly, a fee is established for US vessels that request and are granted a permit for purposes of scientific research.

3. Other measures

The international agreements and commitments signed by Mexico to combat IUU fishing are disseminated among industry and fishers in general. Such is the case with the International Action Plan of FAO on illegal fishing and the Code of Conduct for Responsible Fishing.

Netherlands

1. Legal measures and regulations

a) Fishing activities by national vessels

We would like to add to the Commission's reply that the Netherlands primarily institutes criminal proceedings against IUU fishing.

National inspection and enforcement bodies are authorised to take action in the EEZ (pursuant to the responsibilities laid down by the CFP). They are also authorised to act in the event of a breach by vessels bearing the Dutch flag outside the EEZ or by a vessel bearing the flag of one of the signatory states to the Straddling Stocks Treaty.

We cannot give any examples of IUU fishery activities by Dutch fishing vessels or of national measures taken.

b) Fishing activities by foreign vessels within EEZ

European legislation allows fishing in the EEZ. Only a limited number of Member States are allowed in the Dutch 12-mile zone. The Dutch 3-mile zone is reserved for Dutch and Belgian fishermen (the latter having permission under the Benelux Treaty).

EU and national legislation, the same responsibilities as apply to national fishing vessels.

The Netherlands does not distinguish between fishing with or without a permit. The same national laws apply to violations, and parties found to be in violation are subject to the most stringent category of sanctions (illegal fishing). The minimum fine is 4500 euros, the catch is seized and confiscated and provisional action is taken to freeze the activities of the business concerned.

The Netherlands has no examples of foreign vessels charged with IUU or of measures taken in that event.

c) Registration of fishing vessels

According to EU regulations, the vessel must be equipped for fishing, and must be able to fish commercially. This means that the entrepreneur concerned must hold the necessary permits and fishing documents (European fishing permit, permits for specific types of fishery) and the vessel is inspected by the Shipping Inspectorate. Vessels are inspected annually.

A vessel is registered as Dutch if its primary base of operations is the Netherlands, its normal home port is a Dutch port and if it is at least two-thirds owned by one of more persons holding the nationality of one of member states of the EU or the EEA (European Environment Agency), or by a legal entity incorporated under the law of one of the member states of the EU or the EEA and whose registered office, executive board or head office is situated in the EU or the EEA.

2. Economic measures

a) Investment rules

The ownership of Dutch flag vessels is restricted, unless the investment is made by shipping companies incorporated under Dutch law, established in the Kingdom of the Netherlands and having their actual place of management in the Netherlands. The national flag is reserved for ships owned by nationals incorporated under Dutch law, established in the Kingdom, and have their actual place of business in the Netherlands.

b) Trade rules

Under Dutch law, foreign parties placing fish on the market (auction, trade and processing) must provide the name of the vessel that caught the fish. When the vessel is not known, the fish is seized and confiscated under the category NN (Niet Natuurlijke Personen, or non-legal bodies). The proceeds go to the Kingdom of the Netherlands.

c) Rules regarding landing, transhipments and marketing

These vessels fall under current regulations. In the event of a violation, they are subject to the severest regime.

d) Penalties, fees and restrictions to GFTs

No distinction is made between different nationalities. In the event of illegal fishing, the most severe category of sanctions applies. See section 1b. Port fees are charged for landings in Dutch harbours. No other levies are charged.

3. Other measures

We know of no other measures against IUU fishing.

New Zealand

1. Legal measures and regulations

a) Fishing activities by national vessels

High Seas

General provisions

This section describes the legal provisions that control New Zealand flagged vessels and New Zealand nationals when fishing in all areas of the high seas.

Control of New Zealand flagged vessels

Under Part 6A (High Seas Fishing) of the Fisheries Act 1996 (the Fisheries Act), any person using a New Zealand flagged vessel to take or transport fish on the high seas must do so in accordance with a high seas fishing permit issued in respect of that vessel. For a high seas permit to be issued, the applicant and vessel must meet the following criteria:

- The vessel must be registered under the Ship Registration Act 1992;
- The vessel must be registered in the Fishing Vessel Register under the Fisheries Act as either a fish carrier or a fishing vessel;
- The applicant must be named in the Fishing Vessel Register as the operator1 of the vessel;
- The applicant must not have engaged in fishing or transportation in a manner that undermined the effectiveness of international conservation and management measures, and that resulted in a high seas fishing permit, or an equivalent authorisation granted by a participating state or a party to the FAO Compliance Agreement, being suspended or revoked during the 3 years immediately preceding the application (the 3-year period);
- The applicant must not have engaged in fishing or transportation on the high seas during the 3-year period without a high seas fishing permit (or equivalent authorisation granted by a participating state), if a high seas fishing permit was required for that fishing or transportation, and in a manner that undermined the effectiveness of international conservation and management measures.

When making a decision whether to issue a high seas fishing permit, previous offending history is considered. This includes any offences in relation to fishing or transportation (whether within the national fisheries jurisdiction of New Zealand or

1 . Under the Fisheries Act 1996, 'Operator' is defined as - in relation to a vessel, means the person who, by virtue of ownership, a lease, a sublease, a charter, a subcharter, or otherwise, for the time being has lawful possession and control of the vessel.

another country, or on the high seas), of the vessel's owner, operator, foreign charterparty, notified user, master, or crew.

High seas fishing permits are issued for a period of up to one year and are subject to conditions (these are explained later in this document). High seas fishing permits are not area or species specific. However, in most cases, to fish on the high seas in an area and for a species covered by a Regional Fisheries Management Organisation (RFMO), an additional authorisation is required (this is explained in the next section).

Using a New Zealand flagged vessel to fish or transport fish on the high seas without a high seas fishing permit can result in a penalty of up to NZD 250 000. Contravention of high seas fishing permit conditions can result in a penalty of up to NZD 100 000. Both of these offences also result in forfeiture of the fish (or proceeds from the sale), fishing gear and the vessel to the Crown. In addition, the Chief Executive of the Ministry of Fisheries has the discretion to suspend or revoke the high seas fishing permit.

If a person is convicted more than once within 7 years for specified serious offences, such as using a New Zealand flagged vessel to fish on the high seas without a high seas fishing permit, they are banned from the following (from hereon in this document, this provision is referred to as the "banning provision"):

- holding any license, approval, or fishing permit obtained under the Fisheries Act, including a domestic or high seas fishing permit;
- engaging in fishing authorised under the Fisheries Act or any activity associated with the taking of fish; or
- deriving any beneficial income from fishing related activities under the Fisheries Act– for a period of 3 years[2].

Control of New Zealand nationals

The fishing activities of New Zealand nationals on foreign flagged vessels are also controlled under Part 6A of the Fisheries Act. No New Zealand national may use a foreign flagged vessel to take or transport fish on the high seas unless they do so in accordance with an authorisation issued by a state that meets one of the following criteria:

- A state that is a party to the UN Fish Stocks Agreement; or
- A state that is a party to the FAO Compliance Agreement; or
- A state that is a party to, or has accepted the obligations of, a global, regional, or sub-regional fisheries organisation or arrangement to which the authorisation relates; or
- A state that :
  - Is a signatory to the UN Fish Stocks Agreement; and
  - Has legislative and administrative mechanisms to control its vessels on the high seas in accordance with that agreement.

2 Any "banned person" can apply for relief from the Court

A New Zealand national may apply to the Minister of Fisheries for an exemption from these requirements in the following circumstances:

- The applicant is a citizen of another country and that country has jurisdiction over the applicant's proposed fishing activities on the high seas; and
- New Zealand is not a participant in, or a member of, or has not accepted the obligations of, a global, regional, or sub-regional fisheries organisation or arrangement that covers the area of the high seas in which the applicant proposes to take or transport fish, aquatic life, or seaweed; and
- The applicant has not engaged in fishing or transportation :
  - In a manner that undermined the effectiveness of international conservation and management measures; and
  - That has resulted in a high seas fishing permit, or an equivalent authorisation granted by a participating state or a party to the FAO Compliance Agreement, being suspended or revoked during the 3 years immediately preceding the application ('the 3-year period'); and
- The applicant has not engaged in fishing or transportation on the high seas during the 3-year period :
  - Without a high seas fishing permit (or equivalent authorisation granted by a participating state), if a high seas fishing permit was required for that fishing or transportation; and
  - In a manner that undermined the effectiveness of international conservation and management measures.

Contravention of the "New Zealand national" provisions outlined above can result in a penalty of up to NZD 250 000 and forfeiture of the fish (or proceeds from the sale) to the Crown. If a person is convicted more than once within 7 years for specified serious offences, such as contravening the "New Zealand national" provisions, the "banning provision" applies for a period of 3 years.

Additional provisions for high seas areas subject to RFMOs

This section describes the additional legal provisions that control New Zealand flagged vessels and New Zealand nationals when fishing on the high seas in areas that are covered by RFMOs.

New Zealand is party to three arrangements that regulate fishing by New Zealand flagged vessels and New Zealand nationals on the high seas[3]. They are:

- Arrangement between the Government of New Zealand and the Government of Australia for the Conservation and Management of Orange Roughy on the South Tasman Rise (STR Arrangement);
- Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR); and
- Convention for the Conservation of Southern Bluefin Tuna (CCSBT).

[3] New Zealand is also party since 2004 to the Convention on the Conservation and Management of Highly Migratory Fishstocks in the Western and Central Pacific Ocean (WCPFC).

For each of these arrangements, there are specific provisions that apply to New Zealand flagged vessels and New Zealand nationals, in addition to the general provisions outlined in the previous section.

STR Arrangement

To engage in trawling or other demersal fishing in the high seas area of the South Tasman Rise[4], all people using New Zealand flagged vessels must hold a high seas fishing permit as well as an additional authorisation issued under the Fisheries (South Tasman Rise Orange Roughy) Regulations 2000.

To obtain such an authorisation, the vessel must be registered under the Ship Registration Act 1992 and in the Fishing Vessel Register under the Fisheries Act as a fishing vessel, and the holder of the authorisation must be the operator of the vessel. Before issuing an authorisation, the Chief Executive of the Ministry of Fisheries may have regard to any previous offending history of the vessel's owner, operator, notified user, master, or crew; and such other matters as the he/she considers relevant. The authorisations are issued subject to conditions.

The activities of New Zealand nationals fishing in the high seas area of the South Tasman Rise are also controlled by the Fisheries (South Tasman Rise Orange Roughy) Regulations 2000. New Zealand nationals fishing in the high seas area of the South Tasman Rise using a non-New Zealand flagged vessel are required by the regulations to hold an authorisation issued by a Party to the arrangement other than New Zealand. In addition, no person may land fish in New Zealand taken by trawling or other demersal fishing in the high seas area of the South Tasman Rise unless that fish was caught in accordance with an authorisation issued by New Zealand or another Party to the arrangement.

Contravention of the Fisheries (South Tasman Rise Orange Roughy) Regulations 2000 can result in a penalty of up to NZD 100 000 and forfeiture of the fish (or proceeds from the sale), fishing gear and the vessel to the Crown.

CCAMLR

New Zealand flagged vessels and New Zealand citizens fishing within the CCAMLR Area are required to hold a permit issued under the Antarctic Marine Living Resources (AMLR) Act 1981. The AMLR Act gives effect to New Zealand's obligations under CCAMLR. For New Zealand flagged vessels, an AMLR permit is required in addition to a high seas fishing permit. To be granted an AMLR permit, applicants must meet specific criteria, for example, satisfactory compliance history and capacity to meet CCAMLR Conservation Measure requirements. All AMLR permits issued incorporate the requirements of CCAMLR Conservation Measures as conditions.

Fishing in the CCAMLR Area without an AMLR permit can result in a penalty of up to NZD 250 000. Breaches of AMLR permit conditions can result in a penalty of up to NZD 100 000.

4 An under-sea ridge extending south from Tasmania, Australia into the Southern Ocean straddling the Australian EEZ and the high seas.

CCSBT

A person using a New Zealand flagged vessel to fish on the high seas for southern bluefin tuna is required to hold only a high seas fishing permit. Catch of southern bluefin tuna by New Zealand flagged vessels is closely monitored by the New Zealand Ministry of Fisheries throughout the season and the fishery is closed to New Zealand flagged vessels once New Zealand's catch allocation under CCSBT is reached. Any person using a New Zealand flagged vessel, and any New Zealand citizen, who takes southern bluefin tuna once the New Zealand catch limit is reached is liable to a penalty of up to NZD 100 000 and the fish (or proceeds from the sale), fishing gear and the vessel may be forfeit to the Crown.

Other RFMOs

High seas fishing permit conditions prohibit fishing by New Zealand flagged vessels in areas or for species covered by RFMOs to which New Zealand is *not* a party, without a specific approval from the Chief Executive of the Ministry of Fisheries. Any such approval issued would be subject to conditions reflecting the relevant conservation and management measures of the RFMO. New Zealand may need to become a cooperating non-member or member (as appropriate) of the RFMO prior to issuing an approval.

Contravention of this provision can result in a penalty of up to NZD 100 000 and forfeiture of the fish (or proceeds from the sale), fishing gear and the vessel to the Crown. If a person is convicted three times within 7 years for specified serious offences such as this, the "banning provision" applies for a period of 3 years.

Compliance tools to control high seas fishing

Through the Fisheries Act (including high seas fishing permit conditions), New Zealand uses a number of compliance tools to control the activities of New Zealand flagged vessels fishing on the high seas. These tools include:

- Fishing permit and fishing vessel registers;
- Operation of VMS;
- Reporting (including catch and effort reporting);
- Carriage of observers;
- Vessel marking requirements;
- Vessel inspections;
- Control of landings (such as requirement to land only to licensed fish receivers);
- Auditing of licensed fish receivers;
- Control of transhipment;
- Analysis of catch and effort reporting and comparison with VMS data to confirm accuracy;
- Boarding and inspection by fishery officers at sea;
- Aerial surveillance by RNZAF Orion aircraft; and
- Any other measures required by RFMOs where relevant (e.g. application of CCAMLR Catch Documentation Scheme for vessels catching toothfish)

Below are further details on some of these compliance tools.

VMS

All New Zealand flagged vessels fishing on the high seas are required by high seas fishing permit conditions to carry and operate an automatic location communicator (ALC) at all times. The ALC must comply with specific standards and requirements.

Reporting

When on a fishing trip on the high seas, high seas fishing permit conditions require New Zealand flagged vessels to notify the Ministry of Fisheries before departing port; when entering or exiting the New Zealand EEZ, any foreign jurisdiction, or any area governed by an RFMO; and when returning to port.

New Zealand flagged vessels are also required by high seas fishing permit conditions to complete catch and effort returns that must be submitted to the Ministry of Fisheries at the end of each trip.

When fishing in an area that is governed by an RFMO where more detailed or frequent catch and effort reporting is required, New Zealand flagged vessels are required to meet those requirements e.g. within the CCAMLR Area, catch and effort reporting is required every 5 days.

Observers

Under high seas fishing permit conditions, the Ministry of Fisheries retains the ability to place an observer on any New Zealand flagged vessel fishing on the high seas. There are certain circumstances when the Ministry of Fisheries will decide to place an observer on a vessel, such as when a permit holder intends to fish within the New Zealand EEZ and on the high seas on the same trip.

When fishing in an area that is governed by an RFMO where observer(s) are required, New Zealand flagged vessels are required to meet those requirements, e.g. New Zealand flagged vessels fishing within the CCAMLR Area are required by AMLR permits to carry two observers at all times.

Vessel markings

All New Zealand flagged vessels must be marked in accordance with the Fisheries (Commercial Fishing) Regulations 2001 and the conditions of high seas fishing permits. This includes a requirement for all New Zealand flagged vessels fishing on the high seas to be clearly marked with the vessel's international radio call sign.

Vessel inspection

All New Zealand flagged vessels must be inspected by a Ministry of Fisheries fishery officer prior to leaving port to fish on the high seas unless a specific exemption is obtained from the Chief Executive of the Ministry of Fisheries.

Landing and transhipment

Each landing of fish caught on the high seas by a New Zealand flagged vessel at a New Zealand port must be supervised by a Ministry of Fisheries fishery officer or observer, unless otherwise advised. No fish may be landed to a port outside New Zealand fisheries waters without the prior written approval of the Chief Executive of the Ministry of Fisheries.

Each transhipment of fish caught on the high seas by a New Zealand flagged vessel that occurs within New Zealand fisheries waters must be supervised by a Ministry of Fisheries fishery officer or observer, unless otherwise advised. No fish may be transhipped while in a port or on a trip, either to, or from the vessel, whether on the high seas or otherwise, without the prior written approval of the Chief Executive of the Ministry of Fisheries. In general, New Zealand flagged vessels are not allowed to tranship fish caught from within the CCAMLR Area.

Other Countries' EEZs

This section describes the legal provisions that control New Zealand flagged vessels and New Zealand nationals when fishing in other countries' EEZs.

General provisions

Under the Fisheries Act, any New Zealand national or person using a New Zealand flagged vessel to take or transport fish in the national jurisdiction of another country must do so in accordance with the laws of that jurisdiction.

Contravention of this provision can result in a penalty of up to NZD 250 000 and forfeiture of the fish (or proceeds from the sale), fishing gear and the vessel to the Crown. If a person is convicted more than once within 7 years for specified serious offences such as this, the "banning provision" applies for a period of 3 years. A person's high seas fishing permit may also be suspended or revoked if the permit holder has been convicted of a fishery-related offence under the laws of a country other than New Zealand.

Provisions for other countries' EEZs within areas subject to RFMOs

If the foreign jurisdiction falls within an area covered by an RFMO to which New Zealand is a member, New Zealand nationals and people using New Zealand flagged vessels are required to obtain and comply with an authorisation from the coastal state. They are also required to comply with any specific New Zealand legislation that implements the obligations of that RFMO in foreign EEZs.

At present, CCAMLR is the only organisation to which New Zealand is a member that manages fisheries within areas of national jurisdiction and has licensing requirements for those areas. To fish in national jurisdictions within the CCAMLR Area, New Zealand citizens and people using New Zealand flagged vessels are required to obtain a permit from the Minister of Fisheries in accordance with the Antarctic Marine Living Resources (AMLR) Act 1981. A permit issued under the AMLR Act incorporates the obligations of CCAMLR Conservation Measures. Fishing in the CCAMLR Area without an AMLR permit can result in a penalty of up to NZD 250 000. Breaches of AMLR permit conditions can result in a penalty of up to NZD 100 000.

