



THE ILLEGAL FISHING AND ORGANIZED CRIME NEXUS:

ILLEGAL FISHING AS TRANSNATIONAL ORGANIZED CRIME



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**THE GLOBAL INITIATIVE
AGAINST TRANSNATIONAL
ORGANIZED CRIME**



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List of Acronyms

AIS - Automatic Identification System

AP - Associated Press

CCAMLR - Commission for the Conservation of Antarctic Marine Living Resources

CITES - Convention on International Trade in Endangered Species of Wild Fauna and Flora

COLTO - Coalition of Legal Toothfish Operators

DAFF - South African Department of Agriculture, Forestry, and Fisheries

ECCAS - Economic Community of Central African States

ECOWAS - Economic Community of West African States

EEZ - Exclusive economic zone

EJF - Environmental Justice Foundation

EU - European Union

FAO - United Nations' Food and Agricultural Organization

GDP - Gross domestic product

GGC - Gulf of Guinea Commission

GPS - Global Positioning System

ICCAT - International Convention for Conservation of Atlantic Tunas

IMO - International Maritime Organization

INTERPOL - The International Criminal Police Organization

IO - Inter-governmental organization

ILO - International Labour Office

IPO - Initial public stock offering

IUCN - International Union for Conservation of Nature

IUU Fishing - Illegal, unregulated and unreported fishing

MPA - Marine protected area

NEST - National Environmental Security Task Force

NGO - Non-governmental organization

NOAA - National Oceanic and Atmospheric Administration

OECD - Organization for Economic Co-operation and Development

RFMO - Regional fisheries management organization

SUA Convention - Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation

TAC - Total allowable catches

UNCLOS - United National Convention on the Law of the Sea

UNFSA - United Nations Fish Stocks Agreement

UNICPOLOS - United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea

UNODC - United Nations Office on Drugs and Crime

UNTOC - United Nations Convention Against Transnational Organized Crime

USFWS - US Fish and Wildlife Service

VAT - Value-added tax

VMS - Vessel Monitoring System

WWF - World Wide Fund for Nature/World Wildlife Fund

Yaoundé Code of Conduct - Code of Conduct Concerning the Repression of Piracy, Armed Robbery Against Ships, and Illicit Maritime Activity in West and Central Africa



Executive Summary

This report presents evidence that many types of illegal, unregulated and unreported (IUU) fishing constitute a form of transnational organized crime, and that treating IUU fishing as a form of organized crime is vital for effectively combating this destructive practice. IUU fishing is currently a low-risk, high return activity, driven by greed, weak governance, poor monitoring and enforcement, overcapacity, overfishing, and diminishing fish stocks. Because it is largely treated as a regulatory matter, IUU fishing has been allowed to flourish. Perpetrators are levied minimal fines, if anything, and are permitted to continue their illicit and profitable activities.

Far from constituting a harmless lack of compliance with regulations, IUU fishing destroys marine ecosystems, threatens food security, harms legitimate fishers and damages the economy and state governance. This report presents a wide range of case studies selected from across the globe, to argue that IUU fishing is in fact a dangerous and highly organized form of transnational crime, and one associated with other illegal, violent and destructive practices.

IUU fishers launch multi-vessel fleets on lengthy voyages to all the corners of the globe. They employ sophisticated and coordinated strategies to launder money and fish, and evade taxes. Along the way they enable their activities through the violation of labour and environmental standards, corruption, bribery and violence. Case studies also reveal connections between IUU fishing and human trafficking and drug smuggling.

This report demonstrates how IUU fishing more than meets the criteria used in defining transnational organized crime: those who actively set out to

fish in contravention to the law are engaging in a highly organized criminal activity. The recognition of IUU fishing as a form of transnational organized crime, rather than a regulatory or compliance issue, is an important step in effectively combating this problem. In addition to this first step, this report recommends additional actions to be taken, which include:

- **Strengthening international regulations** regarding shipping and vessels. This includes measures such as increasing port state controls, confronting the use of flags of convenience, combating fish and money laundering, and cooperation aimed at tackling tax evasion on the part of IUU fishers.
- **Creating domestic legislation** designed to treat IUU fishing as a crime. Taking measure such as ending the reliance on self-regulation, reporting and monitoring.
- **Dramatically increasing the punishments** for IUU fishing, including not only levying fines sufficient to serve as a deterrent, but also confiscating the infrastructure involved in IUU fishing, vessel forfeiture, ending subsidies to illicit fisheries, and imposing criminal and professional penalties on offenders.
- **Significantly enhance monitoring and enforcement.** This entails increasing information sharing and cooperation between enforcement actors at all levels. Involving civil society in monitoring and enforcement, and utilizing innovative solutions, both technical and strategic.

By reconceptualising IUU fishing as a form of transnational organized crime, we greatly enhance our ability to tackle this global threat. When the United Nations Food and Agricultural Organization (FAO) reports that more than 90% of fisheries are fully or over-exploited, the need to end the peril of the multi-billion dollar global IUU fishing industry with its annual illegal catches of millions of tonnes of marine species demands urgent action.





Introduction

Illegal, unregulated and unreported fishing (IUU fishing) has long been considered a regulatory issue, a matter of different actors violating regulations, perhaps opportunistically or out of ignorance. However an examination of this widespread practice increasingly reveals that this description fails to capture the true nature of the problem. Practices commonly employed in IUU fishing more closely resemble, and can be considered, a form of transnational organized crime. Rather than fishers accidentally violating some regulations, we see systematic and highly coordinated efforts around the globe to violate fishing laws and regulations, putting the stability of marine ecosystems in serious jeopardy.

This report presents a wide range of case studies selected from across the globe, to argue that IUU fishing is in fact a dangerous and highly organized form of transnational crime, and one associated with other illegal, violent and destructive practices. It posits that treating IUU fishing as a form of organized crime is vital for effectively combating this destructive practice.

Part one, an examination of IUU fishing itself, defines the concept and explores the many harms for which it is responsible; from causing long-term irreversible destruction of marine species, to threatening global food security, to destroying the livelihood of legal fishers and dangerously undermining governance. The report then examines the drivers of IUU fishing and the illicit activities employed in order to facilitate its practice. IUU fishing is exposed as a low-risk, high return activity, driven by greed, weak governance, poor monitoring and enforcement, overcapacity, overfishing, and diminishing fish stocks.

The *modus operandi* of IUU fishers is then expanded upon, and case studies relate how IUU fishers launder their fish and money, evade taxes, bribe officials, forge licences and other documentation, smuggle and transship their wares, and the various means by which they keep illicit activities clandestine. The many techniques and sometimes violent practices employed by IUU fishers are explored throughout the report.

Part two begins with an examination of the global problem of environmental crime, and details the growing recognition of IUU fishing as organized crime. Definitions and criteria of transnational organized crime are then presented and discussed. The report then examines how IUU fishing fulfills these criteria and fits these definitions through the use of a wide range of examples selected from around the globe.

We see how IUU fishers launch multi-vessel fleets on lengthy voyages to all the corners of the globe, and how they enable their activities through the violation of labour and environmental standards, corruption, bribery and violence. Some of the IUU fishing operations explored in this report take place on a massive scale, involving cooperation between hundreds of people, across multiple jurisdictions, and massive long-term investment in the infrastructure. Case studies also reveal an even darker side to IUU fishing, one connected with human trafficking, illegal drug smuggling, violence and murder. Because IUU fishing is a form of transnational organized crime which is treated as a regulatory issue, these types of nefarious activities which are intrinsic to the practice are able to flourish.

The low priority given to IUU fishing by enforcement agencies and the authorities explains why this practice and the fishing industry in general, are an ideal cover for so many other illicit activities. On the rare occasion that effective monitoring and enforcement are undertaken, perpetrators are levied minimal fines, if anything, and are often permitted to continue their illicit and profitable activities, sometimes even receiving subsidies from the state. Part three relates some of the policy implications of reconceptualising IUU fishing as transnational organized crime and advances several key policy recommendations. Building from the first step of recognizing IUU fishing as a form of transnational organized crime, the report suggests that efforts be made to develop legal framework to combat IUU fishing as transnational organized crime and urges the significant strengthening of monitoring and enforcement.

The recommendations of this report advocate the importance of strengthening international regulations regarding shipping and vessels, creating domestic legislation designed to treat IUU fishing as a crime, and dramatically increasing the punishments for IUU fishing. It further urges increased information sharing and cooperation between enforcement actors at all levels, involving civil society in monitoring and enforcement, and experimentation with innovative solutions. The report highlights the need for an increased role of civil society actors in all aspects of marine fisheries monitoring and enforcement, and explores some of the innovative solutions and collaborations which are already being employed around the world.



Methodology

This report has been conducted primarily as a desk review commissioned by the Global Initiative against Transnational Organized Crime as a follow on to the Global Initiative's 2014 publication, "[A Baseline Assessment to Transnational Organized Environmental Crime](#)," which highlighted the extent to which criminal enterprises are active in illegal fishing, and the lack of dedicated research on the topic. The report draws upon a diverse range of sources, including academic studies and papers, non-governmental organization (NGO) investigations and reports, government and inter-governmental organization (IO) reports and resolutions, news media reports and grey literature. The report also benefits from consultation with members of the Global Initiative Network of Experts and additional experts referred by the Network.

This report was written and is co-published in close consultation with The Black Fish, a Netherlands-based international organisation that works to end illegal overfishing. The Black Fish is a non-profit organization that employs innovative strategies and tactics to the challenge of illegal fishing, and it brings together a large number of citizen inspectors who employ modern technology to monitor and report on illegal fishing. Partnering with other organizations and government actors, The Black Fish uses the information it gathers

through citizen inspections to affect changes on a policy level, pressuring governments to act for better ocean protection. The Black Fish also works in direct cooperation with state authorities providing evidence to support ongoing enforcement efforts. The Black Fish currently runs 28 projects in 12 countries around Europe, with countless volunteers and supporters around the world. The lead author of this report, Dr. Teale Phelps Bondaroff, is a researcher with The Black Fish, and information gathered in the field by The Black Fish has provided valuable experience informing the findings of this report are current.

The report endeavours to fill a critical gap in our current understanding of IUU fishing and transnational organized crime. Thus far IUU fishing has generally been treated as a regulatory issue, however this illicit practice is increasingly being considered by a variety of actors including inter-governmental organizations to NGOs as a form of organized and transnational crime. Despite this growing recognition, there have been no systematic studies exploring IUU fishing as a form of transnational organized crime. This not only explains the pressing need for this report, but also its reliance on media reporting and the expertise of individuals actively involved in the field of law enforcement and combating illegal fishing.





PART I

INTRODUCTION TO IUU FISHING



IUU Fishing Defined

Illegal, Unreported and Unregulated (IUU) fishing is a major threat to marine biodiversity, the sustainability and balance of marine ecosystems, and to fish populations worldwide.¹ It is necessary to un-package and define what constitutes IUU fishing. The term IUU fishing generally encompasses all fishing that breaks fisheries laws or occurs outside the reach of fisheries laws and regulations.²

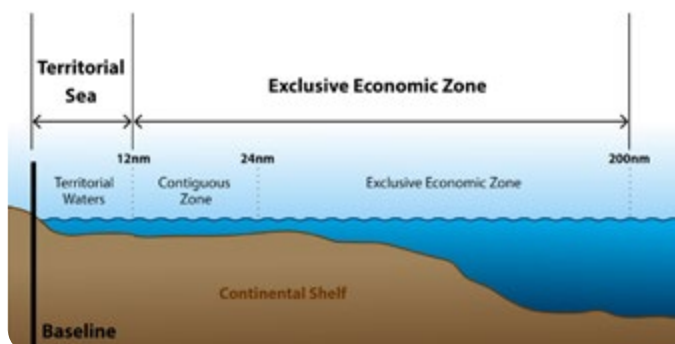
Illegal fishing specifically refers to fishing which is conducted by national or foreign vessels in waters under the jurisdiction of a state, without the permission of that state, or in contravention of the laws and regulations of that state. It also constitutes fishing which violates the laws, regulations, and conservation and management measures adopted by a fishing vessel's flag state, or which generally violates national laws or international obligations, the obligations of cooperating states to relevant regional fisheries management organizations (RFMOs).³ Illegal fishing has been defined as an 'environmental crime' by the United Nations Office on Drugs and Crime (UNODC) and a number of NGOs and academic commentators, and was "identified as a 'new trend in crime' in the Salvador Declaration of the Twelfth United Nations Congress on Crime Prevention and Criminal Justice in 2010."⁴ Examples of illegal fishing include fishing without a license, fishing in a closed area or marine protected area (MPA), fishing with prohibited gear, fishing over a quota, or the fishing of prohibited species.⁵

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 similar lack of reporting or misreporting to regional fisheries management organizations.⁶ Unreported fishing can be both intentional and unintentional. Fishers may only report

a portion of a catch in order to fall within quotas, may fail to report the harvest of non-targeted species, or simply avoid reporting all together. A lack of reporting and underreporting catches is "a violation of quotas, and complicates scientific tallies of fish stocks," confounding conservation and management efforts.⁷ Examples of unreported fishing include the widespread practice of fishers keeping two logs: an official log for the inspectors and a 'confidential' log for the owner. Fishers may also under-report harvests, falsely record vessel locations, or offload fish at ports with low regulatory and inspections standards, so called 'ports of convenience'.⁸

Unregulated fishing is a broader term which includes fishing conducted by vessels without nationality, or those flying the flag of a country not party to a RFMO within the jurisdiction of that RFMO, or more generally fishing in a manner which contravenes the regulations of the RFMO.⁹ This also includes fishing in areas or for fish where there are no applicable conservation or management measures, and "where such activities are conducted in a manner inconsistent with State responsibilities for the conservation of living marine resources under international law."¹⁰

While not all unregulated fishing explicitly violates the law, it certainly violates the spirit of the law, as it is typically carried out as a means of circumventing the law. Those engaging in unregulated fishing also often



violate the law in other ways, such as when introducing their catches to market, to launder their profits, and not complying with shipping and labour regulations.

Understanding the term IUU fishing is useful to gaining a full picture of the issues itself. However it should be noted that treating IUU fishing as a comprehensive category can complicate policy solutions - the legislative and policy solutions to illegal fishing differ from those addressing unreported or unregulated fishing. As a result, those seeking to operationalize the term IUU fishing will often find it useful to unpack the term to its various components.

There is often little incentive for one state to assume the expensive and potentially diplomatically complicated role of enforcing international law on the high seas for vessels flagged to other nations. In this way a sort of tragedy of the commons has emerged on the high seas.

A great deal of unregulated fishing occurs on the high seas. The high seas, or international waters, are all those waters which lay beyond the exclusive economic zones (EEZs) of states.¹¹ An EEZ encompasses the 200 nautical miles from the shoreline of a coastal state, established by United Nations Convention on the Law of the Sea (UNCLOS), the international agreement codifying the laws governing the world's oceans. States are largely responsible for regulating the actions of vessels flying their own flags on the high seas, which creates several problems. States are significantly constrained when it comes to enforcement actions targeting vessels flagged

by other states: from a legal perspective, there are few specific legal criteria which permit the interdiction of a vessel flagged to a foreign government on the high seas. There is also the question of political will, with no international authority enforcing laws on the high seas, there is often little incentive for a coastal state to assume the expensive and potentially diplomatically complicated role of enforcing international law on the high seas for vessels flagged to other nations. In this way a sort of tragedy of the commons has emerged on the high seas, greatly facilitating widespread illegal practices such as IUU fishing.

Efforts to resolve these failings of UNCLOS have taken a variety of forms, including bilateral agreements between various states and multilateral efforts to create new treaties regulating gaps in UNCLOS, such as the Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation (or SUA Convention). These efforts have met with varied success, and have thus far failed to curtail widespread illegal activity on the high seas.

The high seas are difficult to patrol for jurisdictional as well as spatial reasons – they cover almost 45% of the planet, as a result, unregulated fishing often runs rampant.¹² In many instances fishers will overtly seek to avoid regulatory regimes by fishing in areas beyond state jurisdictions, or increasingly in areas under the jurisdiction of states with weak governance. A seminal 2009 study by David Agnew and colleagues, found a significant relationship between World Bank governance indicators and levels of IUU fishing. They noted that “developing countries with poor governance records are [not] necessarily to blame for illegal fishing, but that they are more vulnerable to illegal activities, conducted by both their own fishers and vessels from distant water fishing nations.”¹³



The Scale of IUU Fishing

Various studies have attempted to measure the size and scope of IUU fishing. Developing a precise picture of global IUU fishing is, of course, a challenge given the clandestine nature of the practice. A 2008 study estimated that the annual global IUU fishing catch was between 11- 26 million tonnes, which the PEW Charitable Trust notes “equates to more than 1,800 pounds of wild-caught fish stolen from our seas *every second*.”¹⁴



that \$1.6 billion in seafood enters Europe annually, and that approximately 50% of all seafood sold in Europe has illegal origins.”¹⁸

IUU fishing comprises a subset of transnational organized environmental and natural resource crime, which also includes such actions as poaching and illegal trade in flora and fauna, illegal logging

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In purely economic terms, this annual catch has been estimated at \$10 – 30 billion (USD).¹⁵ It has been estimated that for some important fisheries IUU fishing accounts for 30% of the total catch, and that in some ports, as much as 50% of landings.¹⁶ IUU fishing is generally considered to be responsible for 10% to 22% of total global fisheries production.¹⁷ It is “estimated

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and the trade in wood products, the production and trade in ozone-depleting substances, the illegal disposal and dumping of hazardous and radiological waste. These illicit and environmentally harmful activities represent a growing global criminal enterprise which is estimated annually at \$143 billion, calculated by combining the estimated annual earnings from illegal timber (\$100 billion), IUU fishing (\$23 billion), trade in wildlife (\$19 billion), and ozone-depleting substances (\$0.68 billion). This number is necessarily a low estimate in so far as values are hard to estimate given the illicit nature of these activities.¹⁹ Even more worrisome is the fact that the scale of these activities is on the rise.



