

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.

Table of Contents

	<u>Page</u>
LIST OF ACRONYMS	9
EXECUTIVE SUMMARY	13
CHAPTER 1: SYNTHESIS REPORT	21
Introduction	21
1. The State of Play on IUU Fishing	24
2. Impacts of IUU Fishing	34
3. Drivers of IUU Fishing Activities	37
4. Assessment of Possible Actions Against Illegal, Unreported and Unregulated Fishing	41
5. Final Observations	49
Annex 1. Definitions of IUU Fishing in the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing	53
Annex 2. Tables	54
Annex 3. Key Observations and Findings by the IUU Workshop Chairs	58
CHAPTER 2: ECONOMICS OF IUU FISHING ACTIVITIES	65
Introduction	65
1. Definition	66
2. Analytical Framework	68
3. Exploring the Incentives to Engage in IUU Fishing Activities	69
4. Enlarging the Framework	86
5. Possible Actions to Curb IUU Fishing Activities	87
6. Observations from the Analysis	97
Annex 1. The Model	100
Annex 2. Tables and Boxes	102
Bibliography	105

CHAPTER 3: MEASURES IN PLACE AGAINST IUU FISHING ACTIVITIES	107
Introduction	107
1. International Frameworks on High Seas Fisheries	109
2. Synthesis of Inventory on National Measures	114
3. Inventory of RFMO Measures	124
4. Other Related Instruments that may be Useful to Combat IUU Fishing	139
5. Observations and Key Issues	146
Annex 1. Questionnaire for Reporting on National Measures Against IUU Fishing Activities	148
Annex 2. OECD Countries' Involvement in Major RFMOs	151
Annex 3. Major Cases for Actions Taken by FONC States Against Offences	152
Bibliography	153
CHAPTER 4: INVENTORY OF NATIONAL MEASURES AGAINST IUU FISHING ACTIVITIES	155
Introduction	155
Australia	156
Belgium	168
Canada	170
Denmark	176
Finland	177
France	178
Germany	183
Greece	186
Iceland	189
Ireland	193
Italy	195
Japan	198
Korea	202
Mexico	206
Netherlands	218
New Zealand	220
Norway	237
Poland	241

Portugal	244
Spain	249
Sweden	255
Annex 1. Summary of two court cases	259
Turkey	260
United Kingdom	262
United States	264
Annex 1. United States Statutes Relevant to Fisheries Enforcement	275
European Union	289

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
CEPTA	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