Requirements on fishing in other countries' EEZs

Under the Fisheries Act, New Zealand nationals or people using a New Zealand flagged vessel to take or transport fish in the national jurisdiction of another country must do so in accordance with the laws of that jurisdiction. New Zealand fisheries legislation does not impose any further requirements on New Zealand nationals or New Zealand flagged vessels fishing in other countries' EEZs, apart from the following:

- If the vessel is registered under the New Zealand Fishing Vessel Register, it is required to carry and operate VMS at all times; and
- If the foreign EEZ falls within an area covered by an RFMO to which New Zealand is a member, New Zealand imposes the requirements of the RFMO on New Zealand nationals and people using New Zealand flagged vessels (e.g. New Zealand flagged vessels fishing within a foreign EEZ within the CCAMLR area are required to submit catch and effort reports to the New Zealand Ministry of Fisheries during the trip).

b) Fishing activities by foreign vessels within EEZ

Foreign flagged vessels fishing in the New Zealand EEZ fall into two categories: vessels fishing under a charter arrangement with a New Zealand company, and vessels fishing under a foreign licensed access arrangement.

Vessels fishing under charter arrangements

There are currently 48 foreign flagged vessels registered on the New Zealand Fishing Vessel Register and fishing in the New Zealand EEZ under charter arrangements with New Zealand companies[5]. While fishing within the New Zealand EEZ, these vessels operate under the same conditions as New Zealand flagged fishing vessels.

Foreign flagged vessels fishing under charter arrangements with New Zealand companies within the New Zealand EEZ operate under much the same requirements as New Zealand flagged vessels. These include:

- Operation of VMS;
- Catch and effort reporting;
- Vessel marking requirements;
- Control of landings (such as requirement to land only to licensed fish receivers);
- Control of transhipment;
- Carriage of observers (at the discretion of the Ministry of Fisheries); and

Vessel inspections are made (at the discretion of the Ministry of Fisheries).

The only difference is that *all* foreign flagged charter vessels fishing within the New Zealand EEZ are required to operate VMS at all times.

Measures to address illegal fishing activities by foreign flagged vessels and fishers fishing under charter arrangements with New Zealand companies within the New Zealand EEZ are largely the same as for New Zealand flagged vessels. The only exception is that foreign persons cannot be imprisoned for offences under the Fisheries Act, and instead, may face larger financial penalties for offending.

A person using a foreign flagged charter vessel to fish illegally within the New Zealand EEZ can face penalties of up to NZD 500 000 (depending on the offence) and the fish (or proceeds from the sale), fishing gear and the vessel may also be forfeit to the Crown. If a person is convicted more than once within 7 years for specified serious offences, the "banning provision" applies for a period of 3 years.

5 A total of 1 568 vessels are currently registered on the New Zealand Fishing Vessel Register.

Vessels fishing under foreign licensed access arrangements

Provisions for foreign licensed fishing access to the New Zealand EEZ by foreign flagged vessels are set out in Part 5 (Foreign Licensed Access) of the Fisheries Act and in the Fisheries (Foreign Fishing Vessel) Regulations 2001. These include provision for the issue of foreign fishing licenses. Foreign fishing license fees vary depending on the species of fish that is being targeted.

The only vessels that currently fish in the New Zealand EEZ under a foreign licensed access arrangement are US vessels fishing pursuant to the Multilateral Treaty on Fisheries between the Governments of Certain Pacific Island States and the Government of the United States of America (US Tuna Treaty). Under the terms of the US Tuna Treaty, US purse seine vessels are entitled to fish in New Zealand EEZ subject to certain conditions. US purse seine vessels must hold a regional fishing license issued by the Forum Fisheries Agency (the treaty administrator), as well as a New Zealand foreign fishing licence, to fish within the New Zealand EEZ. These licences set out the terms and conditions under which such fishing activity must occur (consistent with the Treaty). Fees are paid as set out in the provisions of the US Tuna Treaty and the Fisheries (Foreign Fishing Vessel) Regulations 2001.

Currently there are no other foreign licensed access arrangements allowing foreign flagged vessels to fish in the New Zealand EEZ.

The responsibilities of foreign flagged vessels fishing in the New Zealand EEZ under the US Tuna Treaty are set out in the provisions of the US Tuna Treaty.

A person using a foreign flagged vessel operating under a foreign licensed access arrangement, including under the US Tuna Treaty, who commits an offence within the New Zealand EEZ, can face penalties of up to NZD 500 000 (depending on the offence) and the fish (or proceeds from the sale), fishing gear and the vessel may also be forfeit to the Crown. The Minister of Fisheries also has the discretion to suspend or revoke the foreign fishing license for an offence, or if a fisheries-related administrative penalty is not paid within the time limit. If a person is convicted more than once within 7 years for specified serious offences such as a breach of a foreign fishing license, the "banning provision" applies for a period of 3 years.

In the case of illegal fishing activities by US Tuna Treaty vessels in the New Zealand EEZ, there is scope under the Treaty for any enforcement action to be taken by the US rather than by New Zealand.

In 2000, a US Tuna Treaty vessel that was authorised to fish within the New Zealand EEZ was caught fishing within a closed area. The offending was reported to the treaty administrator, the Forum Fisheries Agency, by the regional observer on board the vessel. New Zealand officials investigated the incident and provided evidence of the offending to the US authorities. The US authorities then took enforcement action.

c) Registration of fishing vessels

Rules and regulations of Vessel registration

There are two registration processes in New Zealand for fishing vessels:

- Registration on the New Zealand Ships Register under the Ship Registration Act 1992, and

- Registration on the New Zealand Fishing Vessel Register under the Fisheries Act 1996.

Registration on the New Zealand Ships Register allows a vessel to become a New Zealand flagged vessel, but it is not sufficient to allow a vessel to fish. For a New Zealand flagged vessel to fish, the vessel must also be registered on the New Zealand Fishing Vessel Register. For a foreign flagged charter vessel to fish in New Zealand fisheries waters[6], registration on the New Zealand Fishing Vessel Register is required (but not on the New Zealand Ships Register).

New Zealand Ships Register under the Ship Registration Act 1992

The following vessels must be registered on the New Zealand Ships Register:

- All New Zealand-owned ships exceeding 24 metres operating within New Zealand jurisdiction
- All New Zealand-owned ships, regardless of length, operating in areas outside New Zealand jurisdiction.

To be a "New Zealand-owned ship" the ship must be majority owned by New Zealand nationals[7].

Foreign owned ships on demise charter to New Zealand-based operators are entitled to be registered on the New Zealand Ships Register.

To register a ship on the New Zealand Ships Register, evidence of current and previous ownership must be provided. This includes evidence of all ownership changes from the builder to the current owner, or, if the ship was previously registered in another country, evidence of all ownership changes from the last registered owner overseas to the current owner.

Other documents must be provided when applying for registration on the New Zealand Ships Register such as the Builder's Certificate, International Tonnage Certificate, and if applicable, a certified transcript of any previous overseas registration and evidence that the registration has been closed. For demise charter ships, a copy of the charter agreement must be provided. If the owner does not reside in New Zealand or does not have a registered office in New Zealand, they must appoint a representative person in New Zealand.

Once the required information is provided to the Registrar of Ships, the certificate of registry is issued in respect of the ship.

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6 Under the Fisheries Act 1996, 'New Zealand fisheries waters' is defined as –

(a) All waters in the exclusive economic zone of New Zealand:
(b) All waters of the territorial sea of New Zealand:
(c) All internal waters of New Zealand:
(d) All other fresh or estuarine waters within New Zealand where fish, aquatic life, or seaweed that are indigenous to or acclimatised in New Zealand are found:

7 Under the Fisheries Act 1996, 'New Zealand national' is defined as – a New Zealand citizen; or a body corporate incorporated under the law of New Zealand under the Charitable Trusts Act 1957; or the Executive Government of New Zealand.

New Zealand Fishing Vessel Register under the Fisheries Act 1996

To fish in New Zealand fisheries waters or on the high seas, New Zealand flagged vessels must be registered on the New Zealand Fishing Vessel Register. The same applies to foreign flagged charter vessels fishing in New Zealand fisheries waters.

For New Zealand flagged vessels where the operator of the vessel is not an overseas person[8], registration of a vessel on the Fishing Vessel Register is simply an administrative process that is carried out by the Ministry of Fisheries once all of the required information is received. The information required for registration includes owner and operator details, vessel details, and information on fish processing and storage, fishing methods and navigation/communication equipment.

For foreign flagged charter vessels and for New Zealand flagged vessels where the operator of the vessel is an overseas person, registration of a vessel on the Fishing Vessel Register is a more complex process requiring specific consent from the Chief Executive of the Ministry of Fisheries. As well as the information listed above, details on the vessel crew and of an authorised agent in New Zealand (who must be a New Zealand resident) must be provided to the Ministry of Fisheries. In making the decision whether or not to register the vessel, the nature of the charter or other agreement with the operator is considered. The previous offending history in relation to fishing or transportation (whether within the national fisheries jurisdiction of New Zealand or another country, or on the high seas), of the vessel's owner, operator, foreign charterparty, notified user, master, or crew is also considered.

There may be conditions of registration or Chief Executive consent that the operator of the vessel is required to comply with.

Restrictions on offending history vessels

New Zealand flagged vessels

When registering a vessel on the New Zealand Ships Register (i.e. to become a New Zealand flagged vessel), there is no consideration given to previous offending history. As described above however, registration on the New Zealand Ships Register alone does not allow fishing to be carried out.

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8 Under the Overseas Investment Act 1973, 'Overseas person' is defined as —

(a) Any person who is not a New Zealand citizen and who is not ordinarily resident in New Zealand:
(b) Any company or body corporate that is incorporated outside New Zealand, or any company within the meaning of the Companies Act 1955 or the Companies Act 1993, as the case may be, that is, for the purposes of the Companies Act 1955 or the Companies Act 1993, a subsidiary of any company or body corporate incorporated outside New Zealand:
(c) Any company within the meaning of the Companies Act 1955 or the Companies Act 1993, as the case may be, or building society, in which—

(i) Twenty-five per cent or more of any class of shares is held by any overseas person or overseas persons; or
(ii) The right to exercise or control the exercise of 25% or more of the voting power at any meeting of the company or building society is held by any overseas person or overseas persons:

(d) Any nominee of an overseas person, whether or not the nominee is also an overseas person.

Fishing in New Zealand fisheries waters

Previous offending history is considered when registering a New Zealand flagged vessel on the Fishing Vessel Register only if the operator is an overseas person. When registering a New Zealand flagged vessel on the Fishing Vessel Register when the operator is not an overseas person, and when applying for a permit to fish within New Zealand fisheries waters, there is no consideration given to previous offending history.

If a person provides false or misleading information under the Fisheries Act however, their fishing permit can be revoked. If a person is convicted more than once within 7 years for specified serious offences, such as fishing without a fishing permit, breaching fishing permit conditions, using an unregistered vessel, or unlawfully disposing of fish, the "banning provision" applies for a period of 3 years.

Fishing on the high seas

For a New Zealand flagged vessel to fish on the high seas, a high seas fishing permit is required. When making a decision whether to issue a high seas fishing permit, there are certain circumstances in which a high seas fishing permit application must be declined, as follows:

- If the applicant has engaged in fishing or transportation in a manner that undermined the effectiveness of international conservation and management measures, and that resulted in a high seas fishing permit, or an equivalent authorisation granted by a participating state or a party to the FAO Compliance Agreement, being suspended or revoked during the 3 years immediately preceding the application (the 3-year period); or
- If the applicant has engaged in fishing or transportation on the high seas during the 3-year period without a high seas fishing permit (or equivalent authorisation granted by a participating state), if a high seas fishing permit was required for that fishing or transportation, and in a manner that undermined the effectiveness of international conservation and management measures.

Other offending history in relation to fishing or transportation, of the vessel's owner, operator, foreign charter party, notified user, master, or crew is also considered by the Chief Executive of the Ministry of Fisheries when making high seas fishing permit decisions, and can result in an application being declined.

If a person commits a high seas fishing related offence, the Chief Executive of the Ministry of Fisheries has the discretion to suspend or revoke the high seas fishing permit. If a person is convicted more than once within 7 years for specified serious offences, such as using a New Zealand flagged vessel to fish on the high seas without a high seas fishing permit, the "banning provision" applies for a period of 3 years.

Offending history is also considered when deciding whether to issue permits to fish in areas covered by RFMOs, such as the CCAMLR Area. If the vessel's owner, operator, foreign charter party, master, or crew has knowingly engaged in illegal fishing activities, depending on the magnitude of the offending, the application could be declined.

Foreign Flagged Vessels

Charter Vessels

An application to register a foreign flagged charter vessel on the New Zealand Fishing Vessel Register is subject to consideration of offending history of the vessel's owner, operator, foreign charter party, notified user, master, or crew. The Chief Executive of the Ministry of Fisheries has the discretion to decline the application for registration on the basis of offending history and the vessel would therefore be unable to fish within New Zealand fisheries waters. When applying for a permit to fish within New Zealand fisheries waters no consideration is given to previous offending history.

If a person provides false or misleading information under the Fisheries Act, their fishing permit can be revoked. If a person is convicted more than once within 7 years for specified serious offences, such as fishing without a fishing permit, breaching fishing permit conditions, using an unregistered vessel, and unlawfully disposing of fish, the "banning provision" applies for a period of 3 years.

Other Foreign Flagged Vessels

An application for a foreign fishing license is subject to consideration of offending history of the vessel's owner, operator, master, or crew and may result in the application being declined. For US Tuna Treaty vessels in particular, a vessel must be a vessel of good standing on the regional register of foreign fishing vessels maintained by the Forum Fisheries Agency to be able obtain a regional fishing license.

Rules on ownership

New Zealand Ships Register under the Ship Registration Act 1992

The only vessels that are entitled to be registered on the New Zealand Ships Register are vessels that are majority owned by New Zealand nationals, and foreign owned vessels operating under demise charter arrangements with New Zealand operators.

When applying to register a ship on the New Zealand Ships Register, if ownership, or in the case of foreign charter vessels – the operator, cannot be verified as a New Zealand national, the certificate of registry will not be issued.

New Zealand Fishing Vessel Register under the Fisheries Act 1996

In most cases, vessels registered on the New Zealand Fishing Vessel Register are owned and operated by New Zealand nationals.

If a vessel is owned or operated by an overseas person, specific consent from the Chief Executive of the Ministry of Fisheries is required for the vessel to be registered on the New Zealand Fishing Vessel Register. In this case, the fishing company or individual seeking to register the vessel must nominate an authorised agent who is a New Zealand resident for the service of summons in respect of fisheries offences. This ensures that individuals cannot avoid enforcement action should they act in contravention of New Zealand legislation.

Measures against reflagging/ flag hopping

Governmental permission is not required to reflag New Zealand flagged vessels to alternative registries. Reflagging is seen as a legitimate activity where a genuine link exists, often driven by economic imperatives. This places responsibility on the state in which the vessel is seeking registry as opposed to the state where the vessel is currently registered.

As noted above, there are no specific measures to prevent flag hopping. However all New Zealand owned vessels must be registered on the New Zealand Ships Register and there must be a genuine link between the vessel owner or operator and New Zealand. This in itself prevents flag hopping.

2. Economic measures

a) Investment rules

Inward investment rules

New Zealand has inward investment rules on the ownership of vessels as well as the ownership of fishing quota.

Fishing Vessel Ownership

To be deemed a New Zealand-owned vessel and eligible for registration on the New Zealand Ships Register, the following ownership provisions apply:

1) A ship is deemed to be New Zealand-owned if :
   i. It is owned by a New Zealand national or New Zealand nationals, and no other person; or
   ii. It is owned by 3 or more persons as joint owners (otherwise than as described in paragraph (c) of this subsection), and the majority of those persons are New Zealand nationals; or
   iii. It is owned by 2 or more persons as owners in common, and more than half of the shares in the ship are owned by 1 or more New Zealand nationals.
2) For the purposes of subsection (1)(c) of this section, where 2 or more persons are joint owners of any number of shares in the ship the following provisions shall apply:
   i. In the case of 2 or more particular shares that are owned by the same persons, the interest of each owner in those shares shall be ascertained by dividing the number of shares by the number of owners of the shares:
   ii. In the case of a share to which paragraph (a) of this subsection does not apply, the interest of each owner in the share shall be ascertained by dividing the number 1 by the number of owners of the share:
   iii. If the sum of the interests so ascertained in respect of all jointly-owned shares in the ship as being interests of a New Zealand national or New Zealand nationals is a whole number or a whole number and a fraction, such number of shares as is equal to that whole number shall be deemed to be owned by a New Zealand national or New Zealand nationals.

If the vessel does not meet the above criteria or is not a foreign owned vessel operating under a demise charter arrangement with a New Zealand operator, the vessel cannot be registered under on the New Zealand Ships Register.

It is possible for foreign owned vessels to be legitimately registered on the New Zealand Fishing Vessel Register, although in these circumstances, specific consent is required from the Chief Executive of the Ministry of Fisheries and any previous offending history is considered in any decision.

Quota Ownership

The majority of New Zealand commercial fisheries are managed under a quota management system based on Individual Transferable Quota (ITQ). While there is foreign investment in New Zealand fishing companies, there are limits on the degree of foreign ownership of companies that own fishing quota. A company that owns New Zealand fishing quota may be up to 24.9% foreign owned and the remainder of the company must be owned by New Zealand nationals.

There are provisions in the Fisheries Act that allow for more than 24.9% foreign ownership of a company that owns New Zealand fishing quota. In this case however, specific permission is required from the Overseas Investment Commission. In granting this permission, the Overseas Investment Commission considers matters such as the character of the foreign individual(s) and whether granting of the permission is in New Zealand's national interest.

Outward investment rules

There is only one rule that may impose restrictions on the ownership of foreign flagged fishing vessels by New Zealand nationals - that is a requirement that no New Zealand national may *use* a foreign flagged vessel to take or transport fish on the high seas unless they have an authorisation to do so issued by a state meeting one of the following criteria:

- A state that is a party to the UN Fish Stocks Agreement; or
- A state that is a party to the FAO Compliance Agreement; or
- A state that is a party to, or has accepted the obligations of, a global, regional, or sub-regional fisheries organisation or arrangement to which the authorisation relates; or
- A state that:
  - Is a signatory to the UN Fish Stocks Agreement; and
  - Has a legislative and administrative mechanism to control its vessels on the high seas in accordance with that Agreement.

While *use* of a vessel does not necessarily always imply *ownership* of a vessel, this rule does restrict ownership of fishing vessels for use on the high seas by New Zealand nationals to those flagged to responsible fishing states.

There are no other investment rules in New Zealand that impose restrictions on ownership of foreign fishing vessels by New Zealand nationals.

b) Trade rules (including trade-related rules)

New Zealand imposes trade measures consistent with its obligations under RFMOs. New Zealand has fully implemented the CCAMLR Toothfish Catch Documentation Scheme and the CCSBT Trade Information Scheme.