The Harms of IUU Fishing

The magnitude of IUU fishing has made it a serious global problem which is having a profound negative impact on marine ecosystems and on global food security, as well as on local economies, state governance, local communities and as a matter of course on legitimate fishers.

Why does IUU fishing pose such a threat to serious (marine) ecosystems worldwide?

Our oceans are in peril and global fish populations are in serious decline. The United Nations' Food and Agricultural Organization (FAO)'s 2014 report on '*The State of the World Fisheries and Aquaculture*', found that 90.1% of the world's fish stocks were fully exploited or over-exploited. The number of fisheries which are fully or over-exploited have been steadily increasing.²⁰

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In a 2010 study, the Census of Marine Life found that 30% of assessed ocean fisheries were over-exploited and another 57% fully exploited.²¹

This is a serious concern when it comes to the health of fish populations and the complex marine ecosystems within which they play a vital role. Extinction is forever and can irreparably alter an ecosystem. The consequences of destabilizing marine ecosystems are far reaching, extending well beyond global oceans which cover 71% of our planet.²² The collapse of marine ecosystems means irreparably damaging countless

coastal and terrestrial ecosystems, all of which are vital to the wellbeing of innumerable species, including humans. It is difficult to predict the impact of the destruction of marine ecosystems on living things worldwide, but what we can predict is that the consequences would be dire and irreversible.

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IUU fishing may also be on the rise. A 2006 study by the National Oceanic and Atmospheric Administration (NOAA) in the United States noted that the 750 investigations into illegal fishing conducted in the northeastern United States represented a 108% increase over five years.²³ Other sources suggest increases in IUU fishing off the coast of Africa and in Asia.²⁴ Without effective enforcement, monitoring and controls, IUU fishing will increase in the face of declining fish stocks and increasing demand. It is conservative to suggest that given such a perilous state, global fish populations and marine ecosystems are at considerable additional risk as a result of IUU fishing.²⁵

¹ All prices USD unless otherwise stated.





IUU Fishing Destroys Marine Ecosystems

In addition to increased pressure on fish populations and marine ecosystems, IUU is conducted outside of regulatory controls designed to protect at risk species. This further increases the threat of extinction to species

IUU fishing seeks to avoid or violate regulations put in place to protect marine species.

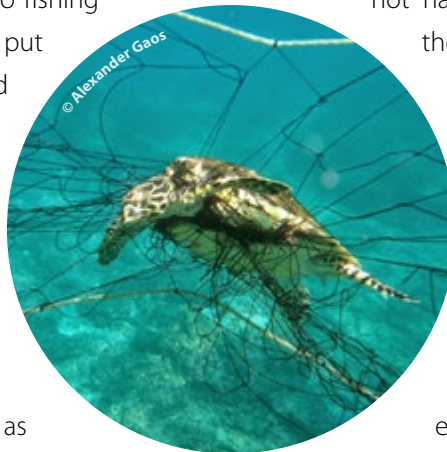
already teetering on the edge, with all of the irreversible and harmful ecological consequences extinction entails. Clandestine fishing further interferes with conservation efforts by confounding assessments of fish stocks. By creating uncertainty regarding total catch levels, the already difficult task of assessing fish stocks becomes even more difficult, and potentially biases fisheries management in favour of “allowing more fishing than would otherwise be considered sustainable.”²⁶

By its very nature as an illicit practice, IUU fishing seeks to avoid or violate regulations put in place to protect marine species, and the impact of IUU fishing on marine ecosystems and marine wildlife populations has been severe.²⁷ IUU fishers not only flaunt catch quotas but may also ignore other regulations designed to reduce bycatch, allow for population recovery, and protect vulnerable non-target species such as marine mammals, birds, sharks and turtles. IUU fishers are more likely to ignore regulations such

as those prohibiting setting tuna nets on dolphins, or fish within the boundaries of MPAs designed to protect particularly fragile ecosystems, or fish for a species out of season. IUU fishers have been known to actively engage in dangerous, damaging, and prohibited fishing practices, such as dynamite fishing,²⁸ and the use of prohibited gear such as driftnets.²⁹ All of these actions have serious negative impact on the marine environment.

IUU fishers are more likely to take advantage of lax safety regulations thereby putting their crews, vessels and the marine environment at greater risk.

By operating under a flag of convenience – a practice whereby a vessel is registered to a country which does not have the ability or will to live up to their international responsibilities – IUU fishers are more likely to take advantage of lax safety regulations thereby putting their crews, vessels and the marine environment at greater risk.³⁰ Older and more polluting vessels employed by some IUU fishers have a greater impact on the environment than other vessels.³¹





Case Study:

Failed IPO Reveals Widespread Fisheries Fraud in China

Shannon Service of *The Guardian* recently reported how a failed initial public stock offering (IPO) accidentally revealed widespread illicit deception and fraud in Chinese fisheries. The company China Tuna Industry Group (China Tuna) attempted to raise over \$100 million in a draft IPO in June 2014. This industry group was the largest Chinese supplier of premium tuna to Japan from 2011 to 2013, with 70% of its \$62 million annual sales made to Toyo Reizo, a subsidiary of Mitsubishi Corp. This company focuses on exporting Bigeye and Yellowfin tuna, both species which are in serious decline (with the Yellowfin listed as near threatened by the International Union for Conservation of Nature (IUCN)), and as a result, China Tuna was required to convince potential shareholders that its business would be profitable, and in so doing China Tuna revealed consistent illicit practices in the Chinese fishing industry.³²



The IPO explained how China, which operates “the world’s largest long-distance fishing fleet, would not crack down on companies engaged in illegal fishing because it never had in the past; that the catch limits set by the Regional Fisheries Management Organizations apply only to China the country, not to actual Chinese fishing boats; and that even if the catch limits did apply, the regional fisheries organizations would not enforce them because ‘there is no sanction for non-compliance with Bigeye catch limits.’”³³

The investigations of Shannon Service uncovered that

China Tuna was engaged in numerous practices designed to circumvent fisheries laws. It employed flags of convenience, regularly flagging its vessels in the Cayman Islands. China Tuna, like many other transnational fishing corporations, is part of a complicated web of corporate ownership, subsidiaries and shell companies. China Tuna, despite its size, lacks an office, its primary shareholders are a 24 year old woman with a St. Kitts passport and her father, and it operates subsidiaries. In September, “Greenpeace filed a complaint with the Hong Kong Stock, stating that China Tuna was deliberately misleading investors about the health of tuna populations.”³⁴ The Stock Exchange ordered China Tuna to suspend its IPO. The IPO itself revealed how China’s fishing practices rely on violating the law.

China Tuna is part of a Chinese fishing industry that is intentionally lying about its frightening levels of overfishing. China has reported to the FAO an annual catch in international waters from 2000 to 2011 to be 368,000 tons, whereas fisheries experts estimate that this catch is more likely close to 4.6 million tons per year, 12 times greater than the reported catch.³⁵ In this way IUU fishing frustrates regulation and conservation efforts; how can regulators set sustainable total allowable catches (TACs) or quotas when their understanding of current populations is confused by considerable yet incalculable levels of IUU fishing? IUU fishing exacerbates the already precarious conservation status of many species, threatening ecosystems worldwide.



IUU Fishing Threatens Food Security

In addition to the severe impact it has on the environment, IUU fishing also harms a range of other actors. IUU fishing results in significant economic losses for legitimate fishers and to legal fisheries in general. IUU fishing depletes fish populations which could otherwise be fished by legitimate actors, and generally degrades the marine environment, producing a vicious circle which further reduces fish populations.

The fisheries sector represents a significant global industry and fish is an important source of protein for the world's population.³⁶ Fish provide 2.9 billion people with 20% of their animal protein, and 4.5 billion people with 15% of their annual animal protein.³⁷ It is also estimated that one third of global fish catches are ground up and used as animal feed, a process which is incredibly inefficient. For example it is estimated that it requires three to five pounds of fishmeal required to produce one pound of farm-raised fish.³⁸

Harvesting this animal protein is a global fleet made up of over 3.23 million marine vessels.³⁹ In 2014, the FAO

estimated that fisheries and aquaculture assured the livelihoods of 10% to 12% of the world's population, more than 800 million people.⁴⁰

Over 800 million people in developing countries depend, directly or indirectly, on fisheries and aquaculture for their livelihoods.

From an economic perspective global fisheries and aquaculture constituted an economic value of \$217.5 billion in 2010.⁴¹ Developing countries are a major participant in this industry, providing 50% of global fish trade, which "contributes a greater amount to their net earnings from foreign exchange than meat, tea, bananas and coffee combined."⁴² The decimation of fish populations due to IUU fishing puts all of these people's livelihoods at risk, in addition to threatening the food security of billions.

IUU Fishing Harms Legitimate Fishers

IUU fishing results in numerous negative impacts on legitimate fishers. IUU fishers have a competitive advantage over legitimate operators, in so far as they are not constrained by regulations or quotas or other limitations to their operations such as environmental or sanitary standards. As a result, they are able to maintain lower operating costs than their legitimate competitors.⁴³ Through the use of flags of convenience, and bribery and corruption (see *Methods of IUU Fishing*, below), IUU fishers are also able to acquire larger quotas and to access otherwise restricted fishing areas otherwise

unavailable to legitimate operators.⁴⁴ IUU fishers may also have access to greater amount of available political and financial capital through involvement in other illegal activities.

IUU fishers sell their products in the same markets as legitimate fishers (see *Fish Laundering, Transshipment and Ports of Convenience*, below), and invariably legitimate fishers suffer. Trade in IUU fish disrupts markets, lowering the price for legitimate fishers. Legitimate fishers also suffer when national and regional



fishery management organizations are forced to reduce quotas in order to sustainably manage stocks in the face of depletion caused by IUU fishing.⁴⁵ Given these pressures, a positive feedback loop can emerge, whereby IUU fishers deplete fish populations forcing legitimate fishers to engage in IUU fishing in order to remain competitive or simply to remain in business. As Ronald Liddick, an associate professor of criminal justice at Penn State University notes, “legal and illegal fish are sold on the same markets, but legitimate fishers pay higher operating costs associated with licensing and overhead due to conservation and management measures... unfair competition from illicit operations may pressure legitimate outfits to cheat as well.”⁴⁶

The impacts of IUU fishing on legitimate operators can be significant. For example in the Florida king mackerel fishery, law enforcement agents estimated that a single IUU fisher stole \$1,400 per week from legitimate fishers by exceeding the catch limits.⁴⁷ In the Gulf of Carpentaria, off the northern coast of Australia, it was estimated that IUU fishing reduced the profitability of fisheries by 10%, resulting in a loss of \$1 million (AUS) a year.⁴⁸

IUU Fishing Damages the Economy and States

The direct impact of IUU fishing is acute, but so too are the indirect costs of this practice. The fishers in coastal states suffer losses from reduced catches which, in turn, impacts coastal states through the reduction of revenue sources. These losses include such things as landings fees, licensing fees, taxes, duties, and other levies.⁴⁹ Given that some of these states are struggling with development and capacity issues, this reduction in revenue can have significant impacts on governance.

Further frustrating governance is IUU fishing and its close association with and

Economic Costs of IUU Fishing

An examination of the effect of IUU fishing on an individual fishery can help illustrate the overall economic scale and impact of IUU fishing:

- In the Hong Kong shark fin trade, an estimated three to four times more sharks are killed annually than official reports claim, amounting to \$292 to \$476 million in shark fin sales.⁵⁰
- Russian sockeye salmon caught illegally is estimated to be 60% to 90% above reported levels based on the amount of fish being traded, representing economic losses of \$40 to \$74 million.⁵¹
- Illegal catches of skipjack, yellowfin, albacore and bigeye tunas are estimated at \$548 million annually.⁵²
- In 2006, a high-level international High Seas Task Force estimated that sub-Saharan Africa lost an estimated \$1 billion a year due to IUU fishing, which was equal to a quarter of its annual fisheries export.⁵³
- In 2009, the estimated average IUU catch in the Western and Central Pacific Ocean was between 786,000 tons and 1,730,000 tons, with a value of \$707 million and \$1.5 billion.⁵⁴



promotion of corruption, as we shall see throughout this report. The corruption upon which IUU fishing thrives and which it in turn reinforces fundamentally undermines good governance, and can fuel instability and promote conflict.⁵⁵ IUU fishing's close association with a range of illicit, dangerous and predatory practices such as extortion, laundering, bribery and even human trafficking, drug dealing and murder, suggests that when IUU fishing flourishes, so too do these harmful practices.⁵⁶

There are also a number of indirect impacts on states, such as a reduction of income and employment from the fishing industries and other associated industries such as processing, packaging, marketing and transport.⁵⁷ Income generated by IUU fishing does not contribute to the overall economy. As noted by Joe McNulty, an inspector for the Marine Area Command New South Wales Police Force and Australian National Centre for Ocean Resources and Security, "financial gains do not find their way back to the fishers and crew. The funds are generally not reinvested in the industry in a legitimate manner; rather they provide finance for organised criminals to continue operations and finance other IUU fishing activities or facilitate diversified criminal activities within their syndicate's scope of reach."⁵⁸

As a result, IUU fishing does not tend to promote economic growth or create legitimate and meaningful employment, thereby restricting vulnerable coastal nations' chances at sustainable development.⁵⁹ This impact can be significantly multiplied in the case of developing states.

IUU fishing can also impact other industries unrelated to fishing. In depleting and destroying marine ecosystems IUU fishing can negatively affect tourism, particularly the very lucrative diving industry.⁶⁰ For example PEW recently calculated that in Palau, the estimated annual value of a single reef shark to the tourism industry was \$179,000, or

Financial gains do not find their way back to the fishers and crew. The funds are generally not reinvested in the industry in a legitimate manner; rather they provide finance for organised criminals to continue operations and finance other IUU fishing activities or facilitate diversified criminal activities within their syndicate's scope of reach.

\$1.9 million over the sharks lifetime, compared to \$108 which could be earned by selling the sharks fins.⁶¹ When one considers the scale and importance of ecotourism to many states, the potential wide ranging damage of IUU fishing becomes clear. For example, PEW estimates that shark-related tourism alone contributes \$800 million to the Bahamian economy over the past 20 years, and that whale shark diving in Thailand generated ~\$110 million in 2003.⁶² If the wildlife upon which the ecotourism industry depends is depleted or driven to extinction by IUU fishing, the ecotourism industry will itself become extinct.

IUU fishing should not be underestimated. It is not a victimless crime. It negatively impacts global and local fish populations, marine ecosystems and as a result harms millions of people.⁶³



Case Study:

Piracy, IUU Fishing, and Safety at Sea

There has been an ongoing debate as to the origins of piracy off the coast of the Horn of Africa. There are a wide range of factors contributing to the explosion of piracy in this region, which peaked in 2011. One of the most significant factors is the collapse of the Somali state; its inability to govern its territory and therefore patrol its waters, allowing pirates and armed groups to flourish. Many commentators have drawn a link between the initial rapid increase in piracy – the so called ‘first wave’ of Somali piracy – and IUU fishing by foreign fleets, citing IUU fishing as one of the root causes of piracy in the region.⁶⁴ The ‘justifications’ for piracy made by many of the participants in this first wave, such as the notorious pirates Abshir Boyah and Mohamed Abdi Garaad, was that they turned to piracy after foreign trawlers destroyed their livelihoods as fishers in the mid-1990s and because illegal dumping by foreign vessels was poisoning their fishing grounds.⁶⁵ In interviews these men often describe foreign fishers as ‘the real pirates,’ and justify their actions on the grounds of defending their livelihoods.⁶⁶

Subsequent waves of pirates, no longer fishers, but young desperate or greedy men, continued to use these arguments, confusing matters considerably. What is clear is that IUU fishers did take considerable advantage of the collapse of the Somali government; either fishing or dumping illegally in Somali waters or by reaching corruption-filled deals for fishing rights with ‘government’ officials in a failed state.⁶⁷ The UNODC notes that “[t]he once thriving Somali fisheries industry has deteriorated into a ‘free for all’ among the worlds’ fishing fleets. For over a decade, hundreds of vessels from various Member States have continuously fished Somali waters in an unreported and unregulated manner, as documented in numerous reports on the subject. This may already have had a disastrous effect on the sustainable management of Somali marine resources.”⁶⁸ The case of Somali piracy demonstrates that the weakening of state governance by IUU fishers and widespread illegal fishing can have far reaching ecological and economic consequences.