New Zealand has also implemented trade information schemes complimentary to the International Commission for the Conservation of Atlantic Tunas (ICCAT) and Inter-American Tropical Tuna Commission (IATTC) schemes in respect of tuna and swordfish exported to ICCAT and IATTC member countries.

c) Rules regarding landing, transhipments and marketing

To land fish caught on the high seas or in another jurisdiction from a foreign flagged vessel at a New Zealand port, an approval from the Chief Executive of the Ministry of Fisheries is required. Approval must be sought prior to the start of the fishing trip and a fee must be paid. The approval is issued subject to conditions.

In most cases the approval requires the vessel to carry and operate a New Zealand Ministry of Fisheries Type-approved Automatic Location Communicator at all times during the trip. Other conditions apply such as a requirement to submit catch and effort reports to the Ministry of Fisheries; notification to Ministry of Fisheries of entry into /departure from the New Zealand EEZ; a prohibition on fishing within New Zealand fisheries waters; supervised landings; requirement to land or dispose of fish only to licensed fish receivers; and compulsory vessel inspection. The master of the vessel must give the Ministry of Fisheries at least 72 hours warning of the intention to bring the vessel into internal waters.

If the Chief Executive of the Ministry of Fisheries is satisfied that a foreign flagged vessel entering New Zealand fisheries waters with fish on board has undermined international conservation and management measures, the vessel may be directed not to enter the internal waters of New Zealand. If such a vessel enters New Zealand internal waters after being instructed not to, the master could be liable to a penalty of up to NZD 100 000 and the fish (or proceeds from the sale), fishing gear and the vessel may also be forfeit to the Crown. If a person is convicted more than once within 7 years for specified serious offences such as this, the "banning provision" applies for a period of 3 years.

In addition to the above measures, New Zealand also implements any other requirements consistent with its obligations under RMFOs. For example, all vessels carrying toothfish that enter New Zealand ports must be inspected and if there is evidence that the vessel has fished in contravention of CCAMLR Conservation Measures or if the fish is not accompanied by a valid CCAMLR Catch Document, the landing is prohibited.

d) Penalties, fees and restrictions to GFTs

Under New Zealand fisheries legislation, all nationalities, including New Zealanders, are subject to the same penalties, with the exception that foreign persons cannot be imprisoned.

The fees for activities of foreign flagged vessels in New Zealand fisheries waters are as follows:

- Foreign fishing license – fee depends on the species of fish to be targeted

- Approval to possess fish caught outside New Zealand fisheries waters within New Zealand fisheries waters on a vessel that is not a New Zealand Ship – NZD 190
- Other fees apply for activities such as observer-monitored unload, however these are not specific to foreign flagged vessels.

The New Zealand Government does not subsidise the New Zealand fishing industry in any way and actually cost recovers the cost of fisheries services from the fishing industry, e.g. cost of commercial fisheries research.

3. Other measures

Examples of non-economic and social mechanisms that discourage engagement in IUU fishing activities in New Zealand include:

- Increased media (including newspaper, television, radio) coverage of IUU fishing issues and incidents, e.g. coverage of New Zealand Prime Minister on New Zealand fisheries surveillance flight to the Ross Sea, Antarctica
- Weekly programme on national television featuring New Zealand fisheries officers undertaking fisheries surveillance around New Zealand coastline
- Increased public awareness of IUU fishing and its associated problems
- Increased pressure from environmental NGOs to address IUU fishing and its associated problems
- Increased awareness of fishing industry of IUU fishing and its associated problems
- Promotion of responsible fishing practices by New Seafood Industry Council Ltd (an organisation that represents the New Zealand fishing industry and provides advice to Government and the industry on sound fisheries management policies and practices)
- Participation of New Zealand fishing companies in international organisations with a focus on mitigating IUU fishing such as COLTO (Coalition of Legal Toothfish Operators)

Norway

1. Legal measures and regulations

Combating IUU/FOC fishing activities has been a major focus for Norwegian Fishing Authorities for several years. Norway has been one of the initiators behind the current focus on combating IUU fishing activities in CCAMLR, FAO and IMO. Subjects have been to establish an international list of fishing vessels that have participated in IUU fishing activities, ban IUU landings globally, impede trade in IUU catches to avoid it entering the market and problems concerning ensuring a the ”genuine link” between the vessel and the state whose flag it flies.

a) Fishing activities by national vessels

The Norwegian Act relating to Sea-water Fisheries, which among other things empowers the Ministry of Fisheries to establish measures concerning Norwegian flagged vessels in combating IUU fishing, is applicable in waters under Norwegian jurisdiction, in waters under national fisheries jurisdiction of a foreign State and on the high seas.

It is prohibited to carry out fishing operations on the high seas without first obtaining authorization to register the fishing vessel with the Directorate of Fisheries. Such registration is valid for one calendar year. There are reporting requirements in place, including the maintenance of a logbook. Further all fishing vessels above 24 meters in length are obliged to carry VMS. The vast majority of Norwegian vessels operating on the high seas does this in areas governed by RFMOs, and is thus obliged to fish in accordance with the applicable measures established by a particular RFMO.

> *Example:* Norwegian authorities withdraw the permit to fish in the CCAMLR-area for a Norwegian registered vessel, because the owner - a shipping company - behind the vessel previously had extensively violated fisheries regulations.

b) Fishing activities by foreign vessels within EEZ

Norway has an extensive system of agreements with other states and a large licensing program for foreign vessels, with approximately 1 200 licenses granted annually.

Foreign vessels have the duty to report to the Directorate of Fisheries concerning their activities (entry, weekly catch, exit and transhipment), including the maintenance of a logbook. All foreign vessels above 24 meters are obliged to carry VMS. When a vessel discontinues fishing operations and plans to leave Norwegian waters, it shall present itself at one of special designated control points for a possible check by the Coast Guard. If the vessel is landing in a Norwegian port, the inspection will take place there. The Norwegian national fleet has similar obligations.

For all foreign fishing vessels a licence (or permit) is required. A vessel that contravenes the applicable legislation is liable to a fine. Further the vessel used and its fittings, any catches onboard and gear may be confiscated (instead of any object, its value may be confiscated). The licence may also be withdrawn and refused in future years.

> *Example:* When a vessel, or the vessels owner, has either participated in IUU-fishing on the High seas, or has violated rules set by a RFMO, the vessel do not get the necessary permissions, concessions etc. that is required to be a Norwegian flagged fishing vessel.

c) Registration of fishing vessels

Before a vessel can be used for commercial fishing, the owner has to obtain a licence from the fisheries authorities. Such a licence can be granted only to Norwegian citizens or likewise. Further special licences are required in order to carry out specific fishing operations such as for example trawling, purse-seining etc. When a vessel is granted a licence, information concerning the vessel (name, radio call sign, tonnage, capacity, length etc.) shall be entered into a register of fishing vessels. A fishing vessel cannot be included into the Norwegian shipping register unless a licence is issued by the fisheries authorities.

In an attempt to target IUU fishing activities Norway has established a regulation stating that authorisation to fish in Norwegian waters may be denied if the vessel in question, or its owner, has participated in an IUU fishing activity. This means that a vessel may be denied authorisation to fish in Norwegian waters also if it is operated by others than those who participated in the unregulated fishery concerned. A list of such vessels has been established. As this has reduced the second-hand market value of the vessel that has participated in IUU fisheries, it has proved to be an effective tool in combating IUU fishing activities.

A licence can be granted only to Norwegian citizens or likewise (i.e. limited liability companies and other companies with limited liability, if the head office and the seat of the board are in Norway; the state, facilities and funds administered by the state, and Norwegian municipalities).

For reflagging of national flagged fishing vessels to alternative registries outside Norway, a permission is required if a particular vessel has been involved in schemes for adjustment of fishing capacity.

No other measures are in place to prevent flag hopping, but if a vessel is removed from the register a new licence will be required in accordance with the rather rigorous regulations as outlined above.

2. Economic measures

a) Investment rules

According to the Act of 26 March 1999 No. 15 relating to the right to participate in fishing and hunting at least 50% of the share capital must be held by so-called "active" fishermen, i.e. working as a professional fisherman on a Norwegian fishing vessel for at least 3 of the 5 last years and is still working within the fishing industry. Given that this requirement is met, only the following may acquire ownership to Norwegian fishing vessels:

- Norwegian nationals and persons who are resident in Norway,
- limited companies and other organisational forms with limited liability, if the head office and the seat of the board are in Norway, and the board consists of Norwegian nationals who are resident and are shareholders or unit holders, and at least six tenths of the share capital or limited partnership capital is owned by Norwegian nationals,
- the state, facilities and funds administered by the state, and Norwegian municipalities.

In special cases where companies are engaged in Norway's fish processing industry, foreigners may be allowed to hold more than 40% of the share capital of a fishing vessel if the vessel is in direct conjunction with a processing unit.

Norway has no specified rules regarding Norwegian resident investment in foreign fishing vessels. However, both Norwegian industry organisations and the government have established recommended ethical guidelines for companies and affiliates that perform foreign investment. In general, it is expected by the general opinion in Norway that both public and private sector investments are based on an ethically sound foundation.

b) Trade rules (including trade-related rules)

As a member of CCAMLR, Norway has implemented the catch documentation scheme for Patagonian toothfish.

c) Rules regarding landing, transhipments and marketing

There is a prohibition against landing of IUU catches taken in Norwegian waters, in waters of another State and on the high seas. Norwegian authorities may also deny access to its ports in special circumstances.

d) Penalties, fees and restrictions to GFTs

A vessel (Norwegian or foreign) that has contravened the applicable legislation is liable to a fine. Further the vessel used and its fittings, any catches onboard and gear may be confiscated (instead of any object, its value may be confiscated).

All foreign vessels fish in Norwegian waters on a reciprocal bilateral arrangement with other States and are not subject to fees.

Governmental support to the shipbuilding industry in relation to building of fishing vessels can only be granted if the vessel is to be flying the flag of a party to the 1995 UN Fish Stocks Agreement.

3. Other measures

At the initiative of the Norwegian Fishermen Association and the Norwegian Federation of Fish and Aquaculture a project that focuses on ethics among people engaged in fisheries has been initiated. The project will focus on giving the fishermen an ethical focus as to resource utilization, towards your fellow fishermen, buyers and other stakeholders etc. The project is co-financed of public and private sector funds. The initiative seeks to explore the possibilities of establishing a certificate for fishermen and/or fishing vessels that comply with a set of ethical standards, providing them “preferred customer status”.

As of January 2003 the Norwegian Government and the various industry organizations have signed a co-operation agreement on how to fight illegal activities. Following the agreement, a forum for discussing these issues has been established.

Poland

Introduction

Poland took an active role in elaboration of IPOA/IUU and has regulations in place to prevent IUU fishing by Polish vessels. From 1 May 2004 Poland will become a member of the European Community and will have to apply EU regulations on this matter.

1. Legal measures and regulations

a) Fishing activities by national vessels

All vessels above 10m length flying the Polish flag (regardless of the fishing area) have to be registered in the Polish Fishing Vessels Register and carry on board:

- valid fishing license,
- valid special fishing permit,
- be equipped with VMS system (so far only vessels above 18m length) and report every 2 hours its position to the relevant monitoring centre, while on fishing trip.

A fishing license can be invalidated when:

- vessel was withdrawn from the Polish Fishing Vessels Register,
- owner of the vessel was sentenced by the court for committing an offence with use of fishing vessel,
- fisher was caught during the last two years for the second time fishing during closed season or in closed areas.

All Polish vessels fishing outside Polish EEZ have to strictly adhere to the regulations of Regional Fisheries Bodies like NEAFC, NAFO, and CCAMLAR.

In recent years, there have been no infringements committed by Polish vessels fishing outside Polish EEZ.

b) Fishing activities by foreign vessels within EEZ

Foreign fishing vessels fishing in Polish EEZ have to apply regulations similar to those of Polish vessels and in accordance with a signed bilateral agreement. The fisheries administrations of foreign countries which vessels are allowed to fish in Polish EEZ have to provide a list of vessels authorised to fish under the Agreement. These vessels should report each entry and exit from Polish EEZ, as well as catch on board. They have to report their position by VMS in accordance with Polish requirements (every 2 hrs) and also provide information about daily catch and its composition.

There is no particular fee for foreign vessels fishing in Polish EEZ as in most cases they are fishing under exchange of quotas.

c) Registration of fishing vessels

All vessels above 10m length flying the Polish flag (regardless of the fishing area) have to be registered in the computerised Polish Fishing Vessels Register. The regulations in force provide clear guidance regarding conditions and documents required for registration of fishing vessel. In principle these follow requirements of EU. There is also a clear obligation to provide details about the owner of the vessel as well as operator.

The Minister responsible for fisheries matters (Minister of Agriculture and Rural Development) may refuse to register the fishing vessel in case when it will exceed the fishing capacity of the fleet or its segment previously established.

There is however no special restriction regarding vessels with IUU fishing record as this never was a problem in relation to Polish vessels. There is also no need for governmental permission for reflagging of national flagged fishing vessel but in such case the owner has to request withdrawal of his vessel from Polish Register of Fishing Vessels.

2. Economic measures

a) Investment rules

There are no government financial transfers for construction of new fishing vessels. However after 1 May 2004, a substantial amount of structural funds from the EU will be available for restructuring the Polish fisheries sector.

In the last two decades, Polish long distance fisheries practically ceased to exist. From 140 large factory trawlers operating on the high seas, only 6 remain in operation either in NEAFC/NAFO areas or under a joint venture with New Zealand.

In the case of the Baltic fleet, the structural funds will be used as a priority to reduce Polish fleet up to 40% of present tonnage. This should adjust the fishing capacity to the resources available.

b) Trade rules

Poland is party to CITES and subscribes to the regulations of this organisation. Also as a member of RFMOs, especially CCAMLAR, Poland is obliged to apply agreed regulations of these organisations.

c) Rules regarding landing, transshipment and marketing

There are no specific rules prohibiting landing of fish in Polish ports by foreign vessels.

However in the case of vessels which are known to be engaged in IUU fishing, there are a number of possibilities/measures to make landing difficult or impossible. In the early 1990s, there were some foreign vessels engaged in Atlantic salmon IUU fishing trying to land its catch in Polish harbours. Acting upon a request from NASCO, port authorities successfully discouraged landing of IUU fish in our harbours.

d) Penalties, fees and restrictions to GFTs

There are provisions for penalties for offenders of fishery rules and regulations, including IUU fishing. They are up to – about EUR 20 000 for ship operator and EUR 8 000 for the captain of the vessel which committed the offense. These also apply to foreign vessels fishing in Polish EEZ.

3. Other measures

IUU fishing on the high seas is not a problem for Polish vessels as they practically have not been involved in such activities, except for some problems of underreporting within our EEZ. Present regulations, strengthened MCS system, introduction of new log books, sales documentations as well as EU regulations of market for fish and fishery products help to eradicate the problem. For this reason present regulations do not address the matter of IUU fishing as such. As already mentioned, from 1 May 2004, Poland will become a Member of European Union and thus all rules of European Commission as well as provisions of the Common Fisheries Policy in relation to IUU fishing will have to be applied by Poland.

Portugal

1. Legal measures and regulations

a) Fishing activities by national vessels

As well as applying Community regulations on fishing activities outside the Portuguese EEZ, Portugal has instituted legal measures at national level such as licences to fish in specific zones with specified gear. These are authorised under Regulatory Decree No. 43/87 of 17 July 1987, amended by Regulatory Decree No. 7/2000 of 30 May 2000.

Fishing by Portuguese vessels in waters not subject to national sovereignty and jurisdiction is subject to European Union regulations and the provisions of Legislative Decree No. 383/98 of 27 November 1998 on the granting of fishing licences.

Order No. 14694/2003 of 29 July 2003 sets out the multi-annual criteria and conditions for licence renewal which, besides sea-worthiness and safety certificates, include proof of regular fishing activity, i.e. a minimum level of fishery product sales in the course of the previous year. This figure showing sales per vessel is then analysed using a special formula based on the number of fishers under contract (number of fishers x 12 x national minimum wage).

The Portuguese vessels engaged in fishing activities outside the national EEZ are those operating under fishery agreements and those operating on the high seas, in particular in areas regulated by regional fishery management organisations. These vessels must be fitted with a satellite-based continuous position monitoring system enabling them to be located at sea at any given time.

To our knowledge, no Portuguese fishing vessel has to date been identified as an IUU fishing vessel.

b) Fishing activities by foreign vessels within EEZ

The only fleet authorised to fish in the national EEZ is the Community fleet, in particular Spanish vessels which also fish in territorial waters under the bilateral agreements between Portugal and Spain, i.e. multipurpose vessels under the Guadiana and Minho agreements and seine-netters under the Minho agreement.

The prevailing Community regulations are applicable, as well as all the measures set out in domestic legislation, in particular on closed seasons when the fishing of certain species (e.g. bivalve molluscs) is prohibited; such measures are necessarily compatible with European Union rules.

The legal measures aimed at preventing illegal, unreported and unregulated fishing (IUU) by foreign fishing vessels are those laid down by Community regulations and by the domestic legislation, which also applies to Portuguese vessels.

Legislative Decree No. 92/96 of 12 July 1996 transposes into domestic legislation the provisions of Council Regulation (EEC) 2847/93 of 12 October 1993 establishing a control system for landings of fish by third-country vessels in national ports.

Council Regulation (EC) No. 2846/98 of 17 December 1998, amending Regulation No. 2847/93, introduces a new Title VIa on the monitoring of fishing activities by third-country vessels, setting out the duties of masters of fishing vessels from outside the EU.

The controls conducted by the relevant authorities with regard to landings by third-country vessels take place in two stages:

- First, the information required for an authorisation to land fish in a national port must be submitted no less than 72 hours before the landing operation takes place.
- Subsequently, the master of the vessel must submit a declaration providing information on the landing operation.

Under domestic regulations (LD 92/96), permission for a landing may be refused (Article 5, §2) when there is sufficient proof that an activity undermines the conservation and management measures applying to international waters or a third country, and when there is some doubt as to the origin of the catch or the authenticity of the data submitted.

In this regard, Council Regulation (EC) No. 2846/98 specifies, in Article 28g, that the competent authorities shall authorise landing only if the species retained on board have been caught outside the areas regulated by any competent international organisations of which the Community is a member, or if those species come from those regulated areas and have been caught in compliance with the relevant conservation and management measures.

Domestic legislation makes it mandatory, under Article 3 (§1), to submit more detailed information to the authorities on landings in Portuguese ports, including a breakdown of catches by species, quantities and descriptions of the fish, the circumstances in which it was caught (location, date and gear used), as well as how it is to be marketed. The same Article (§5) also stipulates that the landings may not take place in the absence of national inspectors.

With regard to post-landing controls, Council Regulation (EC) No. 2846/98 specifies, in Article 28f, that masters of third-country vessels must submit, within 48 hours of landing, to the authorities of the Member State whose ports or landing facilities they use a declaration indicating the quantity of fishery products by species landed and the date and place of each catch.

The same Regulation also requires each Member State to forward to the Commission, at its request, information concerning landings by third-country fishing vessels.

Furthermore, domestic legislation stipulates that, once the landings have been completed, foreign vessels may authorised to leave, provided the masters submit a declaration to the customs authorities, who then forward it to the Fisheries Inspectorate.

The duties of Member States regarding the control and taxation of landings by third-country vessels also stem from obligations towards the European Community by

virtue of its commitments to international and regional fisheries management organisations that adopt control and compliance systems aimed at eliminating IUU fishing.

The NAFO, NEAFC and ICCAT regulatory areas in which Community and in particular Portuguese vessels operate are examples of the many obligations to be met by the European Community and its Member States.

Besides the control schemes that institute information systems on fishing by the fleets of contracting parties in each regulatory area, regional fisheries management organisations (RFMOs) develop programmes to promote compliance with resource conservation measures by the vessels of non-contracting parties.

While the fleets of contracting parties to those RFMOs are under an obligation to comply with the recommendations they adopt, vessels flying the flags of non-members are under no obligation to comply.

As a Member State of the European Union, which is itself a contracting party to several regional fishery organisations such as NAFO, NEAFC, ICCAT, CCAMLR and IOTC, Portugal is responsible for the control and taxation of fishing activities engaged in by not only Community vessels but also third-country vessels suspected of harvesting regulated species without complying with current rules on conservation. It is to this end that controls are conducted on landings by foreign vessels in Portuguese ports.

Under the FAO's International Plan of Action to Prevent, Deter and Eliminate Illegal Unreported and Unregulated Fishing, Portugal is responsible, as a port State, for carrying out pre-landing controls and gathering information, and is authorised to prohibit landings by vessels suspected of engaging in IUU fishing, in co-operation with the authorities of the state in which the suspected vessels are registered.

Finally it should be pointed out that, under Community regulations, the European Commission has the right to request that Member States, at least once a year, include this information in their annual inspection reports.

c) Registration of fishing vessels

In Portugal, a vessel may be registered only if it is replacing a vessel over 10 years old which does not meet safety standards. However, the capacity of the new vessel is restricted in terms of tonnage and engine power, in line with Community regulations and specifications. In principle, the authorised fishing gear is identical to that of the vessel being replaced.

Under Legislative Decree No. 525/99 of 10 December 1999, the owners of fishing vessels exceeding 15 metres in overall length and harvesting species subject to quota must provide annual proof of a genuine link with Portugal.

This economic link must meet one of the following criteria:

- At least 50% of catches are landed in a Portuguese port, and a substantial share is sold locally;
- At least 50% of the vessel's crew live in a coastal area on Portuguese soil;
- At least 50% of fishing campaigns leave from a Portuguese port;
- Any combination of the above criteria, above a minimum of 50%.

Entries and exits of fishing vessels to and from the Register are not subject to prior authorisation.

However, fishing vessels belonging to joint ventures may only exit provided that there are guarantees they will comply with international law on resource management and conservation, and that they have the prior agreement of the authorities of the third country in which the joint venture is registered.

2. Economic measures

a) Investment rules

Legislative Decree No. 278/87 of 7 July (amended by Legislative Decree No. 383/98 of 27 November) sets out in Article 9 the criteria for authorising the chartering of foreign fishing vessels. Chartering is subject to prior authorisation by the Portuguese government official in charge of fisheries.

The chartering of a foreign vessel may be authorised provided that:

- It is for the temporary replacement of a vessel already approved for construction or alteration, and with identical fishing specifications;
- It is for the testing of new types of vessels or new fishing gear/techniques, or the exploration of new fishing grounds;
- Catches by the chartered vessel and the products processed from those catches are deemed to be of Portuguese origin.

The authorisation to charter foreign vessels is issued for a period not exceeding two years. The authorisation expires when the above conditions are no longer met (Legislative Decree No. 278/87, Article 9). Chartered vessels are subject to the legal provisions applying to national fishing vessels.

The chartering of national fishing vessels is also subject to prior agreement, for a renewable period of one year, by the Portuguese government official in charge of fisheries.

b) Trade rules (including trade-related rules)

Within the framework of the regional fisheries management organisations, some fisheries are tightly controlled to meet the conservation needs of stocks that are subject to considerable pressure from the fleets of not only contracting parties but also non-members. This is the case for ICCAT, which is restricting the fishing of certain species such as swordfish and bluefin tuna.

At the same time, and to discourage illegal fishing, systems are being put in place to monitor fishing activity by the vessels of non-contracting parties.

Observation reports on foreign vessels that may be unaware of current conservation measures are submitted to the RFMOs by their contracting parties.

The monitoring of these activities argues in favour of the adoption by RFMOs of trade measures against the relevant flag States to put an end to illegal fishing.

Such measures can take the form of trade restrictions and/or a ban on the landing of certain species, in the ports of contracting parties, by vessels flying the flags of specific third countries.

Catch documentation is another means of restricting illegal fishing. For imports and exports of Atlantic bluefin tuna, and recently swordfish and bigeye tuna, ICCAT now requires trade documents validated by government agencies.

In December 2001 the IOTC adopted a trade documentation scheme for bigeye tuna, while the CCAMLR has set up a catch documentation scheme for toothfish. Under the latter, an assurance is required that the fish have been harvested in accordance with current conservation measures.

The measures adopted by RFMOs to protect resources at risk from overexploitation are helping to prevent illegal fishing and thereby eliminate a substantial share of the black market. At the same time, they encourage States that are not members of regional fishery management organisations to become contracting parties, or at least co-operative non-contracting parties.

Portugal complies with the catch documentation scheme and reports to the European Commission on imports and/or exports, in particular for the species regulated by ICCAT and IOTC. The Portuguese fleet does not operate in the CCAMLR's area of competence.

c) Rules regarding landing, transhipments and marketing

Measures relating to the landing and transhipment of fish by foreign vessels in Portuguese ports are set out in Legislative Decree No. 92/96 of 12 July 1996, amended by Legislative Decree No. 286/98 of 17 September 1998 and apply to all foreign vessels, regardless of whether they are suspected of engaging in IUU fishing.

d) Penalties, fees and restrictions to GFTs

Fishing by vessels from third countries is prohibited in waters subject to national sovereignty or jurisdiction.

All Community vessels enjoy the same right of access within the European Union's Exclusive Economic Zone, with the exception of waters within 12 sea miles of the baseline.

In Portuguese territorial waters, Spanish as well as Portuguese vessels may fish under bilateral agreements and a reciprocal access regime.

The penalties imposed in the event of failure to comply with national, Community and international rules are set out in Legislative Decree No. 383/98 of 27 November 1998.

Failure to comply is punishable by financial penalties, which vary with the gravity of the violation. Other penalties include the confiscation of fishing gear or fishery products and the suspension or withdrawal of fishing licences.

To be eligible for government support, vessels must be licensed in accordance with the criteria and conditions specified either by the government department in charge of the sector, or in Regulatory Decree No. 7/2000 (Article 74 A). Fishing licences are neither issued to nor renewed for vessels that are repeatedly left idle.

Spain

Additional information to this chapter can be found in the document submitted by the European Union.

1. Legal measures and regulations

In response to the International Plan of Action (IPOA-IUU), adopted by the international Community in FAO in 2001, Spain elaborated in November 2002 its **National Plan of Action to prevent, deter and eliminate illegal, unreported and unregulated fishing** (NPOA).

By means of its National Plan of Action, Spain wishes to foster the following objectives:

- The management of fishing as a responsible economic activity in all its facets, from both a national and international perspective, on the basis of the conservation and sustainable use of resources and the responsible trading of fishery products.
- The maintenance of the perspective of the marine ecosystem, which involves addressing and regulating fishing operations in a manner that will reduce the non-target catches of other species.
- To consolidate and provide support for the fishing sector as a whole in the face of unfair competition deriving from illegal practices.

A concern for the social perspective of the problem, as a consequence of the risks befalling those crews that work on board vessels operating under flags of convenience, which do not respect the International Agreements that protect human life at sea

The approach of Spain's National Plan of Action is based on the objective and measures that according to the IPOA of FAO are to be implemented to prevent, deter and eliminate illegal, unreported and unregulated fishing in the different areas where the fishing activity takes place: resources, structures and markets.

Identification is made of the legal and administrative instruments available, by area of activity, on both a national and international basis.

a) Fishing activities by national vessels

The main body of legislation that Spain has in place dealing with fishing activities is **Law 3/2001, of 26 March, on Marine Fishing**, which applies to all national vessels, wherever they operate and to other countries' vessels in waters under Spanish sovereignty or jurisdiction.

This Act, in accordance with the European Common Policy and International Treaties and Agreements, confers to the State exclusive competency in matters involving the regulation of sea fishing and empowers it to lay down the basis of the legal system for the fisheries sector, pursuant to the provisions of the Spanish

Constitution. Amongst its aims, it includes safeguarding the balanced and responsible exploitation of fishing resources, favouring their sustainable development, and adopting those measures necessary for protecting, preserving and generating said resources. It also lays down a system of offences and penalties in the area of marine fishing in external waters, management of the fishing sector and trade of fishing products.

Further to the Law on Marine Fisheries and in accordance with it, the following Regulations have already been established:

Royal Decree 1134/2002 of 31 October 2002, on the application of penalties to Spanish nationals employed on flag-of-convenience vessels

Further to the Law on Marine Fisheries and in accordance with it, the objective of this Royal Decree is the development of the process for the application of the regulations regarding offences and penalties with regard to marine fisheries in external waters to physical and legal persons with Spanish nationality legally bound with vessels of third countries which do not comply with the obligations resulting from the conservation and management measures laid down in international law, when the flag State of such vessels does not exercise the authority to impose penalties corresponding to its jurisdiction.

It establishes, likewise, the necessary guarantees for preventing the import of catches from those vessels that have been held responsible for conducting activities of illegal fishing or contrary to the measures of conservation and management of the Regional Fisheries Management Organisations in their areas of control.

Royal Decree 176/2003, of 14 February, regulating control and inspection functions of the fishing activities:

Also implementing the Law on Marine Fisheries, this regulation entails the control and inspection of all operations involved in fishing, from the system of licences and fishing permits, Fishing gears, Fishing grounds, Logbooks and landing declarations, trough the marketing process, culminating with the consumer, in addition to all imports through all, sea, land and air channels.

Ministerial Order of 12 November 1988, wherein regulation is made in Spain of the vessel monitoring system by satellite.

Implementation of the Vessel Monitoring System (VMS) by Satellite, which is applied on a permanent basis to Spanish fishing vessels (over 1 700 in 2002) that operate all the oceans of the world. Cutting-edge technologies and a sophisticated system of data processing that permit an efficient control of the vessels are used and, where appropriate, the issuing of sanctions for unlawful practices.

Royal Decree 2287/1998, of 23 October, whereby a definition is made of the criteria and conditions of the interventions with a structural purpose in the fisheries sector.

This Royal Decree and those detailed in due course, stops vessels from being reflagged under flag of non compliance states, considering that such vessels do not cooperate in the conservation of resources, or contravene the working conditions of crew members. They are framework rules to prevent companies from changing the flag of their vessels as a way of avoiding compliance with measures of conservation and management measures agreed at international level.

Royal Decree 2287/98 conditions the authorisation for the definitive exportation of vessels of the deep-sea fleet, so as not to allow exportations to countries that are listed in ***Royal Decree, 1080/1991***, which details the states and territories that are considered to be tax havens. Incidentally, on this list that contains 48 states or territories, there are many countries that are flags of convenience from a fisheries perspective.

Royal Decree 601/1999 of 16 April, regulating the Official Register of Fisheries Companies in Third Countries.

The creation and maintenance of this register constitutes an instrument for monitoring the activities undertaken by fisheries companies involving Spanish capital in third countries.

This provision conditions registration to the fact that the fishing companies be located in countries that cooperate in the conservation of fisheries resources, either directly or through the corresponding Regional Fisheries Organisations, and that the State in question has economically exploitable fish resources within its own Exclusive Economic Zone (EEZ).

Royal Decree 3448/2000, of 22 December, laying down the basic regulations for the structural aids in the fisheries sector.

This conditions the authorisation for the incorporation of joint ventures to the fact that "there are sufficient guarantees to ensure there is to be no contravention of international law, in particular regarding the norms of conservation and management of the sea's resources and as concerns the working conditions of crew members."

b) Fishing activities by foreign vessels within EEZ

Royal Decree 1797/1999, of 26 November, on the monitoring of fishing operations by vessels of third Countries in waters under Spanish sovereignty or jurisdiction.

It establishes the monitoring of fishing operations by vessels of third Countries in waters under Spanish sovereignty or jurisdiction in order to verify compliance with the recommendations and other measures of protection and management of the fishing resources adopted by the Regional Fisheries Organisations.

Its adoption meant the creation of the regulatory instrument for consolidating control as Port State. Combined with other instruments, it provides the possibility to refuse port access to those vessels identified by Regional Fisheries Organisations as engaged in IUU fishing.

More recently, in a similar manner, the **Law 3/2001 on Marine Fishing**, lays down the regulations regarding offences and penalties with regard to marine fishing.

c) Registration of fishing vessels

The Spanish global census of the operative fishing fleet, created by Order of 30 January 1989, constitutes a single record of fishing vessels for the entire nation, with an ample and trustworthy database.

At Community level there is a census of all the fishing vessels in the EU, which was created for the purpose of controlling the fishing effort from different perspectives. Each one of the vessels that features in this census has a Community licence, which includes three kinds of information: concerning the vessel (its identification data),

concerning the owner of the vessel (name and address of the owner) and concerning the vessel's technical characteristics and gear.

In order to fish, Spanish vessels are required to be in possession of a specific authorisation issued by the fisheries authorities which specifies the area where the vessel is authorised to fish, the fishing period, as well as all the conditions it has to fulfil, in terms of both the fishing gear, target species and the regular reporting of catches and any landings to be carried out.

The data from fishing vessels authorised to fish in Community and international waters is submitted to the EU.

2. Economic measures

a) Investment rules

Foreign investment is not restricted in Spain, but national investment in third countries is regulated, especially when governmental aids to reduce the internal fishing effort can be obtained.

Royal Decree 3448/2000, of 22 December, laying down the basic regulations for the structural aids in the fisheries sector, conditions the authorisation for the incorporation of joint ventures to the fact that "there are sufficient guarantees to ensure there is to be no contravention of international law, in particular regarding the norms of conservation and management of the sea's resources and as concerns the working conditions of crew members."

As stated before, the creation and maintenance of the **Official Register of Fishing Companies in Third Countries** constitutes an instrument for monitoring the activities undertaken by fishing companies involving Spanish capital in third countries.

This provision conditions the registration to the fact that the fishing companies be located in countries that cooperate in the conservation of fishing resources, either directly or through the corresponding Regional Fisheries Organisations, and that the State in question has in its own Exclusive Economic Zone (EEZ) economically exploitable fishing resources.

b) Trade rules

The prohibition to commercialise products captured contravening the rules on protection and conservation of the fish resources is the most effective form of dissuasion of illegal captures and the best guarantee of a policy of responsible fishing.

The **Law 3/2001 on Marine Fisheries** has among its objectives the establishment of the basic legislation for the management of trade of fish products as well as the regulation of external trade. It also lays down a system of offences and penalties in the area of trade of fish products.

The law dictates the mandatory requirements for prior authorisation from the Ministry of Agriculture, Fisheries and Food (MAPA) for the masters of vessels from third countries that transport fish products and wish to unload in Spanish ports. Likewise, it indicates that those operations involving the Customs Authorities may only be carried out subsequent to presentation of said documentation.

Royal Decree 1134/2002, of 31 October 2002, on the application of penalties to Spanish nationals employed on flag-of-convenience vessels provides the necessary guarantees to impede the marketing of fish products, at the time of landing or import

onto Spanish territory by any means, of the catches proceeding from those fishing vessels that have been found responsible of engaging in activities of illegal fishing, or which are contrary to the measures of conservation and management of the Regional Fisheries Management Organisations in the area of regulation.

c) Rules regarding landing, transhipments and marketing

As it has already been stated, the adoption of **Royal Decree 1797/1999 of 26 November, on the control of the fisheries operations of the fishing vessels of third countries**, meant the creation of the regulatory instrument for consolidating control as a Port State.

On the basis of this provision, the requirement is introduced whereby authorisation has to be obtained to land or tranship in Spanish territory, as well as the need to provide proof of the origin of the catches, within the objective of ensuring that respect is upheld for the measures of conservation and management adopted by the Regional Fisheries Organisations.

Accordingly, an administrative system is introduced for the systematic monitoring and control of fisheries operations undertaken by vessels from third countries upon which the inspection is conducted.

Having this instrument has added a new dimension to the implementation of controls for combating illegal fishing:

- It allowed for the establishment in Spain, as of May 2000, of the control system for catches of "Dissostichus" (toothfish) introduced by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). This measure has meant the closure of the Spanish market to the illegal catches of this species.
- Applying the annual Resolutions on "Instructions for the eradication of the illegal fishing of tuna and swordfish in Spanish ports", based on the list of States that have a quota in the Atlantic, the computation of the same and the documentary evidence that proves the area where catches have been caught, authorisation is granted or refused to the landing or transhipping of the fisheries products in Spain.
- Inspection of the cargo of all vessels of the Contracting Parties to the International Commission for the Conservation of the Atlantic Tuna, as well as of Non-Contracting Parties: This measure complements the application of the recommendation of the ICCAT whereby a ban is imposed on the import of swordfish, red tuna and bigeye tuna from Equatorial Guinea, Honduras and Belize.

Nevertheless, this instrument of control for Spanish ports does not guarantee that illegal catches do not reach the Spanish market. Due to the effect of the free movement within the Community's internal market, illegal catches reach the Spanish market from Member States that have not introduced suitable instruments of port control. Spain proposes to encourage the application of similar measures throughout the entire European Community.

The Framewok Agreement established, in 1997, **the Annual Programme for the Integrated Control of Fisheries Activities** (PACIAP). By virtue of this programme, concerning initiatives developed on land, there is a coordinated control of non-

regulation fish sizes in transport by road. These controls are carried out within a collaboration agreement by units from the Ministry of Agriculture, Fisheries and Food and the Ministry of the Interior, involved in the control, monitoring and surveillance of fishing activities.

d) Penalties, fees and restrictions to GFTs

Law 3/2001 on Marine Fisheries and further legislation lays dawn a system of offences and penalties in the area of marine fisheries. There is no differential treatment between national and foreign vessels with regard to sanctions.

The main infractions related to IUU activities are considered to be heavy infractions or very heavy infractions.