The Drivers of IUU Fishing

There are a number of factors which contribute to IUU fishing and to the increase of this destructive practice: greed, ease and profitability, weak governance, poor monitoring and enforcement, overcapacity, and overfishing.

One of the most significant drivers for IUU fishing, a factor which ultimately drives many environmental crimes, is

greed. Simply put, IUU fishing is a low-risk, high-return activity. This is particularly the case in the capture and trade in high-value, low-volume fisheries surrounding endangered and threatened species. Products derived from at risk species such as rock lobster, trepan (sea cucumbers), shark fins, perlemoen (abalone) and dried sea horse are all easily stored and transported and can be sold at a high costs due to high demand in Asian markets.⁶⁹

In these cases IUU fishing can become a significant factor hindering the protection of these species. IUU fish products are traded alongside other endangered species commodities such as rhino horn and ivory, and are often part of elaborate illegal cash-free commodity transactions which involve illegal drugs, arms and human trafficking.⁷⁰

Adding to the appeal of IUU fishing is the fact that the paucity of enforcement and monitoring make the chances of getting caught relatively low. Even in the event that a perpetrator is apprehended, the costs of fines and prosecution pale in comparison to the enormous profits which are made.⁷¹

Profit seekers exploit the weak governance in fisheries. The fishing industry is typified by poor monitoring, control, surveillance and enforcement.⁷² IUU fishing is able to flourish because regional fisheries management organizations (RFMOs), governments, sub-government agencies, and industry members cannot properly regulate and monitor fisheries.⁷³ Many studies have found a “striking relationship between the level of governance of a country and its vulnerability to IUU [fishing].”⁷⁴

The inability to effectively regulate and monitor fisheries stems both from a lack of political will, as well as a lack of capacity and structural issues inherent to the nature of the problem itself. Many common IUU fishing practices exploit weakness in international laws governing the high seas. The mobility of fishing vessels creates opportunities for IUU fishers to engage in jurisdictional arbitrage, skipping from one jurisdiction to the next, transshipping catches

The Failure of Fines

Fines and penalties for illegal fishing are notoriously low compared to the value of poached fish. Oceana reports that:

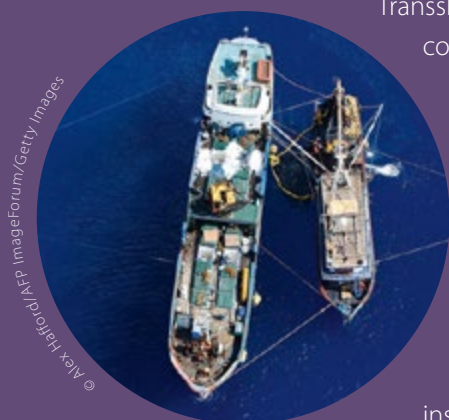
“Penalties paid within the European community averaged between 1.0 and 2.5 percent of the value of IUU landings, effectively a cost of doing business rather than a deterrent.”⁷⁵

A moderate level of poaching appears to be the norm rather than the exception. For example, the European Commission 2010 Control Regulation, Article 14, stipulates that a vessel can fail to report up to 10% of its catch without penalty⁷⁶. Prior to 2009, it was possible, through various simple methods, for a fisher to ‘legally’ under-report as much as 36% of their catch⁷⁷. Low fines for the violation of fisheries laws seem to be the norm around the world. In Russia, one of the most severe fines that can be imposed on a captain of a vessel for the theft of fishing equipment is usually calculated at 200-500 times ‘minimum wage’ which in 1999 amounted to \$4 to \$4.5.⁷⁸ In this way fines are minimal and simply one of many ‘costs of doing business. The size of fines levied against IUU fishers suggests the lack of seriousness with which this widespread problem is treated. In order for fines and punishments to be effective, says criminologist Jay Albanese, the “severity of the penalty associated with apprehension must outweigh the potential gain of the corrupt action.”⁷⁹ Treating IUU fishing as a form of organized crime is a first step to imposing penalties which will actually serve as deterrents.

The size of penalties also influences the amount of investigative effort and resources expended in combating a crime.⁸⁰ Low fines for fisheries crimes is demonstrative of the low level of priority which most countries give to these crimes. This means that not only do current punishments not effectively deter IUU fishing, but that in many cases states are not allocating the resources necessary to arrest IUU fishers in the first place.



Fish Laundering, Transshipment and Ports of Convenience



Transshipment, the transfer of fish at sea, is a common way in which legal and illegal fish are combined, and thereby how illegal fish are laundered. Fish are collected by a refrigerator vessel from numerous individual fishing vessels, and because they do not fish, these collection vessels (or reefers) are often exempt from catch documentation and monitoring. By mixing illegal fish with legal fish, IUU fishers are able to assume the legal documentation for the illegal fish.⁸¹ Re-supply vessels are often untraceable, have the range and operate on an economy of scale which allows them to take advantage of ports of convenience.⁸² Ports of convenience are generally defined as “those ports where the catches can be landed with minimum or no inspection, due either to a lack of resources and capacity of the country or to corruption among inspectors and port officials.”⁸³ Another common way of avoiding quotas and laundering illegal fish is for a single fishing vessel to unload its full quota of fish at multiple ports.

Fish can also be laundered by being transferred to aquaculture facilities. Bluefin tuna ranches were known to hold illegally caught undersized fish, where the fish were kept until they reach the legal marketable size. The fish were not reviewed by inspectors until after they left the ranch, at which point they met legal requirements. Official documentation describing these fish as being in compliance with requirements from the International Convention for Conservation of Atlantic Tunas (ICCAT) were granted to them regardless of any prior practices.⁸⁴

Regulations have subsequently been changed in an attempt to close this loop hole. ICCAT now requires that every transfer of a tuna from a cage to a farm must be recorded using a special video camera. Such efforts constitute progress of a kind; unfortunately these very same changes to regulations also reduced the legal size at which tunas may be caught for the purposes of ranching, counteracting stricter monitoring and other conservation efforts.⁸⁵

and offloading catches in ports of convenience.⁸⁶

Illegal fish can be inserted into legal supply chains, or laundered, with considerable ease. It is generally difficult to distinguish legal from IUU fish on the market, and the incentives to do so diminish as the demand for fish increases.⁸⁷ Illegal fish is commonly introduced into the market by mixing it with legal seafood at numerous stages in the supply chain, otherwise known as fish laundering.

An absence of consequences driven by weak monitoring and enforcement coupled with high profits makes IUU fishing an appealing practice for those who otherwise

obtain their incomes from higher risk activities. During an interview with the UNODC, a senior United States law enforcement official explained “that persons previously engaged in illicit traffic of drugs at sea were now engaged in marine living resource crime (including poaching and illegal fishing), as this was perceived to be more profitable and involved lower risk than drug trafficking.” A similar trend was also reported in the British media.⁸⁸

Turning the Tide, a 2005 World Bank Report drew attention to the direct link between over-fishing and poverty.⁸⁹ Fishers, particularly those living in poverty and operating at very narrow profit margins, may also be tempted



to violate fisheries quotas and regulations. This classic 'tragedy of the commons' results in a positive feedback loop, which destroys livelihoods and the environment in some of the most impoverished parts of the world.

A further driver of IUU fishing is overcapacity. It is the case that the size of the world's fishing fleet is far larger than is sustainable.⁹⁰ Overcapacity is one of the leading causes of overfishing. Fishers need to maintain certain outputs in order to cover the costs of their operations, and they may be tempted to engage in illegal fishing if fisheries are closed or sustainable yet uneconomical quotas are put in place. This builds on the situational theory of crime "which suggests that crime flourishes where people have the means, motive and opportunity to commit it."⁹¹ Overcapacity means that the opportunity, motive

and means to engage in IUU fishing are all present, and markets are available through fish laundering.

The problem of overcapacity is created, in part, due to large subsidies to fishing industries. It has been estimated that the developing world subsidizes its fisheries to the tune of \$30–35 billion per year globally.⁹² These subsidies support fishers in acquiring new vessels and upgrading to better technology, further exacerbating problems of overfishing.⁹³ Ultimately, extensive IUU fishing risks creating a positive feedback loop. It depletes fish stocks, which in turn forces regulators to reduce catch limits, which places constraints on legitimate fishers who follow the rules designed to preserve the health of the marine environment, thereby increasing the incentives and pressure for these legitimate fishers to engage in IUU fishing.⁹⁴

Poaching Threatens Highly Endangered Porpoise

Various news sources have suggested that drug cartels may becoming increasingly involved in smuggling totoaba fish swim bladders between Mexico and the USA.⁹⁵ Totoaba are listed in Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Appendix I, and the US Endangered Species Act.⁹⁶ Their swim bladders are used in making luxury soup which can sell for as much as \$25,000 in China.⁹⁷ The *Daily Mail* reports that in 2013, Mexican regulators seized illegal totoaba bladders worth an estimated \$2.25 million.⁹⁸



Not only is poaching of totoabas for their bladders damaging populations of this species, but it is also threatening one of the most critically endangered mammals on the planet. The vaquita, a diminutive porpoise which occupies a small section of the northernmost portion of the Gulf of California (the Sea of Cortez), is the most critically endangered of all cetaceans.⁹⁹ The vaquita population was estimated at 200 in 2012, and unfortunately since this time half of these animals have died.¹⁰⁰ Without immediate action, conservationists predict that the species will be extinct by 2018. The greatest threat to vaquitas is incidental catches in fishing gear, primarily gill nets, a fishing method used in totoaba poaching.¹⁰¹ In the Sea of Cortez ending illegal fishing has the possibility of saving two endangered species from extinction.



Fishing Subsidies Fuelling Overcapacity and Driving Overfishing

Fisheries subsidies can take many forms, including direct government payments to the industry, tax waivers and deferrals, government loans, loan guarantees and insurance, implicit payments to the industry, and other general programs that affect fisheries.¹⁰² Experts have estimated global fisheries subsidies at as much as \$35 billion in 2009, rates which have remained relatively stable over the past decade. A disproportionate amount of the subsidies provided to the fishing industry are contributed by developing countries (65%), further deepening an already profound divide between developed and developing countries.¹⁰³ From a regional perspective, the most subsidies emanate from Asia (43%) followed by Europe (25%) and North America (16%).¹⁰⁴ The leading subsidizer is Japan, which supports its fishing industry to the tune of \$4.2 billion a year, followed by the EU which provides close to \$3 billion.¹⁰⁵



Fisheries subsidies have a significant negative impact on the sustainability of the fishing industry and marine ecosystems.

The most significant portion of these subsidies, 60%, or \$20 billion, go to capacity-enhancing, followed by fuel subsidies (22%), management subsidies (20%) and subsidies to ports and harbours (10%).¹⁰⁶ Over-capacity is one of the most significant drivers of overfishing – for example, the European Commission estimates that the size and capacity of the European fishing fleet are two to three times above sustainable levels.¹⁰⁷ It is simply the case that the global fishing fleet is too large and powerful in relation to available resources. Subsidies generally reduce the cost of fishing, thereby increasing the profits of fishing companies. Subsidies directly or indirectly allow fishing companies to expand operations, leading to increased capacity, creating a positive feedback loop which leads to unsustainable exploitation of marine species.¹⁰⁸



Methods of IUU Fishing

An examination of the various methods employed by IUU fishers supports the case made throughout this report, namely that IUU fishing constitutes a highly organized form of transnational crime. We have already seen some of the methods employed by IUU fishers, including such

things as coordinated under-reporting, smuggling, fish laundering, the use of ports of convenience and other forms of jurisdictional arbitrage (for example fishing on the boundaries of MPAs or fishing in areas typified by weak governance). The coordinated criminality of IUU



fishing is further highlighted by some of the more complex methods employed by IUU fishers. IUU practices occur at all stages of a fisheries value chain.

A typical value chain for a fishery might contain some of the following illegal methods:



Preparation of fishing vessels for operation:

Obtaining fishing licenses through forgery, extortion, bribery or other illegal means (see *Illegal Practices in the Bering Sea*, below). IUU fishers are also notorious for their use of flags of convenience or non-compliance (see *Flags of Convenience/Non-Compliance*, below). Vessels must also be crewed, and as explored in *Violence, Abuse, and Labour Violations in the Fishing Industry* below, crews are often recruited through dishonest and sometimes violent methods.



Catching fish:

Deploying illegal equipment such as driftnets or dynamite, fishing in areas with little to no governance, or fishing just outside of protected areas. IUU fishing is so profitable that fleets have been known to engage in 'sacrifice games' whereby "a fleet of efficient vessels is augmented by one or two slow inefficient vessels which are used as decoys. After their arrest the efficient fleet is practically assured of a period of fishing uninterrupted by a patrol vessel."¹⁰⁹ IUU fishers will operate coordinated fleets of vessels, where each vessel in the fleet fulfills a specific task. For example one vessel will coordinate fleet movements in relationship to patrols in the area, directing activities and fleet dispersal in the event of contact with authorities (see *Toothfish Poaching in the Southern Ocean*, below).¹¹⁰

Fisheries Value Chain



Preparation of fishing vessels for operation



Catching fish



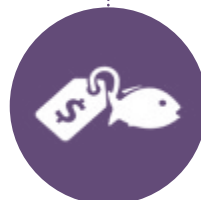
Landing and reporting a catch



Processing the catch



Transporting and exporting fish and fish products



Selling fish and fish products to consumers



Accounting for earnings for tax purposes





Landing and reporting a catch:

Forging or falsifying catch records, keeping multiple log books for the purpose of concealing actual catches or the correct locations of catches (see *Illegal Practices in the Bering Sea*, and *Wide Scale Manipulation of AIS Tracking Data*, below).



Processing the catch:

High-grading, the practice of discarding fish which have a lower market value (due to size or quality) or discarding species with no or very low commercial value, or which are caught alongside a targeted catch is an incredibly wasteful practice and one which often contravenes laws and regulations.¹¹¹ False labelling is often used to sell one type of fish as another (see *Transnational Smuggling of Missouri Caviar*).



Transporting and exporting fish and fish products:

Fish laundering, transshipment, offloading at ports of convenience, false labelling and export permits, and the use of bribery to facilitate the movement of illegal fish products are all used. The process of transshipment has also been criticized as leading to labour and human rights violations; through regular resupply and offloading via transshipment, vessels may remain at sea for months or even years, effectively imprisoning crew members on board and leaving them vulnerable to abuse and exploitation (see *Violence, Abuse, and Labour Violations in the Fishing Industry*, below).¹¹²



Selling fish and fish products to consumers:

Falsely labelling products and direct sales as a means of avoiding taxation (see *Transnational Smuggling of Missouri Caviar*).



Accounting for earnings for tax purposes:

Hiding profits or otherwise dodging taxes, operating under a flag of convenience and employing shell companies to avoid regulations and paying a fair share of taxes on profits.¹¹³

IUU Fishing and Tax Evasion

The illicit profits earned from IUU fishing must often be concealed, and fishers go to great lengths to hide their profits, otherwise legal fishers may also seek to increase profits by engaging in a range of sometimes highly sophisticated tax crimes. The Organization for Economic Co-operation and Development's (OECD's) *Evading the Net: Tax Crime in the Fisheries Sector* report lists practices such as:

- **The evasion of import and export duties** on fish and fish products transported across national borders,
- **Fraudulent claims** for value-added tax (VAT) repayments,
- **Failure to account for income tax** on the profits from fishing activity,
- **Evasion of income tax and social security contributions** and false claims for social security benefits by fishers and their families.¹¹⁴

Other tax dodging practices included:

- The use of front companies in multiple jurisdictions and with untraceable ownership structures. A 2003 OECD report noted that some commercial registries offer 'package deals' to vessel owners, facilitating



The consequence of concerted tax evasion by IUU fishers is a significant loss in tax revenue.¹¹⁵ In 2011, the Norwegian Tax Administration released the results of an investigation into Norwegian fishing operators. The Tax Administration estimated that as much as \$216 million in taxes had failed to be declared (particularly in the form of failures to declare income derived from sale of fish licenses). It further found that estate tax had not been declared on \$325 million, and that VAT had not been paid on an estimated \$1.73 million. The Tax Administration declared that “the operations revealed instances of what they regard as transnational organized criminal activity to hide profits and ownership details.”¹¹⁶

A recent World Wide Fund for Nature/World Wildlife Fund (WWF) report investigating IUU crab fishing in Russia cited Nikolai Fyodorov, the head of the Russian Ministry of Agriculture, who noted that Russia loses an estimated \$1 billion per year in tax revenue from illegal fishing. These numbers were further supported by Russia’s Government Accountability Office, which in a September 2014 report noted that this number exceeded the net income of all Russian fisheries businesses in 2011 (14.4 billion RUB or \$470 million) and constituted more than 15% the annual turnover of all of Russia’s fisheries (127.8 billion RUB, or \$4.2 billion).¹¹⁷

IUU Fishing and Tax Evasion (cont.)

the process of maintaining the anonymity of vessel owners. This process involves “incorporating a front company that will be registered on the ship register as the ‘owner’ but which is in fact owned and controlled with for instance bearer shares by another company.”¹¹⁸ Shell corporations can be established in ‘financial havens,’ jurisdictions which have strong privacy, secrecy laws, or attorney-client privilege laws, thereby making it incredibly difficult for law enforcement to trace or identify the actual owners of a vessel engaged in IUU fishing.

- Underreporting or misreporting catches can serve as a means of evading taxes as much as these actions also evade quotas and other regulations. Underreporting a catch allows fishers to evade import duties and taxes on their profit.¹¹⁹
- Increasingly complex and well coordinated efforts are undertaken by IUU fishers. One process, known as re-invoicing is a method used to reduce the recorded value of sales. The OECD describes the process, whereby “instead of exporting fish or fish products directly to their intended customer, all of the paperwork will suggest that the fish or fish products are being sold to what is in fact an intermediary located in an offshore jurisdiction at a discount to their real value. The fish or fish products are then sold from the intermediary to the real customer for full value. The effect of the fraud is that a relatively small profit will arise in the fishing company’s books, while the majority of the profit will be retained offshore in the intermediary company.”¹²⁰
- Simple methods such as inaccurately describing products can be used to reduce taxes. The OECD reports one case whereby dried codfish, which would normally attract a 20% VAT, was re-labelled as dried cod heads, a product which only incurred a 10% VAT. Investigations into this particular operation found no evidence of illegal fishing, but instead discovered that over \$500,000 in VAT and other taxes had been evaded in the exporting country, and that more than \$2.5 million in customs duties were evaded in the importing country. This same audit further uncovered evidence of embezzling of around \$30,000 on the part of an official at the exporting company, and resulted in a successful prosecution of this individual.¹²¹



Flags of Convenience/Non-Compliance

A flag of non-compliance refers to the practice of registering vessels with countries, such as the Republic of South Korea, which do not comply with their international responsibilities to regulate fishing. The use of flags of convenience is the practice of registering vessels with flag states that are unable or unwilling to exercise criminal jurisdiction over them.¹²² IUU fishers regularly change vessel names and registrations as a means of dodging regulations or avoiding targeted enforcement actions, a practice known as 'flag hopping.' IUU fishers are also notorious for concealing or painting over the names of vessels, thereby frustrating monitoring and enforcement activities.¹²³

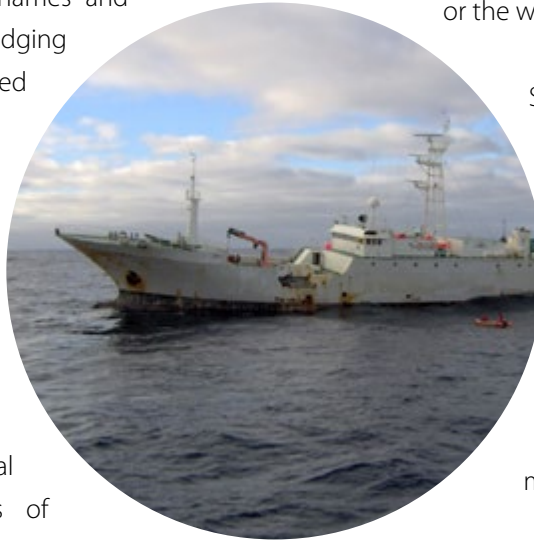
According to the Environmental Justice Foundation (EJF), flags of convenience are used to obfuscate

The use of flags of convenience is the practice of registering vessels with flag states that are unable or unwilling to exercise criminal jurisdiction over them.

ownership of vessels, which can serve numerous purposes. The EJF notes that there is no information about the real ownership of 17% of flag of convenience vessels.¹²⁴ The use of flags of convenience demonstrates both the transnational nature of IUU fishing and the level of advanced planning that IUU fishers use to facilitate and protect their illegal operations. IUU fishing is truly transnational; a vessel can be flagged in one country, crewed by multi-national crews, owned and operated

There is no information about the real ownership of 17% of flag of convenience vessels.

by a company (or sometimes a complex web of multi-national companies), and fish in international waters or the waters of yet another state.



Some IUU fishing fleets are known to have several vessels with the same name fishing under the same permit. This allows them to appear legitimate; if one vessel is stopped it can produce a permit in its name. Or a single vessel may be registered under multiple names, allowing it to use multiple permits.¹²⁵

An example of this practice is the *Berber/Viking* (IMO 8713392), a notorious IUU fisher which operates in the Southern Ocean fishing for Patagonian toothfish. This vessel has changed its name over 15 times since 2003, and has flown under some of the most notorious flags of convenience, including Libya, Honduras, Mongolia, Sierra Leon, North Korea and Nigeria. This vessel has been regularly reported illegally fishing within the Convention Area of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), the inter-governmental organization charged with regulating fisheries in the Southern Ocean, almost every year since 2004 when it was added to the CCAMLR non-contracting party IUU vessel blacklist. It has already been spotted three times in 2014.¹²⁶



Organized Crime and Razor Clams

Organized gangs are reported to be employing an illegal method for systematically poaching razor clams off the coast of Argyll, Scotland. Operations are highly organized and violate a large number of laws. Fishers operate from unlicensed boats and employ electro-fishing, a dangerous process whereby shellfish are stunned using an electrical charge. Stunned shellfish are then collected



completed within 24 hours.

As many as 80 known individuals are involved in this industry, which is adversely affecting the legal razor clam fishery, which contributed £3.1 million to the Scottish economy in 2013. This practice not only hurts the Scottish economy and damages coastal ecosystems; due to the use of illegal methods, these poachers are able to harvest between 500 to 600 kg of razor clams a day, compared with the one to two kilograms harvested by a legitimate fisher.

These poachers are able to harvest between 500 to 600 kg of razor clams a day, compared with the one to two kilograms harvested by a legitimate fisher.



by specially trained divers. Criminals are reportedly harvesting up to £65,000 a day, an amount that police claim is higher than daily revenues from the sales of illicit drugs. Once collected, razor clams are quickly shipped to Asian markets via Singapore. This highly coordinated activity is usually

Electro-fishing, which has been banned since 1998, is also incredibly dangerous to the divers who collect the clams due to the proximity of electricity in the water, and as a result, authorities fear that many fishers in this illicit industry are being exploited and subject to potentially life-threatening conditions.¹²⁷



Case Study:

Wide Scale Manipulation of AIS Tracking Data

In November of 2014 Google, Oceana and SkyTruth launched the 'Global Fishing Watch' digital tool which uses fishing vessel Automatic Identification System (AIS) satellite tracking data to allow for the visualization of global fishing activity,

an important tool in spreading awareness of the problem of overfishing.¹²⁸ AIS transmits information concerning the vessel's identity, location, direction and speed to other vessels and is mandated by the International Maritime Organization (IMO) in vessels above a certain size as a safety regulation.¹²⁹ AIS must be turned on and in many jurisdictions tampering with AIS data or even sailing with AIS turned off contravenes the law. Global Fish Watch and other digital tracking sites which use AIS input, should theoretically allow for the identification of IUU fishers;

for example a fishing vessel which lingers for too long in a MPA could be assumed to be fishing (or in distress) and enforcement (or assistance) could be sent.

The release of the Global Fishing Watch brought attention to the increasing problem of vessels engaged in IUU fishing and other illegal activity manipulating their AIS data. Windward, a maritime analytics company reported a 59% increase in global positioning system (GPS) manipulations from mid-2013 to mid-2014.¹³⁰ Analyzing data from July 2012 to August 2014 Windward found a widespread culture of manipulation and deceit in the global maritime industry. Windward sorted the problems they uncovered into five categories all of which result in "distorting the maritime picture and with it the ability of decision makers to act on valid, reliable data."¹³¹ The five major categories identified were:

1) Identity Fraud: Windward found that 1% of ships were transmitting false or stolen identifying marks (IMO numbers, unique numbers assigned to every vessel over a certain size). While this number might seem low, Windward drew the analogy to airport security, and that this was the equivalent to 1000 people travelling through an international airport using fake identification in a single day. This practice has increased by 30% in the past year.

2) Obscuring Destinations: 59% of vessels failed to report their next port of call.

3) 'Going Dark': This was the most common form of AI manipulation whereby a vessel simply turns off their AIS. Windward determined that over one quarter of the vessels worldwide are turning off their AIS at least 10% of the time. To 'go dark' operators must physically separate an AIS transmitter from its battery.





Case Study:

Wide Scale Manipulation of AIS Tracking Data (cont.)

4) GPS Manipulation: Windward notes that “Findings: AIS transmitters do not provide GPS validation. Therefore, whatever positioning data is ‘fed’ into the device is transmitted as the vessel’s position, regardless of the ship’s actual position.”¹³² Windward recorded a dramatic 59% increase in GPS manipulation between mid-2013 to mid-2014. Operators must physically manipulate the hardware of the AIS transmitter or physically connect the AIS to a computer and use special software to provide false GPS locations. One example given in an article in Wired noted how a vessels turned off its AIS off the south coast of Mexico, only to have its AIS signal reappear near Chile a short while later, and then in the middle of the Antarctic Continent.¹³³

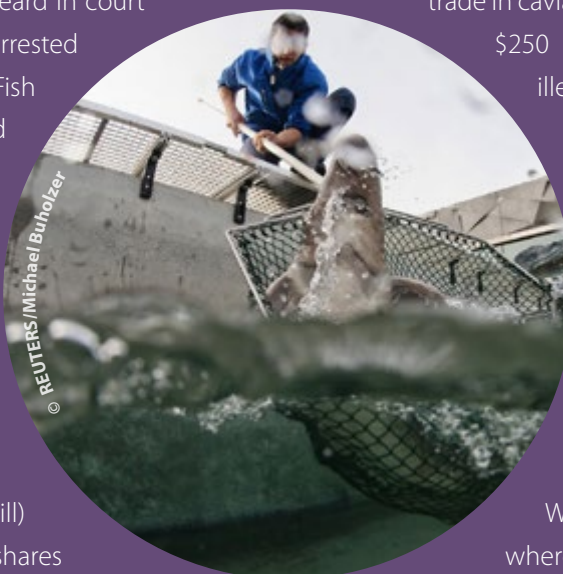
5) Spoofing AIS: The AIS system can be hacked so that ‘ghost ships’ can be introduced where there are not vessels.¹³⁴

The implications of all of these various manipulations of AIS are significant, and include threats to safety at sea, international security, undermining the ability to track vessels and monitor areas on the part of governments and other security and financial stakeholders in global maritime trade. IUU fishers are strongly incentivised to manipulate their AIS or to operate without AIS, either of which is illegal, frustrates the jobs of coast guards and law enforcements, and threatens maritime safety.

Case Study:

Transnational Smuggling of Missouri Caviar

In April 2014 guilty pleas were heard in court by some of the eight men arrested in 2012 as a result of the US Fish and Wildlife Agency launched 'Operation Roadhouse.' This large-scale investigation centered on Warsaw, Missouri, USA saw federal and state officials setting up sting operations targeting poachers selling illegally caught paddle fish between March and April 2011. The paddlefish (or spoonbill) is a freshwater species which shares ancestry with the Beluga sturgeon, a fish



The global legal caviar market ranges between \$40-100 million, which contrasts sharply to the illegal trade in caviar which is estimated at between \$250 and \$400 million.

heavily exploited for its caviar. The fall of the Soviet Union led to organized crime groups taking over the caviar trade in the Caspian Sea in Russia. Over-exploitation has led to the near-extinction of the sturgeon, which in turn has led criminal groups to seek out other sources of caviar. The global legal caviar market ranges between \$40-100 million, which contrasts sharply to the illegal

trade in caviar which is estimated at between \$250 and \$400 million, with this illegal trade being conducted by highly sophisticated and often brutally violent transnational crime organizations.¹³⁵ For example an estimated 90% to 98% of sturgeon caviar sold in Russia comes from poachers.¹³⁶ One of the key locations on the global transnational trade in caviar is Warsaw, in the US state of Missouri, where all manner of highly organized transnational criminal activities surround the exploitation of the paddlefish.



Paddlefish caviar "is attractive to traffickers because it can be processed into caviar similar in colour, size and texture to the prized caviar of the Caspian."¹³⁷

Paddlefish roe is not particularly valuable until it is processed into caviar, at which point 100 grams can sell for as much as \$40 on the black market and retail for many more times this amount. Criminals can make more than \$4000 from one fish given the fact that a large female paddlefish can carry as much as 9kgs of roe. Values can be further inflated through intentional false labelling, whereby paddlefish roe is mislabelled as

Case Study:

Transnational Smuggling of Missouri Caviar (cont.)

a higher grade and therefore more expensive form of caviar. Legal trade in caviar is regulated by CITES, and every tin must be carefully labeled with details which include such features as species, location etc.¹³⁸ Mislabelling can be done at any stage in the supply chain, and often smugglers will alter labels to ease export/import, avoid paying duties or taxes, or in order to traffic in proscribed species. This practice can be easy to get away with, as determining the origin of a tin of caviar can require genetic testing.

The operation of the paddlefish poachers in Missouri [is] highly organized, operating at a level of sophistication beyond someone going fishing in their backyard.

In Warsaw, Missouri, investigators found empty caviar tins labelled as Beluga caviar, suggesting that the criminals they apprehended were engaging in this practice.

In the United States, individual state laws vary regarding personal quotas of paddle fish, but overall, poaching paddlefish for the purpose of commercial sale is illegal, as is the transport of its roe (fish eggs or caviar) across

state lines with the intention of selling it, which constitutes a violation of the Lacey Act. The poachers apprehended by Operation Roadhouse were highly organized and themselves engaged in transnational smuggling – all of the eight apprehended were of Eastern European origin, and some, such as Andrew Praskovsky, a 42-year-old from Colorado, were apprehended while transporting contraband back to their native Russia.

Phaedra Doukakis-Leslie, a professor from the Scripps Institution of Oceanography at University of California - San Diego, described the operation of the paddlefish poachers in Missouri as highly organized, operating at a “level of sophistication beyond someone going fishing in their backyard...[done] by people who have thought this out, who are able to get this to the market and who are able to get a good price for it.”¹³⁹





PART II

IUU FISHING AS ORGANIZED CRIME



Environmental Crime

The majority of IUU fishing violates or contravenes some law, regulation or agreement, or the spirit of these legal instruments, and therefore could be categorized as (an environmental) crime, and as we shall see, due to its transnational and highly organized nature, it constitutes a form of transnational organized crime.

It should be noted that some forms of IUU fishing, particularly unregulated fishing, may not be necessarily illegal. As the UNODC notes, “many fishing vessels engaged in IUU fishing do so by avoiding conservation and management rules and regulations, but they do not *necessarily* operate in contravention of them.”¹⁴⁰ Efforts to avoid regulations are not accidental, they involve planning, effort, and knowledge of the regulations which fishers are seeking to avoid. Fishing in jurisdictions lacking proper regulations at the very least violates the spirit of laws and regulations. The act of fishing at the very edge of an MPA, for example, may not violate the letter of the laws governing this MPA, but it certainly violates the spirit and intent of the MPA, namely marine conservation, and its impact is certainly no less significant on the protected marine ecosystem.

A further clarification should be added. We can divide IUU fishers into three categories:

- **The ignorant,**
- **The opportunist,**
- **The habitual or repeat offender.**¹⁴¹

It is this last category which most accurately meets definitions of transnational organized crime. While the actions of ignorant and opportunistic fishers may easily fit the definition of IUU fishing, these types of activities often lack the degree of organization, planning and forethought, as well as scope and scale needed for their classification as transnational organized crime. Examples

of the former two categories of IUU fisher include such activities as small-scale artisanal or subsistence fishing – a desperate subsistence fisher might catch whatever is available, ignoring regulations and laws out of necessity, or an otherwise legal fishing operation may fin a shark which is accidentally landed as by-catch.¹⁴² Excluding these types of fishing from the discussion does not mean that these methods do not themselves pose a serious threat to the marine environment, but rather that they may require different solutions from transnational organized IUU fishing. This study therefore draws a distinction between forms of IUU fishing carried out opportunistically or as a result of ignorance and large-scale, systematic commercial IUU fishing operations.

Organized crime is more likely to target the vulnerable and most valuable species, and can include environmental offences, theft, fraud, quarantine violation, tax evasion, and serious crime against people, including murder.