The following are considered heavy infractions: a) fishing without the appropriate authorisation, b) fishing a species when its TAC is exhausted, c) fishing in closed areas or during seasonal closures or for banned fish species, d) no compliance with the effort rules, e) not having the VMS installed, f) no compliance with communication rules g) landings from third countries vessels without control, h) landing outside permitted zones, i) landing, commercialisation or transportation of undersized products, j) the use of non-regulated gears, etc.

The following are considered very heavy infractions: a) to fish with a vessel not registered in the Fishing Vessels Census, b) Third countries vessels fishing in Spanish waters without the required authorisation, c) landings from Third Country vessels without justifying its origin, d) no compliance with the obligations derived from International Treaties, e) fishing with forbidden gears or techniques (e.g. use of dynamite), etc.

Heavy infractions are sanctioned with a fee of between EUR 301 to EUR 60 000, as well as an immobilisation of the vessel for no longer than 3 years and the seizure of the products.

Very heavy infractions are sanctioned with a fee that oscillates between EUR 60 001 and EUR 300 000, an immobilisation of the vessel of no longer than 5 years, the seizure of the fishing products and the vessel when it is not registered in the Fishing vessels Census.

3. Other measures

On 26 August 1997, establishment was made of a **Fisheries Protected Zone in the Mediterranean Sea** (Decree 1315/1997), to control the activity of vessels of other flags beyond the 12-mile limit. This FPZ is in compliance with the Convention on the Law of the Sea and invoked "*erga omnes*". Thus Spain exercises its jurisdiction over the FPZ in the Mediterranean and exercises its powers of control and inspection, pursuant to Community and Spanish legislation. As a result of the establishment of the FPZ, Spain supervises and, where appropriate, denies the right to fish in that area from non-EU third countries, which has already meant an improvement in stocks of red tuna and other species of tuna.

During the last years, a notorious decrease in the consumption of undersized fish has been noted, especially thanks to the information campaigns of the FROM (Autonomous Organisation addressed to regulate the internal fish market, that depends from the Fisheries Ministry).

Sweden

1. Legal measures and regulations

a) Fishing activities by national vessels

The Swedish Fisheries Act of 1993 is valid in Swedish territorial waters and in the EEZ of Sweden. Certain parts of the act are also applicable on the high seas and in other waters where fishing is conducted under different international agreements. The Swedish regulations that are applicable on the high seas and in the EEZ of other countries concern, among other things, what kind of fish that is permitted to catch, what kind of equipment and techniques that may be used and in what areas and during what time of the year fishing is allowed.

Violation of the Swedish Fisheries Act by a Swedish vessel outside the Swedish territory could be within the jurisdiction of a Swedish court. The penalty is a fine or prison of up to one year. If the crime is severe, the penalty may be two years of prison.

Swedish vessels fishing in the high seas or in EEZ of another non-EU country need special permits to fish. In Sweden, three types of permits exist :

- Fishing vessel permit – a permit for the actual vessel.
- Personal fishing license – connected to the individual fisher
- A special fishing permit – Is sometimes needed for a fishing vessel to fish in international waters or in other EEZ countries.

The National Board of Fisheries issues the special permit. The special permit can be revoked if regulations have been breached. The Special permits are issued based on historical fishing records in the area in question. If the vessel has been caught for illegal fishing, it might lead to a reduction of the vessels fishing ration or to a withdrawal of the special permit for a certain period of time.

Certain reporting procedures must sometimes be acknowledged when fishing in international waters. All Swedish vessels with a length of 15 meters or more have to use a VMS (satellite) to report their position. This regulation is valid for Swedish territorial waters as well as in international waters.

The National Board of Fisheries may, when a sentence has acquired legal force, decide to revoke a fishing vessel's general permit to fish. The withdrawal of the permit can last from two weeks up to six months.

Control at sea and in harbours is carried out by the Coast Guard. Their jurisdiction is limited to Swedish waters. The Coast Guard has participated in controls conducted in international waters in NEAFC areas. When Swedish vessels fish in waters outside Swedish territorial waters, the Fisheries Act allows foreign authorities to check the vessels through boarding. The captain is obliged to facilitate control of any kind.

Two sentences in Swedish courts against Swedish fishers have attracted attention lately. One sentence concerns fishing in international waters without a special permit, the other illegal fishing of herring in the North Sea. A summary of the two verdicts can be found in Annex 1 of this section.

In addition to national fisheries regulations there are EC regulations that are relevant to Swedish fishers.

b) Fishing activities by foreign vessels within EEZ

The EC has exclusive competence to negotiate and conclude fisheries agreements with third countries. All agreements that allow fishing by foreign vessels in Swedish waters exists with Norway. Vessels from other EC countries may fish in the EEZ of Sweden as long as there are quotas, or if fishing is conducted on unregulated species.

The behaviour of third country fishing vessels fishing in Swedish territorial waters is regulated under different EC-regulations and in agreements with the countries in question.

The Coast Guard controls foreign vessels fishing in the Swedish EEZ. The Swedish Fisheries Act is applicable also for foreign vessels fishing in Swedish EEZ. Violations against Swedish regulations can be judged at Swedish courts.

To fish without a valid permit is a serious crime. The penalty for violation of the Fishing Act in Sweden is fines. Furthermore equipment, vessels and catch can be confiscated. This is true for Swedish fishers as well as for foreign fishers. Due to the fact that Sweden has ratified the 1982 UN Convention on the Law of the Sea, prison is not in the range of punishment for fishing crimes within the EEZ.

c) Registration of fishing vessels

The Swedish fishing vessels are listed in two different registers. One is kept by the Swedish Maritime Administration and the other by the National Board of Fisheries. In the register kept by the Swedish Maritime Administration all vessels that have a length of 5 meters or more is listed. In this register a ship is considered a fishing vessel if it carries the appropriate equipment. If the owner of the vessel has a valid fishing licence a district identification code is given to the vessel. Thus, there might be ships in the Swedish Maritime Administrations register that are listed as fishing vessels but can't be used for fishing due to the fact that the owner of the vessel does not have a valid fishing license.

In the register kept by the National Board of Fisheries, there are, however, only active fishing vessels listed. The requirement for a vessel to be listed in this register is that the National Board of Fisheries has issued a fishing vessel permit. The demands that must be fulfilled to obtain a fishing vessel permit are three. 1) The vessel must be listed in the Swedish Maritime Administrations register of shipping, 2) there must be a financial connection to Sweden and 3) that a fisher with a valid fishing license can be registered as permit holder/ship operator of the vessel.

Fishing vessel permits can be refused or revoked under certain circumstances. See parts 1a and 1b.

In Sweden a fishing vessel permit is issued to a person with a valid fishing license, not to the actual vessel or to the actual owner of the vessel. Governmental or public authority permission is not needed for reflagging of national flagged fishing vessels to

alternative registers in other countries. No special measures are in use to prevent flag hopping, but increased cost for administration and security for bank engagement can act as a deterrent.

2. Economic Measures

a) Investment rules

As a general rule, a ship is to be considered Swedish and has the right to carry Swedish flag if more than half of the owners are Swedish citizens or Swedish juridical persons. For more detailed information see the Swedish Law of the Sea (1994:1009).

To be allowed to fish under Swedish quotas, a personal fishing license is needed. Licenses are granted according to the stock situation and the fisher must have a connection to the Swedish fishing industry. Landings in Sweden, the fact that fishing trips must start in Swedish ports and that the fisher live in Sweden demonstrate this connection. To be able to apply for a vessel permit, a fishing license is required. The vessel also has to carry the Swedish flag. The vessel permit is necessary if a vessel is to be used in a professional fishery.

b) Trade rules

As a member of the EU the rules for trade are the same as for the EU as a whole. No special measures are applied to prevent trade in fish and fish products of IUU origin.

c) Rules regarding landing, transhipments and marketing

Third country fishing vessels may only land their catch in 13 selected harbours. There are no national regulations that forbid reloading from foreign vessels.

There are no special regulations that apply to vessels that have been involved in criminality. The National Board of Fisheries and the Coast Guard have, however, frequent contacts through a risk based check-up system where special control measures can be directed towards vessels that can be suspected of crime.

EC regulations regulate the remainder of this area.

d) Penalties, fees and restrictions to GFTs

The same penalty code in the Fisheries Act applies for Swedish fishers as for foreign fishers. Crimes committed by foreign vessels are generally harder to investigate, especially if the vessel has left Swedish waters. The prosecutor is sometimes forced to cancel preliminary investigations due to the fact that the suspect has left the country and is not expected to return.

Fishing without necessary permits is a serious crime. With the exception of the two sentences mentioned in section 1b, no one has been convicted as fishing without a valid permit. The National Board of Fisheries has, however, recently observed a few cases where Swedish fishers have been fishing without valid permits. One explanation can be that the fishers have forgotten to renew their permits but the National Board of Fisheries has, however, previously notified the prosecutor.

The EC concludes fisheries agreement with third countries in the Swedish EEZ. Possible fees are resolved in the agreement.

3. Other measures

In Sweden the organisation for the West Coast Fishers (Svenska västkustfiskarnas centralförbund) has certain rules concerning defiance of quota rations. Fishers that fish over the quota rations, and are a member of the organisation, can be fined. In the last three years no one has been fined. The organisation does not have penalties concerning violation of other rules and regulations.

Members of the organisation for the West Coast Fishers are responsible for approximately 80 % of the landed quantities of fish.

Appendix

Summary of two court cases

In the first case, which was decided on 23 December 2002, the masters of two Swedish fishing vessels were convicted of illegally fishing for herring on the high sea in the North-East Atlantic Fisheries Commission area (NEAFC). Swedish fishing vessels are prohibited to fish on the high seas unless the vessel has a special fishing-license from the National Board of Fisheries for this. The two vessels, which according to the log books had been fishing in the NEAFC-area, didn't have the special fishing-license for this activity. The masters said in the court that they didn't know that it was necessary to have the special fishing-license, they thought it was enough that Sweden had quota for herring in the area. The two masters got fines, together SEK 87 000 and they moreover had to pay the value of the illegal catch, SEK 179 000.

In the second case, which was decided on 19 May 2003, the masters of four Swedish fishing vessels were convicted of illegally fishing for herring in the North Sea notwithstanding the fact that their log books purported to show that they had been fishing in the Baltic Sea (which would have been lawful in the case of herring at that time). The main evidence against the accused was provided by marine biologists who testified that there was virtually no doubt that the herring caught did not come from the Baltic Sea as well as the fact that the vessels had not been observed at any of the three entry points into the Baltic Sea. The court however, in finding the accused guilty, took particular notice of the fact that the satellite tracking systems of the four vessels ceased transmitting at almost the same time and resumed their transmission virtually simultaneously. This was seen to be evidence of suspicious conduct on the part of the accused. The four masters got fines, together SEK 912 000 and they moreover had to pay the value of the illegal catch, SEK 1 068 000.

Turkey

1. Legal measures and regulations

a) Fishing activities by national vessels

No regulation is in place that regulates Turkish flagging vessels fishing activity outside our country's EEZ. Those vessels must apply and get permission from the competent fishing authority to fish in a country's EEZ or territorial waters and possess the document of that country allowing foreign vessels to fish in those waters.

b) Fishing activities by foreign vessels within EEZ

Turkish Fisheries law (no. 1380) does not allow foreign vessels to fish in Turkish EEZ or territorial waters. Should foreign vessels fish illegally, their equipment and their IUU origin fish are confiscated and financial penalties are applied (up to USD 3 600).

c) Registration of fishing vessels

General requirements for registering of fishing vessels are:

- technical suitability of the vessels for sailing;
- owners must have Turkish nationality;
- owners must be over 18 years of age.

According to the recent amendment in the Fisheries law, those engaged in IUU fishing activities would be punished with removal of fishing licence following a period of 1-3 months temporary ban from fishing. Additionally, financial penalties are also added (up to about USD 4 200).

Ship owners and operators are both eligible for licensing and government permission is required. Financial penalties are in place (up to about USD 3 600).

2. Economic measures

a) Investment

The Turkish fisheries sector is fully liberalised although the investor should have Turkish nationality. However, licensing of fishing vessels has been frozen due to over fishing capacity, except for those operating in new dams and lakes.

b) Trade rules (including trade-related rules)

IUU origin fish are confiscated and subsequently sold in auction after being subjected to legal trade.

c) Rules regarding landing, transhipment and marketing

No rule is in place regarding foreign direct landing and transhipment from foreign vessels.

d) Penalties, fees and restriction to GFT

Foreign vessels, their equipment and their IUU origin fish are confiscated. Additionally financial penalties are applied (up to USD 3 600) but fees are not implemented.

3. Other measures

Pressures of environment and nature groups, NGOs, press and media on fishing community by bringing attention to IUU and over fishing, damage to natural stocks, threat of extinction of some species, etc.

United Kingdom

1. Legal measures and regulations

a) Fishing activities by national vessels

The UK takes responsibility for the implementation of measures specified in Community legislation as detailed in the Commission's response to this question.

b) Fishing activities by foreign vessels inside EEZ

Access to UK waters by foreign vessels is determined by Coastal State based on fishing rights of the flag state. Access rights for 3rd country vessels are determined by the Commission. See chapter from European Union for the response regarding bilateral agreements with 3rd countries.

c) Registration of fishing vessels

Registration is required by the UK for all commercial fishing vessels. See Commission's response.

2. Economic measures

a) Investment rules

The main investment rules for UK flagged vessels are regarding economic links. These rules are for UK flagged vessels only.

b) Commercial or related rules

The UK has cooperated under the guidance of a regional organisation to develop and implement internationally agreed market-related measures to combat IUU fishing and has participated in catch certification schemes of Regional Fisheries Management Organisations.

c) Rules on landings, transhipment and marketing

See the European Commission's response regarding Community legislation regarding control regulations and fishing permits.

d) Penalties, fees and restrictions to GFTs

See the European Commission's response regarding Community legislation that details the measures Member States, including the UK, take in event of non-compliance with the rules of the Common Fisheries Policy.

3. Other measures

See the European Commission's response regarding sustainable exploitation of fisheries resources under the Common Fisheries Policy.

United States

1. Legal measures and regulations

The United States has been – and will continue to be – among the leaders of the international community in efforts to address IUU fishing. The United States contributed actively to the development of the FAO International Plan of Action on IUU (IPOA-IUU) and to measures adopted in various regional fisheries management organizations (RFMOs) on this topic. At the national level, U.S. laws and regulations to combat IUU fishing are among the strongest, most comprehensive and best enforced in the world.

a) Fishing activities by national vessels

The U.S. Lacey Act (16 U.S.C. 3371 et seq.) makes it unlawful for any person subject to U.S. jurisdiction to "import, export, transport, sell, receive, acquire, possess or purchase any fish ... taken, possessed or sold in violation of any ... foreign ... law, treaty or regulation." The United States has used the Lacey Act successfully to prosecute U.S. nationals who engage in certain forms of IUU fishing. A recent case, involving both foreign nationals and U.S. nationals who were illegally importing large quantities of Honduran spiny lobster into the United States, was prosecuted criminally under the Lacey Act and resulted in some of the longest jail terms ever given under that statute. (See U.S. vs. McNabb, *et. al.*) Such prosecutions occur only where there is some "nexus" between the activity in question and the United States, e.g., where the fish or fish products are landed, brought, or introduced into any place subject to the jurisdiction of the United States.

Although the Lacey Act covers acts in violation of any "treaty," it does not expressly cover acts in violation of conservation and management measures that may be adopted by RFMOs. Certain other U.S. laws make it unlawful for U.S. nationals (and other persons subject to U.S. jurisdiction) to engage in fishing activity in violation of such measures (see, *e.g.,* Atlantic Tunas Convention Act (16 U.S.C. 971), North Pacific Anadromous Stocks Act of 1992 (Title VII of P.L. 102-567), etc.).

The United States has implemented the FAO Compliance Agreement, requiring all U.S. vessels fishing on the high seas to possess a permit and conditioning such permits on observation of all internationally agreed conservation and management measures recognized by the United States. Permit holders are required to fish in accordance with the provisions of these agreements and U.S. regulations.

The Magnuson-Stevens Act lays out a process for, and various prohibitions on, transshipment activities by both U.S. and foreign vessels. The National Marine Fisheries Service (NMFS), however, does not completely regulate transport and support vessels. Transhipments between U.S. fisheries go largely unchecked, and are

prohibited only in a few isolated fisheries. For instance, U.S. regulations of highly migratory species do not allow U.S. vessels to participate in at-sea transhipments.

Within the U.S. Government, a number of federal agencies have responsibility for MCS functions, including the National Oceanic and Atmospheric Administration (NOAA), U.S. Coast Guard, Customs, the Immigration and Naturalization Service, the Department of Justice, the Department of State, and others.

The United States has recently taken significant steps to update its fishery MCS program. Since 2000, the United States has more than doubled the budget for the National Marine Fisheries Service (NMFS) Office for Law Enforcement, expanding federal-state law enforcement partnerships and funding a national VMS program. This increased support has enhanced U.S. capacity to monitor fishing operations and landings, and to oversee the passage of fishery products through commerce at unprecedented levels.

Over the past twenty years, the U.S. Coast Guard's role in fisheries law enforcement has shifted from monitoring foreign fishing activity in waters under the jurisdiction of the United States to ensuring compliance by U.S. fishing vessels while minimizing illegal incursions of foreign vessels into U.S. waters.

To date, NMFS's Office for Law Enforcement has actual or pending arrangements for the monitoring of nearly 2 500 fishing vessels in both domestic and international fisheries. Domestically, the United States first used VMS in the Hawaiian pelagic longline fishery in 1994. VMS monitors approximately 130 longliners, deterring them from fishing in large closed areas established to reduce localized overfishing, and minimizing conflicts with endangered species. VMS is also required in certain fisheries in New England and Alaska. Currently NMFS and the U.S. Coast Guard are working on implementing a National Vessel Monitoring System (N-VMS). N-VMS will not require VMS on all vessels. It will, however, consolidate all VMS information into one database and promote near real-time transmission of this data to on-the-water assets.

The United States maintains a tuna access agreement with the island States of the South Pacific Forum Fisheries Agency. The agreement stipulates the use of VMS on U.S. vessels fishing in these countries' EEZs and requires observers on a proportion of fishing trips. U.S. vessels also fish in Canada's EEZ under a bilateral treaty governing mutual access to Pacific albacore tuna stocks. These vessels are subject to the same MCS requirements, *i.e.* observers, logbooks, etc, as those participating in the U.S. domestic albacore fishery.

NMFS deploys approximately 500 observers who monitor more than 42 000 fishing days in more than 20 fisheries annually. Most are used in domestic fisheries, but the United States does require observer coverage in many high seas fisheries as well. Observers are generally used to collect data for monitoring catch, discards, and incidental takes of protected species such as marine mammals, seabirds and sea turtles. In some fisheries, observers may also be used to monitor compliance with regulations. Observers are, however, recruited as biological technicians to perform primary activities that are scientifically oriented.