Criminologists generally suggests that organized crime is systematic criminal activity “which is more likely to target the vulnerable and most valuable species, [and to] escalate... not only the seriousness of illegal activity but also its effect, through an increase in criminal activity generally, such as environmental offences, theft, fraud, quarantine violation, tax evasion, and serious crime against people, including murder.”¹⁴³



Growing Recognition of Illegal Fishing as Organized Crime

It is clear that IUU fishing is closely linked with a range of nefarious activities. While these activities can be carried out on a more *ad hoc* basis, generally they are strongly linked with traditional organized crime syndicates and mafias, organizations which have been known to deal with opponents in violent and potentially lethal ways. The link between IUU fishing and organized criminal syndicates was highlighted in the December 4, 2009 United Nations General Assembly Resolution 64/72 on sustainable fisheries, which noted “the concerns about possible connections between international organized crime and illegal fishing in certain regions of the world, and encourages States, including through the appropriate international forums and organizations, to study the causes and methods of and contributing factors to illegal fishing to increase knowledge and understanding of those possible connections, and to make the findings publicly available, bearing in mind the distinct legal regimes and remedies under international law applicable to illegal fishing and international organized crime.”¹⁴⁴

A similar link between IUU fishing and organized crime was raised at the meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea (UNICPOLOS) and at the meeting of the Conference of Parties to the UN Convention Against Transnational Organised Crime in 2008.¹⁴⁵

Moving beyond simply being connected with organized

crime, there is a growing trend amongst international bodies and inter-governmental organizations to

There is a growing trend amongst international bodies and inter-governmental organizations to recognize IUU fishing as a serious and highly organized crime.



recognize IUU fishing as a serious and highly organized crime. For example, the UNODC defines illegal fishing as an ‘environmental crime,’ and the Salvador Declaration of the Twelfth United Nations Congress on Crime Prevention and Criminal Justice in 2010 identified illegal fishing as a “new trend in crime.”¹⁴⁶

An even more explicit declaration can be seen in the 2013 ‘Code of Conduct Concerning the Repression of Piracy, Armed Robbery Against Ships, and Illicit Maritime Activity in West and Central Africa (Yaoundé Code of Conduct)’ passed by the Economic Community of Central African States (ECCAS), Economic Community of West African States (ECOWAS), and the Gulf of Guinea Commission (GGC), encompassing 25 west and central African states. This Code of Conduct listed IUU fishing in its list of ‘transnational organized crime in the maritime domain,’ a list which included many well-established transnational criminal activities, such as money laundering, human trafficking, illegal dumping, maritime terrorism and hostage taking.¹⁴⁷



Several Australian states have amended their legislation to include 'fisheries crime,' including laws on 'trafficking in fish.' For example "the New South Wales Fisheries Management Act (1994) provides for indictable species and quantity of fish which is currently limited to 50 abalones (*Haliotis rubra*) and 20 eastern rock lobsters (*Jasus verreauxi*)."¹⁴⁸

Efforts to raise awareness of the problem of fisheries crimes are also emerging. In February 2013, as part of its work in Environmental Compliance and Enforcement, the International Criminal Police Organization (INTERPOL) initiated Project Scale, the explicit aim of which is to "raise awareness of fisheries crime and its consequences, establish National Environmental Security Task Forces (NESTs) to ensure institutionalised co-operation between national agencies and international partners, assess the needs of vulnerable countries to effectively combat fisheries crime and conduct operations to suppress crime, disrupt trafficking routes and ensure the enforcement of national legislation."¹⁴⁹

INTERPOL Most Wanted List

In October 2014 INTERPOL launched its first Most Wanted List for environmental criminals. Its first list contained the names of nine fugitives all of whom are evading charges relating to environmental crimes. Dubbed Operation Infra (International Fugitive Round Up & Arrest) Terra, INTERPOL's effort sought to bring together the support of numerous global agencies and included a list of 139 fugitives wanted by 36 member countries, of which nine were focused upon.¹⁵⁰ While the list includes a large number of individuals charged with exotic wildlife and wildlife product smuggling such as rhino horn, elephant ivory and tropical wood products, it also includes a number of IUU fishers and fishing rings;



Ariel Bustamante Sanchez, age 53, who is suspected of organizing illegal fishing operations in a Costa Rica national park.¹⁵¹

Sergey Darminov, age 50, who is wanted by the Russian government for fisheries violations.

He is the suspected leader of a criminal group that organized illegal crab fishing (BPP), whose operations have resulted in profits of more than \$450 million.¹⁵²



Stefano Carvelli, the head of INTERPOL's fugitive investigative support unit, noted that transnational organized environmental crime is estimated to be worth between \$70 and \$213 billion, and declared that "we consider all of these people to be dangerous, especially because the nature of these crimes required the involvement of organised criminal networks."¹⁵³ Andreas Andreou, a criminal intelligence officer with INTERPOL's environmental security unit was quoted in the Guardian saying that "until recently, environmental offences were not even considered a crime by many countries, but as the years have passed, they have realized that environmental crime is a serious internal threat to our societies."¹⁵⁴



Transnational Organized Crime Defined

The term transnational refers to coordinated activity of a cross-border nature, it is used in lieu of 'global' to emphasize that this type of activity and the actors involved rarely have a truly global scope, although some international fishing operations may in fact be global in nature.¹⁵⁵ The United Nations Convention Against Transnational Organized Crime (UNTOC), Article 3(2) explains that a crime is transnational in nature if:

- **It is committed in more than one State;**
- **It is committed in one State but a substantial part of its preparation, planning, direction or control takes place in another State;**
- **It is committed in one State but involves an organized criminal group that engages in criminal activities in more than one State;**
- **Or it is committed in one State but has substantial effects in another State.**¹⁵⁶

Criminologist Jay Albanese refines this broad definition of transnational organized crime into three categories:

- (1) illegal activities** that somehow transcend international borders;
- (2) transnationally mobile criminal organizations** – respectively, criminal organizations with a presence in more than one country; and
- (3) the extension of illegal governance** across international borders.¹⁵⁷

And he further notes how transnational crimes can be divided into three broad categories: the "provision of illicit goods, illicit services, and infiltration of business or government affecting multiple countries."¹⁵⁸ Due to the need to coordinate and carry out such activities, transnational crime is by its very nature organized.

Organized crime has been defined by criminologists Jay Albanese and Philip Reichel "as continuing criminal enterprises that rationally work to profit from illicit

activities...[whose] continuing existence is maintained through the use of force, threats, monopoly control, and/or corruption of public officials."¹⁵⁹ Organized criminal groups are established when the types of activities in which they are engaged cannot be effectively carried out by a lone offender or by those who are not organized.¹⁶⁰ The UNTOC defines a transnational organized criminal organization as "a structured group of three or more persons, existing for a period of time and acting in concert with the aim of committing one or more serious crimes or offences established in accordance with this Convention, in order to obtain, directly or indirectly, a financial or other material benefit."¹⁶¹

The **Annual European Union Organised Crime Situation Report** expands on this definition, noting that in order for something to be described as organized crime, at least six of the following characteristics are required and it must have characteristics 1, 3, 5, and 11 (in *italics*):

- 1 *Collaboration of more than 2 people;*
- 2 Each with own appointed tasks;
- 3 *For a prolonged or indefinite period of time (refers to the stability and (potential) durability);*
- 4 Using some form of discipline and control;
- 5 *Suspected of the commission of serious criminal offences;*
- 6 Operating at an international level;
- 7 Using violence or other means suitable for intimidation;
- 8 Using commercial or businesslike structures;
- 9 Engaged in money laundering;
- 10 Exerting influence on politics, the media, public administration, judicial authorities or the economy;
- 11 *Determined by the pursuit of profit and/or power.*¹⁶²



Transnational organized crime takes place on a massive scale. In 2009, the World Development Report estimated the global value of revenue earned through organized crime to be \$1.3 trillion. The UNODC conservatively calculated earning for organized crime in 2009 at \$870 billion, or the equivalent to 1.5% of global gross domestic product (GDP).¹⁶³ The International Monetary Fund estimates that

2 to 5% of the world's GDP is in the form of illegal income, with a 2% value being equivalent to the total economy of Spain.¹⁶⁴ Calculations of these numbers do not regularly include IUU fishing: had they had, the numbers would be considerably higher.

IUU Fishing as Transnational Organized Crime

While the UNTOC does not include IUU fishing and other fisheries-related crimes, it is clear that large-scale commercial IUU fishing constitutes a form of transnational organized crime. Holding up common IUU fishing practices to the 11 categories detailed in the Annual European Union Organised Crime Situation Report definition serves as a clear illustration.

1 Collaboration of more than 2 people: Fishing operations are not solo endeavours, and numerous individuals, from the fishers themselves, to boat/ship owners, funders, backers and others collaborate in financing and executing a fishing operation, as well as in the eventual sale of the fish. All of the case studies explored in this report detail fishing operations of varying sizes, all of which involve groups of people. The number of people involved in IUU fishing is considerable, when one considers not just those directly involved with removing fish from the sea, but all those along the sometimes very lengthy fisheries supply chain.

2 Each with own appointed tasks: Each of the different actors involved in a fishing operation generally has an appointed task, from investors who fund expeditions, vessel owners who provide the necessary equipment, captains and crews who pilot vessels and haul in fish, to those who process, transport, and sell fish once they are landed. All vessels at sea divide tasks between crew members, and most businesses similarly divide labour, this is to be expected. However even within an IUU fishing fleet different vessels may have specific appointed tasks, as we have seen, fleets often employ look-out vessels charged with monitoring inspectors, and may even employ aging bait vessels to delay officials, buying time for the remainder of the fleet to escape (see *Toothfish Poaching in the Southern Ocean*, below).



3 For a prolonged or indefinite period of time:

Unlike crimes of opportunity, whereby a criminal may take advantage of a situation which presents itself, IUU fishing, like all fishing operations and perhaps more so, requires considerable planning. This includes such steps as fuelling and equipping a vessel, hiring crew, planning and executing potentially lengthy voyages, understanding the laws and regulations in place and so on. Weeks of planning and preparation take place before a single net is cast. While some instances of unreported fishing may be opportunistic, regular fishing vessels and equipment are expensive and are not employed for a single season but see repeated use. Those who engage in IUU fishing in one season can be expected to repeat this behaviour in future seasons.

4 Using some form of discipline and control:

Reports abound of violence associated with IUU fishing. This can take the form of IUU fishers targeting legal fishers in order to secure prime fishing locations, the use of violence against other IUU fishers in order to protect turf, and IUU fishers may also use violence against their crews as a means of securing a cheap and pliant source of labour. Suffice to say that crews on board IUU vessels are often mistreated, abused and controlled through violence, intimidation or financial leverage. See for example: *IUU Fishing and West Africa*; *IUU Fishing and Money Laundering*; *Violence and Drugs in the South African Abalone Fishery*; *Journalist Beaten to Death after Investigating Illegal Fishing*; and *Violence, Abuse, and Labour Violations in the Fishing Industry*.

5 Suspected of the commission of serious criminal offences:

IUU fishing is a serious criminal offence, violating numerous laws, and in so doing threatening the stability of marine ecosystems. In destroying marine ecosystems, IUU fishing also threatens food security, and harms the economy and legitimate fishers and the communities which depend upon them. IUU fishing generally encourages corruption and in so doing undermines the authority of states, weakening

governance. There are also strong links between IUU fishing and other criminal activity, such as human trafficking and drug smuggling, discussed in greater detail below (see for example *IUU Fishing/Illegal Drug Nexus*, and *Violence, Abuse, and Labour Violations in the Fishing Industry*).

6 Operating at an international level:

IUU fishing can occur within the waters of a single state, cross borders or on the high seas. Illegally caught fish are transported to and sold in multiple countries, sometimes transiting through multiple countries on their way to consumers. The nature of the globalized world today means that cross-border activity is inevitable. This component of the definition is included to differentiate domestically oriented organized crime from transnational organized crime. As we have seen, IUU fishers are transnational, taking advantage of flags and ports of convenience and fishing all over the globe. See in particular *IUU Fishing in West Africa*.

7 Using violence or other means suitable for intimidation:

Like any illicit business, IUU fishing flourishes when it is able to travel under the radar, and avoid unwanted attention which usually is attracted by violence, however as we shall see, IUU fishers often employ violence against other IUU fishers and against legitimate fishers. Activists confronting IUU fishing have also been threatened, and even murdered, see for example *The Death of a Sea Turtle Activist*; *Journalist Beaten to Death after Investigating Illegal Fishing*; *Violence and Drugs in the South African Abalone Fishery*; and *Violence, Abuse, and Labour Violations in the Fishing Industry*.

8 Using commercial or businesslike structures:

Like legitimate fishing operations, IUU fishers will often adopt conventional commercial or businesslike structures for their operations, sometimes as cover for these operations. They also may be 'legitimate' fishing businesses who are systematically violating the law. IUU



fishing is all about profit, and as a result, operations tend to be modeled after other successful business operations. We have also seen in the *IUU Fishing and Tax Evasion* case study how IUU fishers will use front companies and various other business practices to hide their income and facilitate their illegal activities. See also *Failed IPO Reveals Widespread Fisheries Fraud in China*.

9 Engaged in money laundering: As we have seen in the *Fish Laundering, Transshipment and Ports of Convenience* case study, IUU fishers employ a range of laundering strategies to hide their profits and illicit catches. The fishing industry may also serve as a means of laundering dirty money from other illicit activities, or may be used as a front for smuggling drugs or people. See for example *IUU Fishing and Money Laundering*.

10 Exerting influence on politics, the media, public administration, judicial authorities or the economy: It is clear that in some locations, IUU fishers exert considerable influence on politics, the media, public administration, judicial authorities or the economy. The sheer size of IUU fishing in economic terms allows it to exert influence broadly speaking.¹⁶⁵ The importance of fishing to coastal communities allows this industry to exert considerable political influence. Bribery is often a means of exerting power over low level officials, and is commonly employed by IUU fishers seeking fishing licences, or ports willing to allow them to offload their illicit catches. We can see examples of extortion, bribery and threats of violence in the case study on *IUU Fishing and the Mafia*.

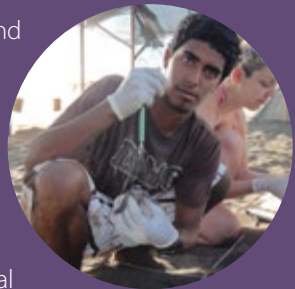
11 Determined by the pursuit of profit and/or power: IUU fishing certainly fits the final category, namely that its practitioners are motivated by profit, and that the principle driver of IUU fishing is greed. As we shall see in further case studies, IUU fishers will often go to exceptional lengths in order to maximize

profit, sometimes travelling to the furthest reaches of the planet, and other times engaging in the most horrific abuses against their crews and the marine environment. See for example *Toothfish Poaching in the Southern Ocean*.

The Death of a Sea Turtle Activist

In May 2013, 26-year old Costa Rican activist Jairo Mora Sandoval was murdered.

Sandoval, a biology student and environmentalist was planning on studying leatherback sea turtle hatchlings and also patrolling Nueve Millas beach, a remote spot near the town of Mohín, with four other volunteers.¹⁶⁶ Sandoval



was violently murdered by masked gunmen, while his four female companions were tied up in a nearby house. As a result of the killing, "the Wider Caribbean Sea Turtle Conservation Network (Widecast), the organization that Mora was working for when he was killed, announced ...that it would close its program in Mohín out of security concerns."¹⁶⁷

The Sandoval case is alarming as it draws attention to the nexus of turtle egg poaching and the illegal drug business in Costa Rica. National Geographic reporter Scott Wallace explains how desperate drug users poach turtle eggs as a quick source of funds and how they will often exchange them directly for drugs, particularly cocaine. Drug dealers and smugglers then become involved in the turtle egg smuggling business as well. Wallace reports that many egg poachers, known as *hueveros*, are far from disorganized, and quotes Juan Sánchez Ramírez, an investigator with the Costa Rican Environment Ministry describing how *heuveros* are better armed than the police, brandishing AK-47's as they poach eggs.¹⁶⁸



Case Study:

Toothfish Poaching in the Southern Ocean

The case of illegal fishing for Patagonian toothfish is highly illustrative in demonstrating the high levels of organization required by IUU fishers, the transnational nature of IUU fishing, many of the methods employed by IUU fishers, as well as the ecological consequences of IUU fishing.



The Southern Ocean permits an annual quota of 12,000 tonnes, however an even greater number are harvested illegally.

The Patagonian toothfish is a large, demersal (bottom dwelling) predatory fish living in the Southern Ocean which can grow to 2 meters and live as long as 50 years. Patagonian toothfish are typical top predators – long-lived, slow growing, late maturing, and producing few offspring.¹⁶⁹ These characteristics make Patagonian toothfish particularly vulnerable to overfishing and mean that over-exploited populations will take a very long time to recover.¹⁷⁰ As a top predator, Patagonian toothfish play a vital role in the Southern Ocean ecosystem, as well as serving as a food source for Ross Sea orcas.¹⁷¹ Scientists have warned that the removal of

toothfish from the Southern Ocean ecosystem, and in particular from the Ross Sea, would risk several possible trophic cascades, harming the populations of other species.¹⁷²

Legal fisheries currently exist for Patagonian toothfish, and CCAMRL, the inter-governmental organization charged with regulating fisheries in the Southern Ocean permits an annual quota of 12,000 tonnes, however an even greater number are harvested illegally.¹⁷³

Extensive commercial fishing for Toothfish began in the early 1990s following the collapse of Austral Hake and Golden Kingklip fisheries in Chilean waters and the decline in fish stocks in many northern hemisphere fisheries.¹⁷⁴

Patagonian toothfish is highly prized, and has been dubbed 'white gold' due to its high market value.¹⁷⁵ IUU fishing exploded in the 1990s. The 1996-1997 season represented the peak of Patagonian toothfish catches (both legal and illegal), which declined thereafter, due almost exclusively to the collapse of Patagonian toothfish population.¹⁷⁶ By 1998 Patagonian toothfish was nearly commercially extinct, and CCAMLR declared that IUU fishing was comparable to "a cancer eating at the fibre of the *Antarctic Treaty System*," and in 2002 it further declared that IUU fishing was "a highly organised form of transnational crime."¹⁷⁷

Case Study:

Toothfish Poaching in the Southern Ocean (cont.)

Percentage of IUU Catch to Total Catch of Patagonian Toothfish (1996-2000)¹⁷⁸

Year	Estimated IUU Fishing Catch	Total Catch	Percentage of catch due to IUU fishing
1996 - 1997	68,234t	100,970t	68%
1997 - 1998	26,829t	54,967t	49%
1998 - 1999	16,636t	53,955t	31%
1999 - 2000	8,418t	33,660t	25%

CCAMLR has attempted to fight IUU fishing, but its efforts have been significantly constrained. CCAMLR has lowered its quotas, and limited catches to specific areas, however CCAMLR relies on vessels reporting their locations and this self-reporting is regularly falsified. For example, despite the fact that 96% of Patagonian toothfish live in areas within the jurisdiction of CCAMLR or individual nations, fishing vessels typically claim half of their catches are caught outside these boundaries.¹⁷⁹ The Coalition of Legal Toothfish Operators (COLTO) estimates that in 2013 the annual IUU catch of Patagonian toothfish was 500-2,500 tonnes, too much for a species struggling on the brink of extinction.¹⁸⁰

Declining Patagonian toothfish populations have led IUU fishers to venture further south to target the Antarctic toothfish. This fish, which has been described by some marine biologists as the most important marine predator in the Southern Ocean,¹⁸¹ is also the prey of sperm whales, Ross Sea killer whales, Weddell seals and large squid. Its removal would negatively impact all of these species, irreparably damaging the ecosystem.¹⁸² Catch rates for Antarctic toothfish have been climbing at an alarming rate since the collapse of the Patagonian toothfish fishery, and IUU fishing has kept pace. In 2013 COLTO estimated that at least 32% of the catch of Antarctic toothfish was illegal.¹⁸³

Toothfish poachers are highly organized and employ a wide range of methods in order to avoid detection and facilitate their illicit activities. There are considerable logistical challenges to operating vessels in the remote and dangerous Southern Ocean, and given the considerable distances involved, most fishing operations employ a fleet of vessels. Outfitting and operating these vessels requires companies investing time and money into operations. Once outfitted, fleets of IUU fishers employ a range of tactics in order to avoid apprehension by the authorities. Toothfish poachers have been known to assign a specific vessel in their fleet with the role of monitoring coast guard vessels, and communication between vessels is kept to a minimum to avoid detection or is done in pre-established codes.¹⁸⁴

On the rare occasions that poaching fleets are intercepted, toothfish poachers have been reported issuing fake distress signals to avoid detection and arrest.¹⁸⁵ When these methods fail, a single vessel, typically the most expendable within the fleet, may be 'sacrificed' in order to allow the rest of the fleet escape.¹⁸⁶ To further protect their illicit operations, vessels flags of convenience and names are changed often, sometimes multiple times in a single season.¹⁸⁷

Case Study:

Toothfish Poaching in the Southern Ocean (cont.)

IUU fishers poaching toothfish in the Southern Ocean are known to:

- **Tamper with their Vessel Monitoring Systems** (VMS), allowing them to misreport catch locations.¹⁸⁸
- **Deploy deepwater gillnets**, equipment which has been banned by CCAMLR due to its high levels of by-catch and risk of ghost fishing, which refers to nets that have been left or lost in the ocean that continue 'fishing' for years.¹⁸⁹
- **Introduce illegally caught fish** to markets through mislabelling, forged documents, and falsified reports.¹⁹⁰
- **Launder IUU catches** through transshipment.¹⁹¹
- And then **unload catches at ports** with lax controls or corrupt administration.¹⁹²

Those profiting from these sophisticated criminal operations further protect themselves by hiding behind complex corporate ownership structures involving

Highly sophisticated transnational corporate structures allow IUU fishers to engage in jurisdictional arbitrage, avoiding taxes and laundering the proceeds of their illicit activities.

multiple front companies in different countries. The 2006 High Seas Task Force noted that sometimes the "operational instructions for the illegal fleet are passed down through front companies with vessel masters

often not knowing who their real employers are."¹⁹³

These highly sophisticated transnational corporate structures allow IUU fishers to engage in jurisdictional arbitrage, avoiding taxes and laundering the proceeds of their illicit activities. The UNODC described how "law enforcement officials are often unable to adequately investigate and prosecute marine living resource offences and the masterminds behind the organized criminal activity, due in part to the transnational nature of the crimes committed and the lack of transparency in the fishing industry."¹⁹⁴

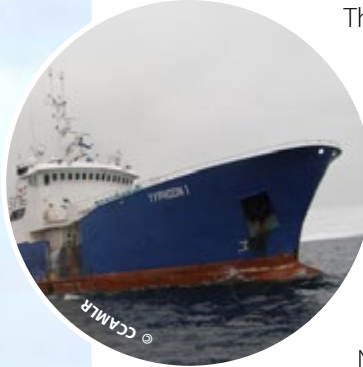
These fishers are fully aware of the illegality of their actions, and adopt a range of sophisticated tactics to avoid detection, all in the name of making a quick profit.

All of these measures demonstrate a high level of transnational organization on the part of IUU fishers in the Southern Ocean. These poachers are engaged in highly coordinated and sophisticated illegal operations which are run over the course of multiple seasons. These fishers are fully aware of the illegality of their actions, and adopt a range of sophisticated tactics to avoid detection, all in the name of making a quick profit.

The risk of all of these actions are the extirpation of toothfish from the Southern Ocean, with the deleterious impact this would have on the entire ecosystem.

Profile:

IUU Fishers of the Southern Ocean



The *Thunder/Typhoon I* (IMO 6905408) which was added to the CCAMLR IUU blacklist in 2006, has been spotted fishing in the CCAMLR convention area every year since. During this time, it has sailed under seven different names and numerous flags of convenience, including Togo, Nigeria, and Mongolia.¹⁹⁵



The *Yangzi Hua/Nihewan* (IMO 9319856) was first spotted fishing illegally in the CCAMLR Convention Area in 2008. Since this time, the vessel has been spotted every year, including as recently as January 12, 2015. While this report was being drafted, the vessel's name was changed to '*Songhua*', and it was re-flagged in Equatorial Guinea. CCAMLR records 8

different names for this vessel, as well as flags of convenience from Tanzania, Mongolia and Cambodia. This vessel can carry as much as 300 tonnes of poached toothfish and is known to operate in cooperation with two other vessels, the '*Kunlun*' (IMO7322897) and the '*Yongding*' (IMO 9042001), both also registered in Equatorial Guinea. Interpol, upon the request of the Government of New Zealand, issued purple notices on all three vessels. A purple notice is an international request for cooperation in gathering information on *modi operandi*, objects, devices and concealment methods used by criminals.¹⁹⁶



Case Study:

IUU Fishing in West Africa

In West Africa, IUU fishing severely compromises conservation efforts, undermines legitimate fishing competition and threatens the livelihoods of coastal communities. West African waters are particularly abundant with highly prized seafood and are estimated to have the highest levels of IUU fishing in the world, representing up to 37% of the region's catch.¹⁹⁷ Estimates project that illegal fishing in the wider Eastern Central Atlantic is worth between \$828 million and \$1.6 billion annually.¹⁹⁸ According to the EJF, Ghana alone loses about \$100 million a year in catches. The fishing industry earns countries like Mauritania, Senegal, Guinea, Guinea Bissau, Ghana, Liberia and Sierra Leone collectively an estimated \$4.9 billion per year.¹⁹⁹

Many states lack the capacity to effectively monitor their waters and enforce fisheries laws and regulations, however this region is also plagued by IUU fishing by international fleets (Chinese, South Korean and European), occurring just beyond states' EEZ on the high seas.²⁰⁰

IUU fishing and other criminal activities in West Africa are rampant due to the low probability of being caught throughout the region.²⁰¹ In Ivory Coast for example, only four vessels have been found fishing illegally since 2007, despite reports of local fishers coming into contact with foreign ships on a regular basis.²⁰² The deficiency in adequate monitoring mechanisms is partly linked to political instability throughout many coastal nations in the region. For example, Sierra Leone's civil war left fisheries largely ungoverned for 10 years in the 1990s and early 2000s.²⁰³

With unchecked illegal fishing activities, fish stocks in the area are quickly depleting, producing considerable hardships for legal fishers.²⁰⁴ Faced with rising fuel prices and declining



Case Study:

IUU Fishing in West Africa (cont.)

livelihoods, there is evidence that these fishers are more inclined to themselves engage in IUU fishing.²⁰⁵ These local illicit fishers are often employed by foreign companies due to their knowledge of the coast and the lower probability of triggering suspicion.²⁰⁶

While IUU fishing can be in and of itself an organized criminal enterprise, due to unstable governments in West Africa, the unregulated nature of the fishing industry, as well as the diversity of actors acting both within and outside of the region, IUU fishing has become closely linked to other areas of organized crime including human trafficking, and smuggling of narcotics and weapons. Due to its location, West Africa serves simultaneously as a supply zone (e.g., illegal fishing), a transit zone (e.g., drug trafficking) and a destination (e.g., people smuggling) for criminal markets that span multiple continents.²⁰⁷

Crews on board fishing vessels involved in fishing crimes are more at risk of human trafficking because operators readily take advantage of an endless supply of workers desperate for income.

The UNODC has identified two main 'transshipment hubs' in West Africa: one taking place in the Eastern Central Atlantic around Guinea and Guinea-Bissau, including Cape Verde, Senegal and Gambia, while the other is found in the Gulf of Guinea, including Ghana, Togo, Benin and Nigeria.²⁰⁸ These transshipments between fishing vessels are a common method to traffic

drugs, smuggle migrants and weapons.²⁰⁹ A number of cocaine seizures have for instance been made in Ghana and there are suggestions that cocaine is stockpiled in the country for further shipments.²¹⁰ Fishing vessels involved in drug trafficking are able to provide a necessary component to criminals, as large ships are often used as a base in international waters, while smaller vessels are used to transport drugs to and from shores.²¹¹

The fishing industry in the region is also highly susceptible to human rights violations. Forced labor and human trafficking take place on board fishing vessels because of the isolation of the workplace, strong competition within the industry, and the ready supply of vulnerable workers.²¹² In 2010 while conducting investigations into alleged IUU fishing in the EEZ of Sierra Leone, the EJP and Greenpeace International came across fishing vessels used as 'mother ships' containing sleeping quarters for about 200 Senegalese fishers.²¹³ The fishers slept on cardboard mattresses layered less than a meter above one another. Every day the fishers would leave the mother ship in 40 wooden canoes and return at night. Crews on board fishing vessels involved in fishing crimes are more at risk of human trafficking because operators readily take advantage of an endless supply of workers desperate for income. Since many countries in the region lack effective monitoring methods, there are no incentives for operators to meet international human rights standards on ships.



Bribery, Corruption and IUU Fishing

Corruption can be defined as the misuse of public office or the abuse of power for private gain, and crimes relating to corruption including embezzlement and fraud, nepotism, bribery, extortion and influence peddling.²¹⁴

These nefarious practices can be seen at every stage of the IUU fishing supply chain, and are widespread.²¹⁵ Officials need to be bribed in order to obtain fishing licences, or to overlook fishing in the absence of a licence.²¹⁶ Bribes significantly undermine enforcement efforts, allowing IUU fishing to continue unpunished.²¹⁷ Corruption is a vital component to the transport of IUU fishing. For example in 2002 the South Africa-based fishing company Hout Bay Fishing Industries, was convicted of 301 charges of bribery of fisheries inspectors.²¹⁸

Jay Albanese lists some of the costs and harms of corruption, noting that it:

1. Undermines democracy and good governance,
2. Causes unequal provision of public services,
3. Subverts the rule of law,
4. Erodes government institutional capacity,
5. Undermines economic development,
6. Increases the cost of private business,
7. Undermines the legitimacy of government.²¹⁹

The direct financial harms which corruption causes to governments can be considerable:

- In 2008, the government of Guinea performed an audit which reveals that this small developing country had lost €1 million due to fraud and theft by the Ministry of Fisheries.²²⁰
- A 2005 audit of the Solomon Island Department of Fisheries and Marine Resources uncovered that SB\$70.4 million (\$9 million) had been lost as a

result of corruption and fraud in relation to fishing licences.²²¹

- January 2011 the media reports claimed that Japanese governmental tax investigations had found that Japanese companies had paid bribes of as much as ¥500 million (~\$6 million) to Russian fisheries officials in order to exceed the fisheries quotas.²²²

IUU Fishing and Money Laundering

There are many stages in the fishing industry supply chain where the illicit profits of other criminal activities can be introduced so as to appear legitimate, a process known as money laundering. The fishing industry – both the licit and illicit – is also associated with money laundering.²²³ Illicit funds can be invested in infrastructure (new gear, fish processing plants, vessels), or in operations (fishing, processing and transport). Cash sales of fish at port are hard to trace and commonplace (see *Case Study: Illegal Practices in the Bering Sea*), and crew members can likewise be paid in cash.²²⁴

The Solomon Island's 2008 report on *Financial Crime & Money Laundering Risk Assessment* found that environmental crimes (including marine living resource crimes such as IUU fishing) were the third most common predicate offences of money laundering in the Pacific.²²⁵ A predicate offence is a crime that is a component of a more serious crime, that is, the crime which generated the revenue being laundered.



Case Study:

Violence and Drugs in the South African Abalone Fishery

Abalone is an edible marine sea snail, some species of which can reach considerable sizes (up to 30 cm). This snail is prized in some East Asian countries where its meat is considered a delicacy with aphrodisiacal and other qualities.²²⁶ Demand for abalone is very high, as are prices given plummeting populations of this marine snail. Abalone is also particularly attractive to would-be poachers; it is a high-value, low-volume product, it is relatively easy to acquire and transport, and for which there exists a large market.²²⁷

Unregulated poaching quickly led to the decline of abalone populations, threatening the sustainability of legal abalone fisheries and very existence of the species.