NOAA has also been active in promoting and sharing information within national judicial systems. A good example of sharing this type of information involves the first known case worldwide relying exclusively on VMS evidence to be decided by a court of law (See NOAA case In the Matter of Lobsters, Inc. and Mr. Lawrence M. Yacubian). The decision and other information on the case were immediately shared

with national representatives on the MCS Network and other interested countries and widely distributed on the Internet. As VMS proliferates, information sharing is essential, as judges around the globe will face similar issues within the context of their legal structures.

The U.S. Government participates actively in numerous international fisheries organizations and continually seeks to promote MCS mechanisms and regimes that are consistent with international as well as domestic laws.

The United States is already party to several international agreements that provide for the boarding and inspection of vessels fishing on the high seas, under certain conditions and subject to certain limitations. Those regimes are the Convention for the Conservation of Anadromous Stocks in the North Pacific Ocean, the Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea, and a scheme established under the auspices of the Northwest Atlantic Fisheries Organization. n addition, the United States is among those States that have signed the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, which provides for a similar scheme. Under the Magnuson-Stevens Act, the United States has full authority to board and inspect all vessels fishing in waters under the jurisdiction of the United States, as well U.S. vessels fishing on the high seas.

Examples involving IUU fishing activities by national vessels include a recent case, involving both foreign nationals and U.S. nationals who were illegally importing large quantities of Honduran spiny lobster into the United States, was prosecuted criminally under the Lacey Act and resulted in some of the longest jail terms ever given under that statute (See U.S. vs. Mcnabb, *et.al.*).

b) Fishing activities by foreign vessels within EEZ

The Magnuson-Stevens Act provides the legal framework under which foreign fishing vessels may operate in the U.S. EEZ. Generally speaking, no foreign vessel may fish in the U.S. EEZ unless the flag State has concluded a "Governing International Fishery Agreement" (GIFA) with the United States. One exception to this rule is a U.S.-Canada treaty governing the Pacific Albacore tuna fishery that allows reciprocal access to albacore tuna stocks in each other's EEZs. At the present time, only a small number of States have GIFAs in force with the United States.

Vessels of flag States that have GIFAs in force are eligible to receive allocations of surplus fish stocks for direct harvesting in the U.S. EEZ. Those vessels may also participate in certain types of "joint venture" fishing operations in partnership with U.S. companies. With the exception of 2001, there have been no surplus stocks available for direct harvesting by foreign vessels since the early 1990s. A small amount of "joint venture" fishing does take place each year.

GIFAs contain a number of provisions designed to prevent IUU fishing by foreign vessels operating in the U.S. EEZ, including mandatory reporting, use of observers and VMS in certain situations and a number of other controls. These requirements are comparable to those imposed on U.S.-flagged vessels participating in the same fisheries. Given the low level of foreign fishing in the U.S. EEZ in recent years, and the high level of U.S. monitoring required of those operations, the United States is

confident that no IUU fishing is taking place by foreign vessels authorized to fish in waters under the jurisdiction of the United States.

Under the U.S.-Canada Pacific Albacore treaty, each country retains responsibility for enforcement over its vessels. Canadian vessels are required to hail in and hail out when entering or leaving the U.S. EEZ, and if a violation is detected while in U.S. waters, U.S. enforcement officials will alert Canadian enforcement to take the appropriate action upon the vessel's return to Canadian waters.

c) National legal measures against IUU fishing activities by foreign vessels and fishers

The legislative chart in the Appendix summarizes the current levels of sanctions available under U.S. law for IUU fishing.

If unauthorized foreign fishing in waters under the jurisdiction of the United States is detected, the vessel will typically be seized and brought into a U.S. port where prosecution will occur, including high monetary fines and possible vessel and catch seizure. This treatment is similar to that of U.S.-flagged and permitted vessels committing similar violations. In certain instances, the evidence of the violation will be given to the vessel's flag state so that it may prosecute the offence rather than U.S. authorities.

The United States and Russia have developed a broad and growing cooperative relationship on fisheries enforcement matters in the Bering Sea and North Pacific Ocean, under the umbrella of a 1988 Agreement on Mutual Fisheries Relations. Particular attention has focused in recent years in deterring and penalizing incursions by Russian and third-party vessels across the U.S.-Russia maritime boundary line in this region. Recently, the first meeting of fisheries law experts took place between Russia and the United States.

The United States and Mexico also cooperate on fisheries enforcement matters, but do not yet have a formal agreement in this field. Fisheries enforcement officials share information regularly on an informal basis, particularly with respect to pending investigations concerning alleged illegal fishing by vessels of one State in waters of the other State. The two States have also been attempting to make more routine the handling of cases involving small Mexican vessels (*lanchas*) operating in the Gulf of Mexico that cross into waters under the jurisdiction of the United States and fish illegally. An effort is also underway to develop a U.S. - Mexico fisheries enforcement agreement modelled on the U.S. - Canada and U.S. - Russia agreements.

Since 1991, the United States has maintained a Memorandum of Understanding (MOU) with the People's Republic of China that facilitates joint enforcement of the high seas driftnet moratorium in the North Pacific. The MOU allows boarding of vessels of one Party suspected of large-scale high seas driftnet (HSDN) fishing by enforcement officials of the other Party. The MOU also provides for officials of the People's Republic of China to embark on U.S. Coast Guard cutters engaging in high seas driftnet patrols. For the last several years, in addition to deploying on cutters on an as-needed basis, PRC officials have taken part in U.S. Coast Guard fisheries law enforcement training in Kodiak, AK and in U.S. Coast Guard HSDN surveillance flights.

The United States apprehends and prosecutes foreign flag vessels that engage in IUU fishing within waters under the jurisdiction of the United States and through

appropriate international authorities. The cases described below are examples of such sanctions.

In September 1994, the Honduran-flagged, Korean owned, F/V HAENG BOK #309 was determined to have made three incursions into the U.S. EEZ, and it complied promptly with U.S. Coast Guard attempts to conduct a boarding. The case was settled for a civil penalty of USD 1.12 m and the company was required to put Vessel Monitoring Systems (VMS) on their entire fleet of 19 longliners for a period of five years.

The Polish flag vessel ADMIRAL ARCISZEWSKI was detected fishing 1000 yards within the U.S. Exclusive Economic Zone (EEZ) on June 14, 1996. This was the vessel's second offence. The case was settled for USD 750 000, plus USD 10 276 for U.S. Coast Guard costs.

The South Korean flag vessel KUM KANG SAN was detected fishing 500 yards within the U.S. EEZ on September 6, 2000, and it complied promptly with U.S. Coast Guard attempts to conduct a boarding. The case was settled for USD 300 000 plus USD 16 415.29 in costs.

In July 1997, the unflagged F/V CAO YU #6025 was detected conducting large scale driftnet fishing on the high seas, and the vessel failed to cooperate with the U.S. Coast Guard boarding attempts, resulting in a forced boarding of the vessel. The vessel was forfeited to the United States along with its entire catch of 120 mt of albacore tuna, for an estimated total loss to the unknown owner of USD 435 000.

The South Korean flag vessel MAN JOEK was detected fishing 400 yards within the U.S. EEZ on November 10, 2001, and it complied promptly with U.S. Coast Guard attempts to conduct a boarding. The case was settled for USD 250 000.

d) Registration of fishing vessels

All vessels of five net tons or greater that are owned by a U.S. citizen or corporation are required by under U.S. law to be federally documented through the U.S. Coast Guard's National Vessel Documentation Center (NVDC) if the vessels are to be used in the fishery trade. Fishing vessels less than five net tons may not be federally documented, but are otherwise registered by individual states of the United States. Authorization for U.S. vessels to fish in U.S. federally managed fisheries or upon the high seas is a responsibility of NMFS.

Currently, a system does not exist where NMFS shares information on a vessel's past fishing activity to the U.S. Coast Guard's NVDC as criteria for issuance of federal documentation or to individual states as criteria for state registration. However, Section 401 of the Magnuson-Stevens Act directs the Secretary of Commerce, in cooperation with several other officials and organizations, to "develop recommendations for implementation of a standardized fishing vessel registration and information management system on a regional basis." NMFS is developing a National Fishing Vessel Registration and Fisheries Information System, which would be a cooperative federal-state partnership.

The United States participates in a number of regional fishery management organizations that are developing rules to prevent vessels involved in **chartering arrangements** from being used for IUU fishing. In the ICCAT context, U.S.

regulations require U.S. vessels to receive permits from, and report catches to, NMFS. The United States has the authority to issue exempted fishing permits to certain U.S. vessels involved in chartering operations for ICCAT species and to link reporting requirements so that we could collect the same information that the foreign chartering partner receives.

The Northwest Atlantic Fisheries Organization (NAFO) has a pilot program allowing the use of national fishing privileges by chartered vessels flying the flag of another NAFO member. Catches made using such arrangements are assigned to the NAFO member that received the fishing privileges. All MCS responsibilities remain with the flag State.

The United States requires express authorization to fish in most, but not all, federally managed fisheries. The existence of prior convictions for illegal fishing does not preclude an applicant from obtaining a permit. However, if a prior fine for such a violation is unpaid or if a permit sanction exists, the new permit will be denied until the prior penalty is paid or the permit sanction is served. Under the Magnuson-Stevens Act, the transfer of a vessel to a new owner does not extinguish the prior or existing permit sanctions, although the change in ownership may be taken into account in considering whether to issue a new permit.

U.S. vessels wishing to fish on the high seas must obtain a NMFS permit. NMFS checks for prior U.S. fisheries violations before issuing such permits. The existence of such violations is taken into account in determining whether to issue a permit, but is not an absolute bar.

Although the United States does not require flag-state authorisation for foreign vessels fishing in waters under the jurisdiction of the United States, we do require observers and other measures to ensure compliance. However, while the U.S. Government asks for a compliance history of foreign fishing vessels, responses are not investigated.

As noted above, the United States has implemented the FAO Compliance Agreement, requiring all U.S. vessels fishing on the high seas to possess a permit and conditioning such permits on observation of all internationally agreed conservation and management measures recognized by the United States. Permit holders are required to fish in accordance with the provisions of these agreements and U.S. regulations.

U.S.-flagged fishing vessels greater than five net tons must be U.S.-built and wholly owned by a U.S. citizen, or by a U.S. corporation or partnership that is at least 75% U.S.-owned. There are no restrictions on registering small vessels built outside of the United States. The National Vessel Documentation Center (NVDC) requires proof of U.S. citizenship for the owner, proof that the vessel was built in the United States, and evidence of removal from the previous flag prior to issuing a federal document with fisheries endorsement. The NVDC database tracks ownership and encumbrances (mortgages, liens, etc.) for all fishing vessels.

As a general matter, U.S. laws and regulations do not offer a direct means to prevent U.S. nationals from reflagging fishing vessels, but the American Fisheries Act of 1998 (46 U.S.C. 12102(c)(6)) does prevent the return of large class fishing vessels to U.S. registry once they have been reflagged.

Flag-hopping is characterized as the practice of repeated and rapid changes of a vessel's flag for the purposes of circumventing conservation and management measures or provisions adopted at a national, regional or global level or facilitating

non-compliance with such measures or provisions. The NVDC requires proof of U.S. citizenship for the owner, proof that the vessel was built in the United States, and evidence of removal from the previous flag prior to issuing a federal document with fisheries endorsement. This review by NVDC prevents vessels from jumping flags repeatedly, and may provide the opportunity for review of historical flagging of vessels

Among many recommendations contemplated in the U.S. NPOA are:

- Examine the possibility of linkages between the U.S. Coast Guard's registration process and NMFS's fishery permit process.
- Consider withholding issuance of documentation, registration and/or fishing permits to vessels that have a history of IUU fishing, unless change in ownership and control of the vessel has been verified.
- Consider establishment of a national registration process for small fishing vessels, less than five tons.
- Consider establishing a database of photographs for documented fishing vessels.
- Consider consolidating information on state-registered fishing vessels into a national database.
- Consider developing unified permitting and renewal scheme for U.S. vessels. Permits are issued differently in each of five different regional NMFS offices.
- More thoroughly investigate compliance history of foreign vessels applying to fish in waters under the jurisdiction of the United States.
- Improve logbook data requirements in accordance with paragraph 47.2 of the IPOA-IUU.
- Develop a mechanism to share violation histories on IUU vessels with other States.
- Review the existing process on transhipment activities and determine where improvements are possible, *e.g.*, prior notification.

2. Economic measures

a) Investment rules

The United States has no restrictions on investments in shore-side operations such as processing plants. The US does maintain laws that prohibit the transportation of merchandise between points in the United States except on US-built vessels documented under US law and owned by citizens of the USA. These laws are collectively known as the Jones Act. The American Fisheries Act of 1998 has had a significant impact on foreign direct ownership/shareholding restrictions. The AFA increased U.S. percentage of ownership requirement from 51% to 75%.

b) Trade rules (including trade-related rules)

As a matter of policy, the United States considers the use of trade restrictive measures to be an extraordinary action. The United States recognizes that the most effective trade measures to combat IUU fishing are likely to be those that are developed and implemented under the auspices of multilateral organizations with well-

defined conservation goals articulated as first principles. The United States has actively participated in the establishment of such measures (including import prohibitions, landing restrictions, and catch certification and trade documentation schemes) through our membership in various RFMOs. As discussed more fully below, the United States believes that RFMOs should expand the use of such measures to combat IUU fishing.

The United States fully implements a range of catch documentation and certification schemes through RFMOs. For example, we prohibit the importation of certain tuna and tuna-like species from specific States in accordance with recommendations adopted by ICCAT. We also require imports of certain fish and fish products to be accompanied by documents mandated by RFMOs such as ICCAT and CCAMLR.

The United States has taken the lead in promoting the use of catch documentation and certification schemes in a number of RFMOS such as CCAMLR, ICCAT, and the IATTC. CCAMLR and IATTC have adopted catch certification programs and ICCAT has adopted statistical document programs for several species. These programs are under continuous review in an effort to improve their effectiveness.

The United States actively supports the goal of standardizing catch documentation requirements to the extent feasible, and has been working with FAO, certain RFMOs and other States to achieve it. The United States considers the implementation of harmonized electronic catch certification and documentation schemes tailored to fit the needs and requirements of each RFMO to be the most effective way to accomplish this objective. For example, the United States is working with other members of CCAMLR is moving towards converting its documentation scheme for toothfish to an electronic format. Meanwhile, CCAMLR is developing ways to make its forms more efficient and comprehensive.

As noted above, the U.S. Lacey Act makes it unlawful for persons subject to U.S. jurisdiction to "import, export, transport, sell, receive, acquire, possess or purchase any fish ... taken, possessed or sold in violation of any ... foreign ... law, treaty or regulation." if the fish or fish product was harvested in violation of another State's law or in violation of a treaty. As for commercial suasion, the United States has not provided "administrative guidance" to its fisheries sector in the way that some countries have done and is not likely to do so in the future.

In a number of instances unregulated and unreported fisheries are also unidentified fisheries. In this regard, the Unites States joined with other States in March 2002 at the FAO in developing a draft Strategy for the Improvement of Reporting on Status and Trends in Commercial Fisheries. One element of this draft strategy is to expand the customs codes into products and fisheries not currently covered by codes and then to expand the depth and breadth of FAO's reporting on these fisheries, such as those for sharks or coral reef species that currently operate without any tracking of volumes and movement of trade. The United States is a supporter of this strategy and will work for its adoption and implementation at FAO.

The United States has been a leader in encouraging closer cooperation between the FAO and CITES to improve the applicability of CITES provisions to commercial fisheries and supports the early development of an MOU between the two organizations to formalize cooperation. The United States would also like to see greater cooperation between FAO and CITES lead to increased law enforcement capacity from both organizations in line with the MCS provisions of the IPOA. As a tool for tracking trade and as a legally binding instrument, CITES Appendix II can be

useful in accurately cataloguing and deterring IUU fishing. The United States thinks that CITES could be used under certain circumstances as an effective adjunct to traditional fisheries management regimes. CITES cannot replace fisheries management, but can be an effective tool to control and track and regulate trade.

c) Rules regarding landing, transhipments and marketing

U.S. law generally prohibits foreign vessels from landing or transshipping fish in U.S. ports. The primary exceptions to this rule concern ports in U.S. territories in the Pacific Ocean and landings of Pacific albacore tuna under a U.S.-Canada treaty. With respect to those ports, at least, the provisions of the IPOA-IUU are relevant to the United States.

NMFS boards some foreign vessels in U.S. ports to examine and verify fish landings. The U.S. Coast Guard requires an Advanced Notice of Arrival 96 hours prior to entry into U.S. ports for all vessels greater than 300 gross tons. This requirement does not presently capture most fishing vessels, as they are usually less than 300 gross tons. The United States does not currently require foreign fishing vessels seeking access to U.S. ports to have a logbook on board. A logbook helps establish where the vessel has been, and where and when it was fishing. This sort of evidence is critical in certain types of cases involving IUU fishing, especially in the absence of universal VMS requirements.

If the United States has sufficient evidence of IUU fishing in waters *within U.S. jurisdiction* by a foreign flag vessel and the vessel evades apprehension initially, the vessel would be arrested if it subsequently entered a U.S. port. The United States would notify the flag State. If the fisheries violation involved a stock that is within the purview of a RFMO, the United States might also inform the RFMO as well, depending on the circumstances.

If a foreign vessel is suspected of IUU fishing in waters *beyond U.S. jurisdiction* and subsequently seeks access to a U.S. port, the United States would first determine whether the elements of the Lacey Act have been met. If so, the United States would ask the other State(s) involved to investigate the matter and see if they would support a U.S. prosecution. International cooperation through various means, such as the MCS Network and Interpol, may also come into play, as United States works with other States in documenting and prosecuting cases against IUU fishers who cross jurisdictional lines. The United States generally informs flag States of the outcome of U.S. prosecutions in such cases. This information is typically passed through diplomatic channels.

The Magnuson-Stevens Act lays out a process for, and various prohibitions on, transhipment activities by both U.S. and foreign vessels. NMFS, however, does not completely regulate transport and support vessels. Transhipments between U.S. fisheries go largely unchecked, and are prohibited only in a few isolated fisheries.

In waters off Alaska, for example, U.S. catcher-processor vessels tranship thousands of tons of processed fisheries products to foreign-flagged cargo vessels each year. Although these transhipments are limited to certain locations in internal waters, and must be reported afterwards, there is no prior authorization or notification required.

ICCAT rules allow at-sea transhipments to take place only between ICCAT members themselves or between ICCAT members and cooperating non-parties. U.S. regulations of highly migratory species do not allow U.S. vessels to participate in at-sea transhipments.

U.S. law generally prohibits foreign fishing vessels and carrier vessels that act as "mother ships" to fishing vessels at sea from landing their catch in U.S. ports. American Samoa, Guam, and the U.S. Virgin Islands are exempt from this law, so foreign cargo vessels that accept at-sea transhipments of fish species and foreign flagged fishing vessels can land product in these U.S. ports.

d) Penalties, fees and restrictions to GFTs

Although the Magnuson-Stevens Fishery Conservation and Management Act establishes higher potential penalties against foreign (vs. domestic) fishers for violations, and in fact describes broader restrictions on certain foreign fishing activities, the severity of penalties for those in violation will depend on the facts of the case. Most but not all U.S. fisheries have permit requirements, although some are more restrictive than others. In some cases, permits are given out upon request, while in other fisheries, permits effectively limit access. Differences in permit systems, as well as the severity of the violation, may play a role in assessing a penalty.

Under Section 204 of the Magnuson-Stevens Act, fees are charged to apply to fish (including transhipping) in the EEZ (USD 380.00 per vessel) and a fee schedule is maintained for the quite limited directed fishing possibilities in the Northwest Atlantic (see 50 CFR 600.518). Vessels conducting directed fishing and/or joint ventures are required to pay for observer coverage (see 50 CFR 600.506).

All federal loans or grants are subject to background checks including but not limited to credit bureau reports, fines and penalties review. Administrating officials cannot give a loan or grant if there is an outstanding fishing violation. An Inspector General clearance for criminal activity is also required. Due to the fact that boat owners seeking loans or grants must operate within the territory of the U.S. Federal Court system (which for this purpose extends to the waters of Mexico and Canada) restricts the range of the vessels and therefore lessens the likelihood of them ever engaging in IUU activities.

3. Other measures

The United States tries to educate the U.S. fishing industry about initiatives such as MCS. A variety of methods are used to provide outreach to industry to increase understanding of the MCS requirements and need for them. This is done at trade shows, targeted educational sessions for industry groups, public affairs work, news releases, and with a toll-free number to report activities that merit investigation. The Fishery Management Councils maintain enforcement committees where MCS professionals and council members focus on enforcement activities and their integration into fisheries management plans and approaches.

In international negotiations where industry and public interest groups are stakeholders, U.S. delegations often include representatives from groups, allowing diverse interests to have a voice and participate firsthand in the process.

NOAA has also implemented direct outreach efforts in certain fisheries to educate fishermen on enforcement issues. In particular, the NMFS Office of Law Enforcement

and the NOAA General Counsel for Enforcement and Litigation use the opportunity provided by federally mandated skipper education workshops.

Advisory groups representing relevant constituent interests generally support U.S. participation in a large number of regional fishery management organizations and arrangements. These groups have been active in identifying and addressing IUU fishing problems.

The United States will publicize the results of IUU fishing cases to include: countries involved, and in general for violations and resulting convictions in order to deter IUU violations and support compliance with international agreements and domestic fishing laws. This information will be distributed through a variety of means including posting on the websites of various federal agencies, including the U.S. Coast Guard and NOAA, and press releases to international and national media venues.

Appendix

Table 4.A1. United States Statutes Relevant to Fisheries Enforcement

Key to Enforcement Authorities in the Following Table:

1 Agricultural Marketing Act of 1946, 7 U.S.C. § 1621-1627
2 American Fisheries Act of 1998, Pub. Law 105-277;
3 Anadromous Fish Products Act, 16 U.S.C. 1822 note, Section 801(f);
4 Antarctic Marine Living Resources Convention Act of 1984, 16 U.S.C. 2431-2444;
5 Antarctic Protection Act of 1990, 16 U.S.C. 2461-2465;
6 Atlantic Coastal Fisheries Cooperative Management Act, 16 U.S.C. 5103(b);
7 Atlantic Salmon Convention Act of 1982, 16 U.S.C. 3601-3608;
8 Atlantic Striped Bass Conservation Act, 16 U.S.C. 1851 note;
9 Atlantic Tunas Convention Act of 1975, 16 U.S.C. 971-971k;
10 Authorized Law Enforcement Activities, 14 U.S.C. 89;
11 Certificate of Legal Origin for Anadromous Fish Products, 16 U.S.C. 1822 note;
12 Civil Asset Forfeiture Reform Act of 2000 (CAFRA), Pub. L. 106-185, 114 Stat. 202 (2000);
13 Communications Assistance for Law Enforcement Act, 103 P.L. 414, 108 Stat. 4279, 47 U.S.C. 1001;
14 Crimes and Criminal Procedure, Wire and Electronic Communications and Interception of Oral Communications, 18 U.S.C. 2510;
15 Dolphin Protection Consumer Information Act, 16 U.S.C. 1385 *et seq.;*
16 Driftnet Impact Monitoring, Assessment, and Control Act, 16 U.S.C. 1822 note (Section 4001 and seq.);
17 Eastern Pacific Tuna Licensing Act of 1984, 16 U.S.C. 972-972h;
18 Electronic Signatures in Global and National Commerce Act, 106 P.L. 229, 114 Stat. 264;
19 Endangered Species Act of 1973, 16 U.S.C. 1531-1544;
20 Fur Seal Act Amendments of 1983, 16 U.S.C. 1151-1175;
21 High Seas Driftnet Enforcement Act, 16 U.S.C. 1362, 1371, 1852, 1862, 1826a-c, 1861 note, 46 U.S.C. app. 1707a, 2110 note;
22 High Seas Fishing Compliance Act, 16 U.S.C. 5501-5509;
23 Lacey Act Amendments of 1981, 16 U.S.C. 3371-3378;
24 Law Enforcement as a Primary Duty, 14 U.S.C. 2;
25 Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. 1801-1882;
26 Marine Mammal Protection Act of 1972, 16 U.S.C. 1361-1407;
27 National Marine Sanctuaries Act, 16 U.S.C. 1431-1439;
28 National Security Act of 1947, 50 U.S.C. 401
29 North Pacific Anadromous Stocks Act of 1992, 16 U.S.C. 5001-5012;
30 Northern Pacific Halibut Act of 1982, 16 U.S.C. 773-773k;
31 Northwest Atlantic Fisheries Convention Act of 1995, 16 U.S.C. 5601-5612;
32 Pacific Salmon Treaty Act of 1985, 16 U.S.C. 3631-3644;
33 South Pacific Tuna Act of 1988, 16 U.S.C. 973-973r;
34 Sponge Act, 16 U.S.C. 781 *et seq.*;
35 Stopping Vessels, 14 U.S.C. 637
36 Tuna Conventions Act of 1950, 16 U.S.C. 951-961;
37 Whaling Convention Act of 1949, 16 U.S.C. 916-916l.

Table 4.A1. United States Statutes Relevant to Fisheries Enforcement

	Statute	Enforcement	Area/Fish Species	Level of Sanction	Applicable to
1	Consumer marketing statute.	Secretary of Agriculture is authorized to inspect, grade and certify agricultural products. §1622(9h). Secretary may cooperate with other branches of government in carrying out his duties. §1624.	None specified	USD 1 000 or imprisonment for one year, or both.	All persons, natural and juridical (individual, partnership, corporation, association or any other legal entity subject to the laws of the U.S.), for misrepresentation of inspection.
2	Fisheries regulation statute.	Forfeiture of all fish taken in violation of regulations. §212.	Pollock	USD 120 000 for each day of fishing.	Owners of vessels holding an official fisheries endorsement (through agent or representative) for falsification or concealment of a material fact; false statement or representation with respect to the eligibility of the vessel.
3	Fish products import regulation statute.	Secretary of Treasury, pursuant to direction from the President and following certification by Secretary of Commerce, may direct that all unlawfully taken anadromous fish products brought into the U.S., or their monetary value be forfeited. §1978(e)(2). Secretary of Treasury is responsible for enforcement generally.	All anadromous stock	USD 12 000 for first violation; USD 27 000 for each subsequent violation.	All persons, natural or juridical engaging in unlawful import of illegally caught fish.
4	Treaty implementation statute (Convention on the Conservation of Antarctic Marine Living Resources).	Authorized officer may search any person, place, vehicle, vessel, etc. reasonably suspected of involvement in harvesting of marine living resources in violation of the Convention. Evidence, marine living resources, equipment and vessels so engaged may be seized and are subject to forfeiture. Enforcement rests jointly with the Secretary and the Secretary of the Department in which the Coast Guard is operating.	All Antarctic marine living resources.	Civil: Up to USD 6 000 for acts prohibited by §2435, and up to USD 12 000 for acts knowingly committed. Criminal: Only for non-harvest violations –USD 50 000 or imprisonment for up to 10 years, or both, for each "offense" committed -defined as violation of §2435 (4), (5), (6) or (7).	Any person engaged in harvesting of marine living resources in Antarctica.

	Statute	Enforcement	Area/Fish Species	Level of Sanction	Applicable to
5	Antarctic environmental protection statute; implementation of voluntary international resource activity ban.	None provided.	None Specified.	Ineligibility to locate a mining claim; refusal of a patent or a lease relating to mineral or geothermal leasing. Monetary penalties of up to USD 5 500 and USD 11 000 (for knowing violations).	Any person, subject to the jurisdiction of the United States, engaging in, financing or knowingly providing assistance to any Antarctic mineral resource activity.
6	Fisheries conservation and management statute.	In the absence of an approved and implemented fisheries management plan under the Magnuson-Stevens Act, Secretary of Commerce may issue and enforce regulations to govern fishing in the EEZ in a manner consistent with a national coastal fisheries management plan and § 301 of the Magnuson Act.	All fisheries resources potentially within scope of Secretary's authority.	Sections 307-311 of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. §1857-61) regarding prohibited acts, civil penalties, criminal offenses, civil forfeitures, and enforcement apply with respect to the regulations issued by the Secretary under this section in the same manner if such regulations were issued under the Magnuson Act.	All persons subject to liability provisions of Magnuson-Stevens Act.
7	Treaty implementation statute (Convention for the Conservation of Salmon in the North Atlantic Ocean).	Any vessel used, and any fish (or the value thereof) taken or retained in any manner, in connection with or as the result of the commission of an act which is unlawful under subsection (a) of this section shall be subject to civil forfeiture under §310 of the Magnuson-Stevens Act (16 U.S.C. §1860). Enforcement rests with Secretary, in cooperation with the Secretary of the Treasury and the Secretary of the Department in which the USCG is operating.	North Atlantic Salmon	Any person who commits an act unlawful under (a) of this section shall be liable for a civil penalty under §308 of the Magnuson-Stevens Act (16 U.S.C. § 1858; and shall be guilty of an offense under §309 of the Act (16 U.S.C. § 1859).	Any person, or any vessel, subject to the jurisdiction of the U.S. that conducts directed fishing for salmon in waters seaward of twelve miles from the baselines from which the breadths of territorial seas are measured in waters of the Atlantic Ocean north of 36 degrees north latitude; or violates any provision of the Convention or this chapter, or any regulation promulgated thereunder. § 3606(a).

	Statute	Enforcement	Area/Fish Species	Level of Sanction	Applicable to
8	Fisheries Conservation and management statute.	Moratorium on fishing of Atlantic Striped Bass within state coastal waters if that state has failed to implement the conservation plan adopted by the Marine Fisheries Commission. This moratorium may be enforced through the use of all powers available to authorized officers under §311 (b) of the Magnuson-Stevens Act (16 U.S.C. § 1861(b)). Enforcement authority rests jointly with Secretaries of Commerce and Interior.	Atlantic Striped Bass.	Violators of the moratorium shall be subject to penalties set out under §308 of the Magnuson-Stevens Act (16 U.S.C. §1858) (The civil penalty shall not exceed USD 120 000 for each violation. Each day of a continuing violation shall constitute a separate offense. The Secretary or his designee shall assess the amount of the penalty by written notice).	All persons subject to the jurisdiction of the United States.
9	Fisheries and import regulation statute; implementation of treaty obligations (International Convention for the Conservation of Atlantic Tunas 1966).	Any person authorized to enforce the provisions of this chapter and the regulations issued thereunder may board any vessel subject to the jurisdiction of the U.S. and inspect such vessel and its catch. If such inspection results in the reasonable belief that the vessel or any person on board is engaging in operations in violation of this chapter, such person may be arrested.	Atlantic Highly Migratory Species (defined by regulation or Magnuson Act §1802(20).	Civil penalty up to USD 120 000. Each day of a continuing violation shall constitute a separate offense. All fish taken or retained in violation of the Statute or regulations thereunder may be seized and disposed of pursuant to an order of a court of competent jurisdiction, or, if perishable, in a manner prescribed by regulation of the Secretary.	Any person in charge of a fishing vessel or any fishing vessel subject to the jurisdiction of the U.S. engaging in fishing in violation of any regulation adopted pursuant to section 971d of this title; or any person engaging in shipping, transport, purchase, sale, offer for sale, import, export, or having possession or control of any fish which he should have known were taken or retained contrary to the recommendation of the Commission made pursuant to article VIII of the Convention and adopted as regulations pursuant to § 971d.

	Statute	Enforcement	Area/Fish Species	Level of Sanction	Applicable to
10	Authorizes the USCG to go on board any vessel subject to the jurisdiction or operation of any law of the U.S.	Authorizes the USCG to make inquiries, examinations, inspections, searches, seizures, and arrests for the prevention, detection, and suppression of violations of laws of the U.S.	N/A	N/A	
11	Use of "certificates of legal origin" by multilateral or bilateral agreement to ensure lawful harvest	Trade Sanctions	Anadromous Fish	Prohibited importation of fish products from an offending country for such duration as the President determines appropriate.	Any nation trading in unlawfully taken anadromous fish; fisherman on U.S. vessels harvesting anadromous fish
12	Statute came out of 7-year attempt to reform civil forfeitures to put in place greater protections for personal property.	Investigation reports must be completed and forwarded to NOAA General Counsel for Enforcement (GCEL) within 30 days from the date of seizure. In any case in which is not forwarded within 30 days from the seizure date, an explanation for the delay must be provided GCEL. After 50 days, the money *may* be returned to the respondent(s) if there is no reasonable explanation for the delay. Seized property or money *will* be returned in cases that are forwarded after 60 days. A claimant may file a claim at any time before the deadline set forth by the Agency.	N/A	N/A	N/A
13	Requires the cooperation of telecommunications carriers in the interception of wire, oral, or electronic communications.	Enforcement is by the federal court issuing the surveillance order under 18 U.S.C. §2516.	N/A	Civil penalty up to USD 10 000 per day or violation.	Any telecommunications common carrier (47 U.S.C. §153) subject to the jurisdiction of the U.S. as well as any supplier of services or equipment (subject to the jurisdiction of the U.S.) that may be required to enable the compliance of the carrier.

	Statute	Enforcement	Area/Fish Species	Level of Sanction	Applicable to
14	Establishes procedure for obtaining judicial authorization to intercept wire, oral or electronic communications and establishes conditions on the use of such intercepted communications.	Authorizes the Attorney General or his/her designee to authorize application by a federal enforcement agency to a federal judge for authorization to conduct interception pursuant to a federal investigation.	N/A	N/A	N/A
15	Consumer Product Labelling	Civil penalties, equitable relief	Tuna and Dolphins	1) up to USD 10 000 per violation (according to 15 U.S.C. § 45); 2) Civil penalties not to exceed USD 110 000.	Any producer, importer, exporter, distributor, or seller of any tuna product exported from or offered for sale in the U.S. Vessel captains, Designees of the Secretary, representatives of the Inter-American Tropical Tuna Commission, and authorized representatives of participating nations.
16	Research, exchange of information, and cooperative enforcement	Trade Sanctions	Fish, shellfish, marine mammals, seabirds, and other forms of marine life or waterfowl found in, or which breed within, areas subject to the jurisdiction of the U.S., including fish that spawn in the fresh or estuarine waters of the U.S.	Prohibited importation of fish products from an offending country for such duration as the President determines appropriate.	Driftnet fishers operating in the North Pacific.

	Statute	Enforcement	Area/Fish Species	Level of Sanction	Applicable to
17	Domestic implementation of multilateral conservation agreements	Civil penalties, search warrants, power of search without a warrant, arrest, seizure, forfeiture.	Certain "designated species of tuna," as defined at 16 U.S.C. § 972.	Civil monetary penalties up to USD 120 000.	Any person subject to the jurisdiction of the U.S., or any vessel subject to the jurisdiction of the U.S. Any person in possession of the regulated species if taken in violation of the Act.
18	Facilitates the use of electronic records and signatures in foreign commerce.	N/A	N/A	N/A	N/A
19	Implementation of multilateral convention through prohibitions on trade or possession of protected species; prohibitions on trade, taking, possession, distribution of domestically protected species; regulation of international traders in fish and wildlife.	Enforcement tools include: reward for information leading to enforcement action; search and arrest warrants; power to inspect items during importation or exportation; power to arrest upon reasonable grounds if violation committed within presence or view; seizure; forfeiture of fish, wildlife, and plants possessed in violation of Act, forfeiture of equipment upon conviction (16 U.S.C. § 1540(e)(4)).	Any threatened or endangered species, as defined at 16 U.S.C. §1532.	Civil Penalties: up to USD 30 000. Criminal violations: up to USD 50 000 or up to one year imprisonment (maximum not available for all violations). Revocation of permits, licenses and agreements also available.	Any person subject to the jurisdiction of the U.S. Exceptions by permit for Alaska natives; provisions for re-introduction of protected species.
20	Implementation of multilateral convention through prohibitions on harvesting or possession of fur seals taken in violation of provisions.	Boarding and inspection authority in U.S. waters or the high seas; arrest, search, and seizure authority with reasonable cause to believe violation is occurring; extradition of seized vessel and arrested person; authority for enforcement agents to testify against violators in foreign judicial proceedings at the request of foreign authorities; forfeiture of U.S. vessel and fur seals if used or taken in violation of the Act; authorization to issue warrants for probable cause.	Northern Pacific Fur Seal	Criminal fines and imprisonment for knowing violations of the Act: up to USD 20 000 and/or imprisonment for up to one year. Civil penalties for violations: up to USD 11 000 per violation.	Any person or vessel subject to the jurisdiction of the U.S. for the taking, or activities connected with such taking, of fur seals in violation of the Act; also, for refusal to allow boarding and inspection by authorized officials. Exceptions by permit for Alaska natives.