In South Africa, poaching for abalone, also known as 'perlemoen,' accelerated dramatically in the early 1990s with the fall of the apartheid government and the transition to democracy. By the late 1990s, what had started off as mostly opportunistic poaching on the part of the poor, had turned into a highly organized and lucrative illicit industry, dominated by 'street gangs' and "highly organized criminal syndicates" on the ground and with transportation and export increasingly controlled by transnational criminal Chinese/Asian gangs which

established themselves during the fall of apartheid.²²⁸ Organized abalone poaching quickly spread from the Western Cape Province to the Eastern Cape Province, where poachers openly fished in public areas at Port Elizabeth.²²⁹

There was money to be made in abalone. For example in South Africa in 1990, the price of abalone, was R146/kg and by 2007 the price had increase to R611/kg. In

2013 it was estimated that in South Africa dried abalone was traded at ~R1,000/

kg and that the same product could be sold for as much

as R6,000 and R12,000 in Asia.²³⁰ Such high prices

incentivized poaching, particularly amongst

poor communities, and thousands of tonnes of

abalone were quickly and illegally harvested. Between

2004 and 2006 it was estimated

that 1000 to 2000 tons of whole

mass abalone was harvested in the Eastern

Cape. This earned illegal abalone fisher groups operating out of Port Elizabeth, an estimated \$13 to \$26 million in non-taxable cash income per year.²³¹ Raemaeker and Britz estimated that the total economic losses to South Africa due to abalone poaching and smuggling to be in the range of \$35 to \$70 million.²³²

Unregulated poaching quickly led to the decline of abalone populations, threatening the sustainability of legal abalone fisheries and very existence of the



Case Study:

Violence and Drugs in the South African Abalone Fishery (cont.)

species – some areas saw a 90% reduction in abalone populations.²³³ In 2002 for example, more abalone was confiscated by the authorities than was harvested by legal fishers that year.²³⁴ More than a million abalone

Policing initiatives and the establishment of Environmental Courts were unsuccessful at stopping poaching.

were confiscated in 2006.²³⁵ South Africa struggled to combat abalone poaching, reducing the TAC from 615 tonnes in 1995 to 125 tonnes in 2006/2007, and then again to 75 tonnes in 2007/2008. These efforts, combined with several policing initiatives, such as 'Operation Neptune' and 'Operation Trident', and the establishment of Environmental Courts, were unsuccessful at stopping poaching. The courts were shut down in 2005, and in 2008 the South African government was forced to ban all abalone harvesting.²³⁶

Some of the reasons that South African authorities had so much difficulty in combating abalone poaching were:

- **The ease with which abalone can be smuggled:** While fresh abalone is easily detected due to a distinct pungent odor, dried abalone can easily be masked and disguised as another product, and shrinks to a tenth its size making it transportable in large quantities. It stays preserved for months, even years, and few law enforcement officials are specifically trained to recognize it.²³⁷ The verification of frozen abalone shipments is also

difficult given that irreversible damage to lawful cargo may occur as a result of inspections.²³⁸

- **The ease of transboundary transport of abalone:** smuggling abalone out of South Africa and into neighbouring state which may lack export bans on the species appears to be commonly practiced. The primary importer of abalone is Hong Kong, followed by China, Japan, Malaysia, South Korea, the Philippines, Singapore and Taiwan. The most significant sources of abalone to Hong Kong are South Africa and Mozambique (19% and 11% respectively), with other south African countries (Madagascar, Mauritius, Mozambique, Namibia, Senegal, Swaziland, Zambia and Zimbabwe) contributing an additional 12%.²³⁹ This is somewhat of an anomaly, as abalone is not endemic to these countries (with the exception of Namibia), which suggests that abalone is smuggled into these countries before being re-exported to Hong Kong and that South Africa is the true origin of these abalone.²⁴⁰

- **Corruption and bribery of officials:** Reports of bribery of enforcement officials suggest that this may have been one of the reasons for the ineffectiveness of enforcement measures.²⁴¹ There have also been reports in *Noseweek* magazine that the Marine and Coastal Management was selling confiscated abalone at cut rate prices (R18/kg compared to the market price of R350/kg), thereby resulting in a situation where the authorities were incentivized to confiscate abalone, but not too much so as to end poaching and thereby reduce revenues.²⁴² In this way, an Institute for Security Studies report described the Department of



Case Study:

Violence and Drugs in the South African Abalone Fishery (cont.)

Agriculture, Forestry, and Fisheries (DAFF) as being a 'legitimate' racketeer competing with organized crime groups, further suggesting that "DAFF has a vested interest in confiscation over prevention."²⁴³

The matter of illegal abalone fishing is not only one concerning the conservation status of this important marine species, but also one which became increasingly intertwined with other criminal activities and social problems.²⁴⁴ The so called 'Abalone Wars' pitted legal commercial divers against poachers and led to animosity and inter-group violence, a problem exacerbated because the groups live within the same community.²⁴⁵

Various seizures and investigations revealed an extensive cash-free barter economy where abalone was exchanged for methaqualone/Mandrax, methamphetamines, or component ingredients for methamphetamine production.

Similar patterns of violence occurred between participants in the legal and illegal abalone industries in Mexico as well.²⁴⁶ The Asian 'Triads' involved in the industry relied heavily on both modern computerized business techniques as well as the psychological power associated with ancient rituals designed to induce loyalty and fear amongst members and fear amongst the general public. Increased involvement

by violent criminal organizations created a state of fear within communities, and community members were often afraid of opposing poaching and assisting law enforcement for fear of violence, and as a result law enforcement efforts were further frustrated.²⁴⁷

Even more dangerous was the closely established link between drug dealers and abalone smugglers. In 2005, multi-ton methaqualone seizures were linked with businesspeople at the centre of the abalone trade.²⁴⁸ Various seizures and investigations revealed an extensive cash-free barter economy where abalone was exchanged for methaqualone/Mandrax, methamphetamines, or component ingredients for methamphetamine production.²⁴⁹ This economy involved cooperation between a wide range of different (sometime transnational)

organized criminal groups.²⁵⁰

For example, in 2007,

"Igshaan Davids, the reported leader at the time of the Americans gang on the Cape Flats, stated that he could trade \$43,000 worth of abalone for methamphetamine worth \$64,000."²⁵¹ Now not

only was abalone poaching fueled by greed, but drug users became involved, engaging in poaching in order to secure their next fix.²⁵²

An examination of the *modus operandi* of a Cape Flats abalone operation reveals the high level of planning and organization involved in this form of IUU fishing. Raemaeker and Britz's study of abalone poaching



Case Study:

Violence and Drugs in the South African Abalone Fishery (cont.)

provides some telling details. They describe how by 2005, poachers were operating a fleet of 30 purpose built 'superduck' vessels. These vessels represented a long-term investment in poaching, costing as much as \$146,000 each, with the total investment of 30 vessels calculated as high as \$4 million.²⁵³ They described the number of individuals and planning involved in a single operation:

"Operations were carefully planned beforehand: dive locations were chosen, boats prepared and loaded with dive cylinders, and law enforcement activities monitored. 'Lookouts' were placed at strategic points (harbours, police road blocks, etc.) and were in permanent cellular phone contact with the boat skipper. Illegal fishing groups have also been known to organize decoy divers in a key area, to divert law enforcement efforts from the target area.... Upon arrival at the designated dive location, reconnaissance divers using snorkeling gear would be deployed to assess the reefs for abalone. Only then would divers equipped with self-contained underwater breathing apparatus.... be deployed After diving, boats were washed down with fuel, and gloves discarded, in order to remove any abalone tissue and mucous which might provide ... DNA... evidence of illegal abalone possession. The returning boats carrying the divers then acted as a diversion from the boat with the abalone bags for possible patrol boats. Abalone would be dropped off anywhere along the coast or in estuaries. Using information provided by 'lookouts', 'runners' would swim the bags ashore and carry them to the waiting vehicles, which transported the abalone to catch accumulation points or drying facilities."²⁵⁴

In 2006, a single trip could earn an individual poacher as much \$6000; with a capacity of 1 ton of de-shelled abalone, a single 'superduck' could hold \$40,000-\$60,000 per trip.²⁵⁵ Poached abalone would then be dried in a 'factory' which was typically a residential home converted for the purpose.²⁵⁶

By 2005, the scale and the level of planning that went into building the illegal fishery was remarkable: a fleet of 30 purpose built vessels existed with a capital investment of 4 million, employing at least 300 full time crew and harvesting 1000-2000 tons of abalone with an export value of \$35-70 million. The reason for the rapid development of the fishery is obvious: due to the high price of abalone, an individual diver could make in the region of \$6000 from 100 kg of abalone in a single trip, with minimal capital investment and risk.²⁵⁷

IUU Fishing and the Mafia



Organized crime's use of fishing vessels and involvement in illegal fishing has been alleged in many regions of the world, from New York's Fulton Fish Market to groups from the former Soviet Union, China, South America and South Africa.²⁵⁸ All of Italy's major Mafia syndicates are involved in maritime transport and fishing.²⁵⁹

For example, the WWF reported heavy involvement of the *Camorra* in the bluefin tuna industry in the Campania region, as well as clans of this syndicate involved in extortion rings associated with fish markets in Napoli and the import and export of fish into the UK.²⁶⁰ The Francesco Muto, a clan leader with the notorious '*Ndrangheta*' and known as 'the king of fish' was known to control fishing and fish mongering activities in the regions of Paola and Scalea, as well as for exercising 'pizzo' (protection rackets) on small businesses in the region and drug trafficking.

In September 2004 seventy members of the 'Francesco Muto clan' were issued arrest warrants and charged with extortion against the tuna canning company Tonno Callipo, based in Vibo Valentia.²⁶¹ In Western Sicily, tuna ranches paid high sums of money to local Mafiosi clans associated with *Cosa Nostra*.²⁶² The WWF also reports that the Cosa Nostra Mazzei clan was heavily involved in fish purchases in the Catania and Portopalo fish-markets.²⁶³

Journalist Beaten to Death after Investigating Illegal Fishing

In February 2014, Suon Chan, a reporter for *Meakea Kampuchea* (Cambodia's Way) newspaper was beaten to death by a mob of 10 fishermen in the Cholkiri district of Kampong Chhnang province.



Two relatives who came to Suon Chan's aid were also hospitalized for injuries they sustained trying to save the journalist. The authorities believe that the attack may have been related to his investigations and reporting on illegal fishing which has led to police crackdowns in the area.²⁶⁴





Case Study:

Violence, Abuse, and Labour Violations in the Fishing Industry

IUU fishing has been linked with numerous crimes which take advantage of, and violate the rights of vulnerable people. In particular, IUU fishing is linked with illegal immigration, human trafficking, numerous violations of labour standards and safety regulations, modern slavery, sex trafficking and other components of the sex industry.²⁶⁵

Those who are trafficked may be exploited for forced manual labour or sex, suffering untold hardships.

There are several reasons as to why the crew of IUU vessels are particularly at risk to human trafficking and human rights violations:

1. Fishing operators involved in marine living resource crimes are already involved in criminal enterprise, and display a commitment to profit seeking and lack of moral judgment.
2. Vessels engaged in IUU fishing are often old and unsafe as they run the risk of forfeiture. This makes hiring qualified crew more difficult and expensive and leads unscrupulous operators to resort to forced labour. This also has potential environmental implications, as these vessels are more polluting than regulated vessels and more likely to sink.
3. There is a complete lack of oversight of IUU fishing vessels, and this applies equally to the locations and number of fish caught as it does to the safety and working conditions on board vessels.²⁶⁶



Case Study:

Violence, Abuse, and Labour Violations in the Fishing Industry (cont.)

4. Vessels engaged in IUU fishing are often registered to states which lack the will or capacity to exercise their criminal law enforcement jurisdiction. Risk to owners is further reduced through the use of front companies.²⁶⁷

The UNODC report on *Transnational Organized Crime in the Fishing Industry* draws particular attention to the use of fishing vessels in migrant smuggling. It notes that many unemployed fishers turn to migrant smuggling as a means of supplementing their incomes,²⁶⁸ and explains how these individuals “possess the necessary knowledge to navigate their coasts,” and have ready access to surplus fishing vessels.²⁶⁹

The UNODC notes that “migrant labourers and fishers fall prey to human traffickers as victims of trafficking for the purpose of forced labour on board fishing vessels.”²⁷⁰

The very same poor regulation and monitoring that allows IUU fishing to flourish also results in poor and dangerous working conditions on board vessels.

The true insidiousness of human trafficking is unlike most illicit transnational exchanges, which involve the buying and selling of a consumable product:

“human trafficking entails the buying and selling of human beings who are exploited over and over again.”²⁷¹

Those who are trafficked may be exploited for forced manual labour or sex, suffering untold hardships.²⁷² When engaging in human trafficking, owners and captains contrive to keep crew members trapped aboard fishing vessels. Crew members may be forced to pay high ‘finders’ fees’ to the agents who arranged their position on board the vessel, thereby turning crew members into bonded labourers. Such practices require high levels of organization and entail cooperation between vessel operators and intermediary brokers and recruiting agencies around the world.²⁷³

Other methods are employed to keep fishers on board vessels once they have been recruited. Pay is often withheld pending the completion of a voyage. Passports may similarly be withheld, preventing crew members from leaving vessels while at port. The practice of transshipment means that fishing vessels can remain at sea for lengthy periods of time, during which crews are virtual prisoners.²⁷⁴ There are reports of fishers being traded from vessel to vessel to meet crewing needs, without ever docking at port.²⁷⁵

Conditions on board IUU fishing vessels are often appalling and the crews of vessels are reported to suffer numerous human rights abuses.²⁷⁶ The very



Case Study:

Violence, Abuse, and Labour Violations in the Fishing Industry (cont.)

same poor regulation and monitoring that allows IUU fishing to flourish also results in poor and dangerous working conditions on board vessels. There is little incentive to invest more than absolutely necessary into infrastructure as IUU vessels may be forfeited at any time and do not need to be brought to code to meet inspections. As a result, IUU fishing vessel operators regularly neglect their vessels, which not only places crews and even entire vessels at risk, but also poses a significant environmental concern, as poorly

Without oversight, operators regularly cut corners, ignoring safety standards which not only affects

Children worked excessive hours and were often exposed to physical, verbal and sexual abuse, and sometimes killed, with their bodies simply dumped into the sea.

There are reported instances of the murders of workers, some of them children, at the hands of violent and unscrupulous owners and captains.

maintained vessels regularly leak pollutants and there are significant environmental damages caused as a result of an accident or when a vessel sinks.²⁷⁷ For example the poorly-maintained Sao Tome and Principe-flagged *Amur*, sunk in October 2000 while illegally long-lining for toothfish in the EEZ of the French overseas territory of Kerguelen Island. Of the 40 crew on board, which included Korean, Spanish, Peruvian, Danish, Indonesian and Chilean nationals, 14 drowned.²⁷⁸

the well being of their crew, but also the food safety standards of governing the hygienic handling of the fish which they handle.²⁷⁹ There are numerous reports of fishers being killed due to poor safety conditions or at the hand of abusive senior crew members.²⁸⁰ There are even reported instances of the murders of workers, some of them children, at the hands of violent and unscrupulous owners and captains.²⁸¹



A survey of workers on more than 140 *jermals* (platforms on stilts used for fishing) in Indonesia found that more than 75% of the 8,000 workers were children, of which one third were under the age of 14.²⁸² Earning an alleged \$0.38 per day, these children were malnourished, and suffered from numerous ailments such as malaria and fatigue. They worked excessive hours and were often exposed to physical, verbal and sexual abuse, and sometimes killed, with their bodies simply dumped into the sea.²⁸³

Case Study:

Violence, Abuse, and Labour Violations in the Fishing Industry (cont.)

Violence appears to be a common method of controlling labour on the part of IUU fishers. In *Sex Trafficking: Inside the Business of Modern Slavery*, Siddart Kara describes an interview with a Colonel Chindavanich, on the subject of the forced labour of young boys in the fishing industry in South East Asia. He explained elaborate systems where Cambodian boys were bussed from small villages and towns, taken to sea, and then forced to fish for as many as twenty hours a day. He further described how these boys were forced by the captains to take amphetamines in order to work nonstop, and how they were prisoners of the vessels upon which they worked. When asked what happened to the boys after a gruelling fishing season, the Colonel explained that many were shot and thrown into the sea.²⁸⁴

Women and children in fishing ports are vulnerable to organized sexual exploitation by fishers.

Another link between IUU and human trafficking and abuse relates to trafficking for the purpose of prostitution. Women and children in fishing ports are vulnerable to organized sexual exploitation by fishers. There are also reports of women and children being employed on vessels for the purpose of sex. Here using the same practices employed in forced labour, and sometime outright kidnapping, women, and young girls and boys are kept imprisoned on fishing vessels where their bodies and labour are exploited by other crew members.²⁸⁵



Case Study:

Illegal Practices in the Bering Sea

A 2001 report produced jointly by the WWF and TRAFFIC (the wildlife trade monitoring network) entitled 'Trawling in the Mist' exposed widespread illegal practices rampant in Russian fisheries in the Bering Sea. This investigation found illegal activities at virtually all levels of the fishing industry, in nearly all seafood markets.²⁸⁶ The cost of illegal fish exports to the Russian government was suggested to be between \$1 and 5 billion.²⁸⁷ Between 1995 and 1998 the value of illegal exports of fish was found to be 2 to 10 times the value of all exports declared to the Regional Kamchatka Customs Branch.²⁸⁸

Bribery of government inspectors has become a widespread phenomenon.

An examination of the findings of this report serves to highlight some of the various methods employed by IUU fishers. Between 1993 and 1998, the most common practice was the falsification of documents, which "was often found to be the first step in facilitating a string of other violations, notably exceeding catch quota limits, unauthorized sale of over-quota harvest and undocumented export of the same."²⁸⁹ The report listed, in order of descending frequency, the types of incidents it uncovered, and these included:

- Re-sale of quotas.
- Fishing in prohibited areas.
- Concealment of prohibited types of catch.
- The use of banned fishing gear.
- Unauthorized processing of catch, usually of crabs or salmon on board vessels.
- Pollution of the sea.