	Statute	Enforcement	Area/Fish Species	Level of Sanction	Applicable to
21	Implementation of multilateral program through denial of port privileges and trade sanctions levied on non-conforming nations	Denial of port privileges, denial of entry to U.S. waters, and imposition of trade sanctions.	All species affected by large-scale high seas driftnet fishing. All fish and wildlife, or products of these species, exported by nations that engage in such fishing.	Penalties include the denial of port privileges and the denial of entry into U.S. waters. Penalties also include the loss of revenue for foreign exporters from non-conforming nations.	Large-scale driftnet fishers with vessels under the jurisdiction of the U.S. or fishers with vessels under the jurisdiction of nations found to be using large-scale driftnets on the high seas. The nationals of non-conforming nations may also be made unable to export fish and wildlife to the U.S.
22	Implementation of multilateral agreement through permitting; record-keeping; information sharing; and prohibitions.	Enforcement tools include: rebuttable presumption that all living marine resources found on board a seized vessel were taken or retained violation of the Act; coordination with other agencies; grant of exclusive jurisdiction to U.S. district courts; authority to arrest with reasonable cause with or, under certain circumstances, without a warrant; authority to board, search, and inspect any high seas fishing vessel; authority to sell any seized marine living resource as long as proceeds are deposited with the court; authority to execute any warrant; authority to exercise "any other lawful authority;" discretion to issue citations in lieu of other actions.	All living marine resources commercially exploited on the high seas.	Civil Penalties: A) Not to exceed USD 109 000 per violation (with the vessel used in commission of the offense liable in rem); B) Revocation, suspension, denial, or imposition of additional conditions or restrictions of a permit under the Act; Criminal penalties available for violations involving obstruction of justice, and threatening or assaulting an officer.	Any person subject to the jurisdiction of the U.S. for fishing without a permit, fishing in contravention of conservation measures or permit conditions, obstructing justice, or possessing or trading any living marine resource taken in violation of the Act. The owner or operator of a vessel that has been used in the commission of the above acts, or any person who has not paid assessed penalties, fines, or fees for any permit issued under any U.S. fisheries resource statute.

	Statute	Enforcement	Area/Fish Species	Level of Sanction	Applicable to
23	Use of trade and possession prohibitions to hamper black markets in protected species	Civil penalties; criminal fines; imprisonment; revocation of permit; forfeiture and seizure of vessel, including its fishing gear, furniture, appurtenances, stores, and cargo if possessed, retained, or used in violation of Act (other than an act for which a citation is a sufficient sanction); rebuttable presumption that all living marine resources found on board a seized vessel are taken or retained violation of the Act; provision for sharing of enforcement tools between agencies; grant of exclusive jurisdiction to the U.S. district courts; authority to arrest with reasonable cause; authority to board, search, and inspect any high seas fishing vessel ; authority to sell any seized marine living resource as long as proceeds are deposited with the court; authority to execute any warrant; authority to exercise "any other lawful authority;" discretion to issue citations in lieu of other actions.	Any fish or wildlife species regulated under any U.S. law, treaty, or regulation, or any Indian tribal law, or any State or foreign law. Any wild plant (excluding common food crops and cultivars) which is indigenous to any State and which is either (A) listed on an appendix to the CITES, or (B) listed pursuant to any State law that provides for the conservation of species threatened with extinction.	Civil Penalties: For knowing violations of Sec. 1 or Sec. 4: Up to USD 12 000 for each violation. Criminal Sanctions: up to USD 20 000 and/or imprisonment for not more than 5 years. Suspension or revocation of license or permit also available.	Any natural or juridical person subject to the jurisdiction of the U.S. for: 1) trade (including the offer or provision, or acceptance of guiding, outfitting, or other services or a hunting or fishing license for consideration) in any subject species taken, possessed, transported, or sold in violation of federal law, Indian tribal law, or state laws if in interstate or foreign commerce; 2) to possess within the special maritime and territorial jurisdiction of the U.S. any fish, wildlife, or plant taken in violation of the same laws; 3) to import or export or transport in interstate commerce fish or wildlife unless the container has been properly marked; 4) to falsely identify any fish, wildlife, or plant traded in foreign or interstate commerce
24	Requires the USCG to enforce or assist in the enforcement of all applicable federal laws of the U.S.		N/A	N/A	

	Statute	Enforcement	Area/Fish Species	Level of Sanction	Applicable to
25	Fisheries Conservation and Management	The Secretary of Commerce is authorized to promulgate regulations implementing the Act and enforce the Act and any implementing regulations. The U.S. shall cooperate directly or through appropriate international organizations with those nations involved in fisheries for highly migratory species.	The fish off the coasts of the United States, the highly migratory species of the high seas, the species which dwell on or in the Continental Shelf, and the anadromous species which spawn in United States rivers or estuaries.	Civil penalties up to USD 120 000.	There is a very broad range of prohibitions under the Act and any person subject to the laws of the U.S. comes within the scope of liability.
26	Marine mammal and marine mammal products conservation.	The Secretary may, by agreement, use the resources of another federal agency to enforce the Act and may also designate officers and employees of a state or U.S. possession to enforce the Act, allowing them to function as federal law enforcement agents for this purpose.	Marine mammals, and marine mammal products.	Civil penalty: USD 11 000 – USD 12 000. Criminal penalty (knowing violations): up to USD 20 000 and/or imprisonment for not more than one year. Any person involved in unlawful importation may be made to abandon the mammal or product. 16 U.S.C. 13759(a)(1).	Any person or vessel subject, to the jurisdiction of the U.S. on high seas, or on lands. (Including any port or harbor) To take or import marine mammals or marine mammal products. Also any transport, purchase, sell, export, or offer to do so of any marine mammal or marine mammal products.
27	Regulation and conservation of national sanctuaries.	The Secretary must conduct enforcement activities to carry out the Act. A person authorized to enforce the Act may board, search, inspect or seize a vessel, equipment, stores and cargo suspected of being used to violate the Act, and seize unlawfully taken sanctuary resources.	Species that depend upon these marine areas to survive and propagate.	Any person who violates will receive a civil penalty between USD 109 000 – USD 119 000. 16 U.S.C 1437(c)(1)	Any person who destroys, causes the loss of, or injures any sanctuary resource is liable to the U.S. for an amount equal to the sum of: 1. The amount of response costs and damages resulting from the destruction, loss, or injury and, 2. Interest on that amount calculated in the manner described under section 2705 of title 33. Also any vessel used to destroy, cause loss, or injure any sanctuary, shall be liable for response costs and damages.

	Statute	Enforcement	Area/Fish Species	Level of Sanction	Applicable to
28	Provides a comprehensive, coordinated program for national security.	Authorizes intelligence agencies to assist federal enforcement agencies with the collection of information outside the U.S. regarding individuals who are non-U.S. persons.	N/A	N/A	N/A
29	Implements the conservation of Anadromous Stocks in the North Pacific Ocean.	The Secretary of Commerce is responsible for administering provisions of the convention, the Act and any regulations issued. With the Secretary of Transportation, the Secretary is responsible for coordinating the participation of the U.S. in the commission.	Fish of the particular Anadromous Stock of the North Pacific Ocean.	Civil penalty: USD 100 000-USD 110 000. Each day of a continuing violation shall constitute a separate offence. Criminal penalty: a fine under title 18, or imprisonment for up to 10 year (for injury to an officer) months, or both.	Any person or fishing vessel subject to the jurisdiction of the U.S. to: fish for anadromous fish in the convention area; retain on board or fail to return immediately to the sea any anadromous fish taken incidentally in a fishery directed at nonanadromous fish in the convention area. Ship, transport, offer for sale, sell, purchase etc, of any anadromous fish taken or retained in violation of the convention.

	Statute	Enforcement	Area/Fish Species	Level of Sanction	Applicable to
30	Implements the (1953 convention between the U.S. and Canada) preservation of the halibut Fishery of the Northern Pacific Ocean and the Bering sea.	Any fishing vessel used and any fish taken in connection with the commission of a prohibited act are subject to forfeiture to the U.S. upon application to the Attorney General. The Act is enforceable by the Secretary and the Secretary of the department in which the Coast Guard is operating.	Halibut	Civil penalty between USD 27 500 –USD 30 000. Each day of a continuing violation shall constitute a separate offense. Criminal penalty of not more than USD 50 000 or imprisonment for not more than 6 months, or both. Other criminal penalties available for non-fishing violations.	It is unlawful for a person to violate the convention or the act and regulations or to resist or interfere with an enforcement officer in the conduct of a search, inspection or lawful detention. It is also unlawful for a foreign fishing vessel to fish for halibut in the EEZ or special areas, unless authorized. Any vessel engaged in catching, processing or transporting fish in convention waters, or a vessel outfitted to engage in an activity described above, and a vessel in normal support of a vessel described above.
31	Provides for appointment of U.S. representatives to the Fisheries Commission and General Council	The Secretary appoints up to three members of the general council and the commission. The Secretary of State and the Secretary must jointly establish a consultative committee to advise on issues related to the convention.	N/A	Civil penalty: USD 100 000 – USD 109 000, and/or permit sanction. Violations of paragraph 2-4, or 6 of subsection (a) of 16 U.S.C. §5606 shall be punishable under 16 U.S.C. §1859(b).	Any person or vessel to: Violate a regulation under the act or a measure binding on the U.S. under the convention; refuse to permit an officer to board a vessel to conduct a search or inspection etc, which interfere with, or delay an arrest for violation of the Act.

	Statute	Enforcement	Area/Fish Species	Level of Sanction	Applicable to
32	Fulfillment of obligations under the Pacific Salmon Treaty. (Between the U.S. and Canada)	The U.S. Secretary of State is authorized to: receive and transmit reports and other communications of and, to the commission panel. The secretary of commerce shall inform the state.	Pacific Salmon	Civil penalty up to USD 120 000. Criminal penalties of up to USD 200 000 or imprisonment of up to 10 years.	Any person or vessel subject to the jurisdiction of the U.S. who violates the Act, its implementing regulations, or a Fraser River panel regulation. A vessel used in the commission of a prohibited act shall be subject to forfeiture.
33	Implements the treaty on fisheries between the governments of certain pacific Island states and the U.S.	An officer authorized by the secretary, or the secretary of the department in which the Coast Guard operates.	Tuna	Civil penalties: USD 275 000-USD 300 000. Criminal penalties: USD 50 000-USD 100 000 and imprisonment from 6 months to 10 years.	Any person or vessel to violate the Act or any of it's regulations; use a vessel for fishing in violation of an applicable national law; violate terms and conditions of a fishing arrangement entered into under the treaty.
34	Conservation of commercial sea sponges (Inactive)	The Secretary and/or his or her designee is authorized to make arrests and seize vessels and sponges.	Sponges	Monetary fine of not more than USD 500. Such fine shall be a lien against the vessel or boat on which the offense is committed.	Any citizen of the U.S., or person owing duty of obedience to the laws of the United States, or any boat or vessel of the United States, or person belonging to or on any such boat or vessel.

	Statute	Enforcement	Area/Fish Species	Level of Sanction	Applicable to
35	Stopping Vessels	Authorizes the USCG to stop vessels, including the firing of a warning signal and disabling fire at a vessel that does not stop, from a CG vessel or aircraft, or a DoD vessel with CG LEDET personnel embarked.	N/A	N/A	
36	Establishes an international commission for the scientific investigation of tuna.	The joint responsibility of the U.S. Coast Guard, the department of the Interior and the Bureau of customs.	Tuna	Civil penalty up to USD 120 000 (16 U.S.C. §957)	Any person who knowingly ships, transports, purchases, sells,... etc. fish taken or retained in violation of the Act; fails to make, keep, or furnish catch returns, or other reports as required.
37	Provides framework for implementing the 1946 international convention for the regulation of whaling	Authorized enforcement officer or employee of the Dept. of Commerce, Coast Guard, U.S. Marshall, etc.	Whales	Except as to violations of Sec. 916c(a)(3), fines up to USD 10 000 or imprisonment of not more than one year or both.	Any person, subject to the U.S. jurisdiction to engage in whaling in violation of the convention.

European Union

1. Legal measures and regulations

The measures described below apply without distinction to national vessels within the Community EEZ and on the high seas, as well as in the EEZ of third countries, without prejudice to provisions regarding inspection specified in bilateral agreements with third countries:

a) Fishing activities by national vessels

EU Member States are responsible for implementing the measures set out in the Common Fisheries Policy and for putting in place procedures allowing those who violate regulations to be prosecuted and punished. These tasks must be fulfilled irrespective of the zone in which Community fishing vessels pursue their activities.

In addition, Member States are equally responsible for implementing the conservation and control measures drawn up by Regional Fishing Organisations in which the European Union is a Contracting Party or to which it has made a commitment to uphold such measures.

The various responsibilities of Member States in this area are specified in EU legislation (primarily Council Regulation (EC) No 2371/2002 ("Basic") and Council Regulation (EC) No 2847/93 ("Control")).

Member States are obliged to take appropriate measures with regard to the surveillance of infringements including, in accordance with their national legislation, the initiation of administrative action or criminal proceedings against those responsible where the rules of Common Fisheries Policy have not been respected. The proceedings initiated must be capable of effectively depriving those responsible of the economic benefit of the infringements and of producing results proportionate to the seriousness of such infringements, thereby effectively discouraging further offences of the same kind. Furthermore, EU legislation provides a list of sanctions that can be imposed according to the gravity of the offence, namely fines, seizure of prohibited fishing gear and catches, sequestration of the vessel, temporary immobilization of the vessel, suspension of the licence, withdrawal of the licence. Lastly, Council Regulation (EC) No 1447/1999 establishes a list of types of behaviour which seriously infringe the rules of the common fisheries policy and in regard to which greater transparency is required in terms of the response to such behaviour by national authorities. The procedure for notifying the European Commission of serious infringements and of the proceedings initiated is set out in Commission Regulation (EC) No 2740/1999.

With regard to the conditions applicable to fishing activities, EU legislation provides that a Community fishing vessel is prohibited from carrying out fishing activities in Community waters or the waters of a third country or on the high seas unless the following requirements are met:

- A fishing vessel must carry on board its licence and, where provided for, its authorisations for fishing;
- A fishing vessel must have installed on board a functioning system which allows detection and identification of that vessel by remote monitoring systems. At present, all Community fishing vessels with an overall length of over 24 metres must be detectable by the satellite surveillance system (VMS). This requirement will apply to vessels with an overall length of over 18 metres as from 1st January 2004 and to vessels with an overall length of over 15 metres as from 1st January 2005;
- The master shall without undue delay record and report information on fishing activities, including landings and transhipments;
- The master shall accept inspectors and, where applicable, observers on board and co-operate with them
- The master shall respect conditions and restriction relating to landings, transshipments, joint fishing operations, fishing gear, nets and the marking and identification of vessels.

b) Fishing activities by foreign vessels within the Community EEZ

Vessels from third countries can fish within the Community EEZ provided that they are authorised to do so under bilateral agreements with those third countries.

The requirements listed in the last section of paragraph 1.a) also apply to fishing vessels registered under the flag of a third country operating in Community waters, in accordance with Title VI bis of Council Regulation No 2847/93 ("Control").

EU Member States are also responsible for implementing control measures and for introducing procedures for the prosecution and punishment of offenders for infringements committed within their national EEZ. These sanctions may include, *inter alia*, withdrawal of the fishing licence. In such cases, the Member State concerned informs the European Commission (which applies the sanction given that such licences are issued by the European Commission).

With regard to the fair treatment of those in possession of fishing licences or permits and those without such licences, it should be noted that any vessel fishing in EU waters must be authorised to do so.

c) Registration of fishing vessels

In 2001, prior to the entry into force of the Compliance Agreement, the European Union voluntarily communicated data from the Community fishing vessel register to the FAO (see Article VI on exchange of information). This exchange of information can help to identify fishing vessels which jeopardise international conservation and management measures.

With regard to the Community fishing vessel register: in accordance with Council Regulation (EC) No 2090/98 amended by Commission Regulation (EC) No 839/2002, Member States must inform the European Commission of all data relating to the life of a fishing vessel in cases where such data are recorded in their national database.

Owner/agent: in accordance with Council Regulation (EC) No 839/2002, since January 2003, the name and address of the agent and place of construction of a vessel

whose overall length is 15 metres or more or whose length between perpendiculars is 12 metres or more must be notified to the European Commission. With regard to the name and address of the owner, the applicable limits are an overall length of 27 metres and a length between perpendiculars of 24 metres. It will be mandatory to supply such data for all vessels as from January 2004.

2. Economic measures

a) Investment rules

Trade rules (including trade-related rules)

The European Community supports the use made by Regional Fisheries Organisations of trade measures aimed at ensuring that their conservation and management recommendations are properly implemented (cf. ICCAT). These measures can help to combat and eliminate illegal fishing.

Within the framework of the ICCAT and CCAMLR, imports and exports (of bluefin tuna and toothfish respectively) must be accompanied by statistical or catch documentation.

Rules regarding landing, transhipments and marketing

Third country vessels must meet conservation and control measures as well as other provisions relating to the fishing activities of Community vessels in the zone in which they operate, in accordance in particular with Council Regulation (EC) 2847/93 and Council Regulation (EC) No 1627/94 laying down general provisions concerning special fishing permits.

b) Penalties, fees and restrictions to GFTs

In accordance with Council Regulation (EEC) No 2847/93 ("Control"), Member States must take measures in the event of failure to comply with the rules of the Common Fisheries Policy. Member States can initiate administrative action or criminal proceedings against the natural or legal persons responsible. Sanctions may include, depending upon the seriousness of the infringement, fines, seizure of prohibited fishing gear and catches, sequestration of the vessel, temporary immobilization of the vessel, suspension of the licence, withdrawal of the licence.

3. Other measures

Council Regulation (EC) No 2371/2002 on the conservation and sustainable exploitation of fisheries resources under the Common Fisheries Policy establishes the responsibility of the Flag State with regard to its nationals. This provision matches the action plan against illegal fishing in placing the Flag State under the obligation to monitor its nationals. The aim is to discourage the nationals of Member States from committing infringements within the jurisdiction of a Member State that does not meet its obligations as a Flag State.

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Why Fish Piracy Persists

THE ECONOMICS OF ILLEGAL, UNREPORTED AND UNREGULATED FISHING

Despite national and international efforts, fish piracy continues to thrive worldwide. Illegal, unreported and unregulated (IUU) fishing is a problem that affects both national and international waters, and involves all types of fishing vessels. IUU fishing depletes global fish stocks and undermines efforts to secure and rebuild those stocks for the future. It generates harmful effects on the economic and social welfare of those involved in legal fishing, and reduces incentives to play by the rules. However, fish pirates pursue their trade because it is profitable, and will keep pursuing it as long as their income exceeds their costs.

Why Fish Piracy Persists: The Economics of Illegal, Unreported and Unregulated Fishing is unique in focusing on the economic, environmental and social aspects of fish piracy and identifying the forces that drive this activity. Earlier studies focused on the direct impact that IUU fishing has on fish stocks, and on legal measures to combat such activities. Based on data from a workshop of around 120 experts, as well as analytical documents developed for this study, this book presents the most systematic and consolidated information to date in order to assess measures already in place and to propose new solutions.

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