- Fishing without a licence.²⁹⁰

The WWF and TRAFFIC found that one particularly common illegal practice amongst fishers was the keeping of multiple log books. Russian law requires that a ship's log include reports "reports of all fishing activities, specification of fishing gear used, the time of its use, the volume of the catch and its composition by species and size of specimens caught."²⁹¹ It was found that fishers regularly kept two logs: an official log to provide to inspectors and a 'confidential' log for the owner. This method was widely used to obfuscate a host of illegal activities, including under-reporting, false vessel location, illegal acquisition of fishing licences and illegal offloading of fish.²⁹² Much of the unreported fish was sold using unrecorded and unreported cash, sometimes known as the *Kuril Hokkutensen* method.²⁹³

The keeping of multiple logs was not generally a step taken on the part of the captains of vessels, but rather was often a practice requested by vessel owners. WWF and TRAFFIC found that captains were often issued with 'provisional instructions' by criminal organizations who owned the fishing vessels. These instructions would be read, memorized and destroyed prior to an expedition, and often contained coded information, or instructed the captains to encode coordinates and locations or to keep multiple copies of logs. One document contained instructions to a captain to "maintain the ship's log and the fishing and engine logs strictly as agreed, complete fair versions, including a lag to allow for the time necessary for the transition from the fictitious to the actual area of operation. Each day, captains must give directions to the person in charge of production on how the documents on product yield have to be filled out."²⁹⁴ The 'provisional

Case Study:

Illegal Practices in the Bering Sea (cont.)

instructions' would also include guides to captains on how to minimize the risk of being apprehended by law enforcement. Sometimes instructions would be issued to multiple vessels instructing them on how to work together, coordinating activities through radio communication and using one vessel as a look-out, to avoid the authorities.²⁹⁵

WWF and TRAFFIC suggested that these instructions might have been issued by existing organized crime operations, but as we shall see, the high level of organization in these activities, the planning and explicit efforts to violate laws and regulations, make these enterprises a form of organized crime, regardless of the involvement of other criminal elements in the industry. The report explained how illegal activities on the part of fishers spawned a series of illegal activities down the supply chain.²⁹⁶ The impact of these illegal activities was considerable; the volume of the illegal catch in Alaskan Pollack in the Kamchatka region was estimated at between 15% and 50% of the volume of the legal quota.²⁹⁷

The underreporting of catches is facilitated by the fact that few official/inspectors have both the capacity and will to go to the lengths necessary to verify that the reported catches match the actual amount of fish in a ship's hold. In order to verify the accuracy of a reported catch, an official may be required to unload and then reload several thousand tonnes of fish. Fishers will sometimes further reduce the likelihood of such an inspection by packing their ship to capacity. Without access space for shifting portions of a catch a proper inspection would require a complete unloading of the vessel, a process which is incredibly costly and often highly impractical.²⁹⁸

A further cause of poor inspections was corruption, which was found to be common. A Russian Government source is quoted in the report, noting that "tolerance for poaching, inertia and at times direct protection of poachers by inspectors of the fisheries agencies have become a ... problem. Bribery of government inspectors and their use as a cover for illegal fishing by groups of vessels or individual companies has become a widespread phenomenon."²⁹⁹

A couple of other IUU fishing methods identified by the study highlight both the variety of IUU fishing methods, and the high level of organization and planning which these methods require. The violation of regulations is not simply a matter of opportunism; entire fleets of vessels were found to be engaged in coordinated efforts within areas closed to fishing (to allow for spawning to occur). For example, in 1998, as many as 80 vessels were found fishing in areas where fishing was prohibited in the Bering Sea.³⁰⁰

Another common practice was for captains to obtain licences for relatively low value species (a relatively simple process), begin illegally fishing for a higher value species, and then cover over this catch with a concealing layer of the lower value species.³⁰¹ IUU fishing is sometimes incorporated into business practices by owners in such a way as to force fishers to engage in illegal activity. For example companies with catch quotas will issue contracts to fishing vessels which cover expenses such as repairs, fuel and water but not wages. In this case, crew members earn their wages from 'personal production,' that is fish which they catch and sell themselves, over and above the vessel's quotas.³⁰²



Case Study:

IUU Fishing/Illegal Drugs Nexus

The weak governance which surrounds IUU fishing makes it vulnerable to other illicit activities and the involvement of violent organized criminal elements.³⁰³ The UNODC notes that fishing vessels make excellent vehicles for the trafficking of a range of things, particularly the very lucrative trade in illicit drugs.³⁰⁴ This is because fishing vessels “are unassuming at sea and easily blend in with the ordinary traffic in and out of harbours.”³⁰⁵ These vessels are also constructed in such a way as to allow for the economical transport of large quantities of narcotics.³⁰⁶ Fishers themselves have

Illicit products are often smuggled together with ‘less serious contraband’ such as wildlife products acting as cover for narcotics.

experience which makes them well suited to navigating waterways unobtrusively, and fishing operations create an authentic cover for the clandestine activities. High fuel prices and decreasing catches drive many otherwise legal fishermen to engage in illicit smuggling out of desperation. The practice of transshipment can serve the transport of illicit narcotics just as well as it can serve the transport of illicit catches.³⁰⁷

There are numerous reports where fishing vessels are prominently featured as a vehicle for drug trafficking.³⁰⁸ The practice of smuggling drugs along with illicit wildlife products is widespread. Authorities may be reticent to inspect frozen cargo for fear of damaging merchandise,

fishing vessels may be packed so tightly as to make proper inspection a serious challenge, or cold temperatures impede drug sniffing dogs.³⁰⁹ Reports suggest that as a result, frozen fish represent a particularly effective cover for smuggling drugs.

There is a close relationship between illegal drug and wildlife trafficking. Not only do smugglers use the same routes, but illicit products are often smuggled together, with ‘less serious contraband’ such as wildlife products acting as cover for narcotics. In 2009 Mexican authorities intercepted over a ton of cocaine concealed inside 20 shark carcasses, which smugglers claimed were ‘preserving agents.’³¹⁰ In September 2014, two Canadian-Vietnamese dual citizens were charged by Australian authorities after being caught smuggling \$75 million AUS (\$68 million) in heroin and methamphetamines hidden inside a consignment of frozen fish fillets shipped from Kuala Lumpur to Sydney. Ice packs hidden beneath fish were filled liquid heroin (88 kg) and methamphetamines (21 kg).³¹¹ In Brazil, police estimate that 40% of all illegal drug shipments are combined with wildlife products.³¹² The UNODC found that the use of “fishing vessels is largely regarded as integral to the *modus operandi* of illicit traffic in cocaine at sea to Mexico and the United States.”³¹³

Drug traffickers are unscrupulous and notorious for the violence they employ to further their interests. Citizens threatening these interests, even indirectly as a result of campaigning to end IUU fishing, risk becoming the victims of this violence (see *The Death of a Sea Turtle Activist*, and see *Journalist Beaten to Death after Investigating Illegal Fishing*).



Conclusions

There is a large body of evidence and a growing consensus that IUU fishing constitutes a form of transnational organized crime, and that IUU fishers should be treated as serious criminals.³¹⁴ PEW's description of illegal fishers as "organized criminals who exploit the loopholes and gaps in a massive and fractured global fisheries management system,"³¹⁵ is entirely accurate. Numerous scholars and commentators argue that IUU fishing should be considered as an important criminal matter rather than a simple regulatory issue, and suggest that IUU fishing receive the attention and funding concomitant with other serious forms of organized crime.³¹⁶

IUU fishing is a form of transnational organized crime and a serious threat, one that demands immediate action.

A question which remains is why has IUU fishing been considered as a simple regulatory issue rather than a serious form of transnational organized crime demanding immediate action? In their exploration of the parallels between IUU fishing and organized crime, researchers at the Stockholm Resilience Centre, noted that "the greatest differences between organized IUU fishing and other illegal activities regarded as organized crime are the immediacy of the impact on society and the degree of separation of the latter crimes from the legal economic activities of other industries."³¹⁷ However this distinction is overstated. IUU fishing's effects on society can be felt in its impact on marine ecosystems and fish populations; given the tenuous state of marine ecosystems worldwide, any actions which degrade these ecosystems certainly have far ranging repercussions on the societies which depend on these ecosystems for survival. Any efforts that degrades marine ecosystems certainly pose a direct threat to these people. Given the

role of the ocean in regulating climate, absorbing carbon and as a source of oxygen, any actions which threaten the stability of marine ecosystems pose a risk to all humans and other terrestrial species and ecosystems.³¹⁸

The report has also demonstrated the economic impact of IUU fishing on ecotourism, local fisheries, and local economies in general, and furthermore demonstrated links between IUU fishing and drug and human trafficking, abuse and violence. Conceptions of IUU fishing as a 'victimless crime' are simply incorrect.³¹⁹

The latter part of the distinction made the Stockholm Resilience Centre between IUU fishing and organized crime highlights one of the challenges of those seeking to end IUU fishing, namely that legal and illegal fish are indistinguishable at market. The existence of legitimate markets for fish adds complications for enforcement efforts which do not exist for illegal markets such as those for drugs. As these researchers note, "the overlap between licit and illicit markets means that unmasking illegitimacy is substantially more difficult than for drug smuggling, where, for example, all cocaine is illegal."³²⁰

Criminologist André Standing suggests that one of the reasons why IUU fishing has not typically been considered as a form of organized crime has to do with the methods by which definitions of organized crime are derived. He argues that the approach to developing a definition has been to "research prominent groups to highlight the distinguishing features of organized crime. There is a circularity here – what one defines as organised crime will be chosen to be the subject of study to unearth the defining characteristics of organised crime.... this process is vulnerable to a self-fulfilling prophecy."³²¹

As a result, organized crime has come to be associated with Mafioso typified by *The Godfather* or *The Sopranos*,



or the tattooed image of the yakuza or tong. Sinister characters who, as Standing notes, make up a distinct criminal group, a group of 'organised crime people.'³²² Someone whose 'job' it is to commit crimes. The effect is that we then generally fail to classify members of other communities, such as members of legitimate industries involved in organized criminal activities, as being involved in 'organized crime.' This of course masks the reality that many 'legal businesses,' including those in the fishing industry, are "deeply entrenched in prominent illicit markets, and in many cases can be seen as the principal beneficiaries and architects of illicit trade."³²³

Here Standing draws the distinction between '*criminal economies*,' "economies in prohibited goods and services such as drugs and prostitution, and *criminalised economies*, i.e. economies in legal goods and services that rely on criminal business practices."³²⁴ We can see both of these types of economies present in the fishing industry: criminal gangs dealing in illegal fisheries products – endangered species for example – and otherwise legal fisheries companies bribing officials to obtain licenses or relying on flags of convenience in order to circumvent conservation laws, prosecution and quotas.

Many organized criminal groups also operate legal businesses.

It seems that highly coordinated and organized forms of white-collar crime seem to fall outside of conceptions of organized crime but without a good reason for this differentiation. It seems that there is the perception that "gangsters do organised [sic] crime and businessmen do white-collar crime – the two cannot be compared because one originates from the dangerous underworld and the other from respectable business."³²⁵ A response to this type of reasoning might be that there is in fact a distinction, that organized crime groups exist only to commit crimes, while companies constitute legitimate

businesses which happen to occasionally violate the law – "for one crime is central, for the other, peripheral."³²⁶

This objection falls short. Firstly many organized criminal groups also operate legal businesses, often these businesses were established to launder ill-gotten gains, but then become profitable on their own or are maintained as fronts. Secondly, such objections ignore that the business models of many companies, particularly IUU fishing companies, depend on violating the law. As we can see in cases of toothfish poaching in the Southern Ocean, or the legitimate import export businesses which buy illegal abalone poached in South Africa, or any number of other seafood products, these businesses might not be profitable (or in some instances might not even exist) were it not for their violation of the law. Profits depend on maintaining high levels of fishing which are simply not possible if quotas or TACs are implemented to protect species. Even when dealing in a perfectly legal species well within quotas a company may still be incentivized to cut corners to avoid taxes and duties. Standing notes that it may not be the case that companies require crime to survive, but rather that crime often provides a competitive advantage to firms making the entire industry unsustainable or unprofitable.³²⁷

The reason for IUU fishing not being classified as organized crime up until very recently is because our conceptions of organized crime have been confounded by the methods by which organized crime is studied and definitions of this phenomenon derived. Not all organized criminals are sinister shady characters operating in dark alleys and exclusively within the underworld; some operate fishing vessels poaching fish in protected areas or without a license, others may knowingly transport illegal fish products, and still others may sit in head offices of fisheries companies and set policies which will result in their companies violating fisheries laws. Regardless of our perception, IUU fishing is a form of transnational organized crime and a serious threat, one that demands immediate action.





PART III

POLICY IMPLICATIONS & RECOMMENDATIONS



Policy Implications

The international community, in the establishment of universal development priorities that will replace the Millennium Development Goals post-2015, identified the need to “Conserve and sustainably use the oceans, seas and marine resources for sustainable development.”³²⁸ It is clear that without addressing IUU fishing, achieving this goal will not be possible. IUU fishing poses a serious threat to global food security, threatens the livelihoods of millions of people around the globe and it risks disrupting and destroying marine ecosystems upon which countless living organisms depend. A recognition of the global threat presented by IUU fishing and the true nature of this problem is vitally necessary.

A major policy shift is required if the problem is going to be successfully addressed.

One of the greatest constraints in our capacity to respond effectively to the challenge of IUU fishing has been in the slow recognition of the seriousness of the problem.³²⁹ The issue has long been addressed as a mere regulatory problem, to be dealt with at national or regional level. However, the failure to take a global perspective, and the fact that IUU fishing is dealt with at a technical level undermines the significant harm being done to marine ecosystems.

A second major constraint in the way IUU fishing has been

viewed, is failing to recognize it as a form of transnational organized crime, rather than a mere regulatory issue, or issue of ‘non-compliance’. Treating IUU fishing as a simple regulatory issue has resulted in the *status quo*, where IUU fishing is widespread and one where resources and enforcement techniques are not appropriate to effectively combating the problem.

Regulatory issues require a small number of inspectors; organized crime, on the other hand, requires a sophisticated and coordinated response that draws on a range of criminal justice tools. As we have seen throughout this report, IUU fishers are highly organized, and as a result, a certain type of enforcement is required, namely enforcement which is coordinated and sophisticated enough to match the guile of illicit fishers.

There are many existing laws and regulations (both domestic and international) which seek to prevent IUU fishing, and while these are not comprehensive, and do not always treat

the problem commensurate to its level of severity, their efficacy is more potently undermined by the paucity of effort made to monitor and enforce these laws. The mobility of fishing vessels creates opportunities for IUU fishers to engage in jurisdictional arbitrage, skipping from one jurisdiction to the next, transshipping catches and offloading catches in ports of convenience.³³⁰ While better enforcement of existing laws would ultimately reduce some IUU fishing, it must also be recognized that the inability to effectively regulate and monitor fisheries



stems both from a lack of political will, as well as a lack of capacity and structural issues inherent to the nature of the problem itself.

A major policy shift is required if the problem is going to be successfully addressed, which will need to be underpinned by a global strategy that addresses all aspects of a necessary response, including prevention and monitoring measures, protection of endangered species and marine environments, as well as efforts to

effectively prosecute those criminal actors found to be perpetuating IUU fishing at an organized level. This will need to be supported with an appropriate levels of political will, funding and other resources to ensure successful implementation of the strategic approach.

While there are a wide range of measures that such a strategy would need to include, a couple of core priorities stand out from the analysis undertaken in this review:

Recommendations

1 Develop legal framework to combat IUU fishing as a transnational organized crime

While there are many laws and regulations existing at both the international, regional and domestic levels aimed at combating IUU fishing, these are fragmented, overlapping, and often lack penalties appropriate to the nature and scale of the crime. Piecemeal jurisdictional

amendments undertaken on an ad hoc basis have failed to address the fundamental strategic and structural deficit. There are a range of structures that could achieve this objective, but the following components will be required:

1.1 Strengthen and amend international regulations

Multilateral international agreements, whilst they have proven difficult to negotiate and prone to cheating and free-riding, play an important and sometimes vital role when it comes to combating IUU fishing. The United Nations Convention against Transnational Organized Crime (UNTOC) is a potentially effective instrument to use to address IUU fishing. This convention would benefit significantly from the inclusion of a protocol concerning environmental crime with specific provisions relating to IUU fishing. Such a protocol would need to be accompanied by amendments to national laws, significantly increasing the statutory requirement for

fisheries crimes. The UNTOC provides a framework through which transnational organized crime can be addressed, however, its international cooperative measures can only be invoked to address 'serious crime.' The UNTOC establishes a threshold for what constitute 'serious crimes' as breaches of domestic law which incur a maximum penalty of four years imprisonment or more. Therefore the punishments for domestic fisheries laws may have to be increased if IUU fishing is to meet the UNTOC threshold, and for this convention to be effective against IUU fishing.³³¹



IUU fishing, and the host of other illegal activities associated with it, is allowed to flourish in part due to weak international regulations regarding shipping. Flags of convenience/non-compliance which permit vessel owners to avoid many regulations and protect their criminal activities from prosecution, must first be effectively identified before they can be combated. The criteria which classifies a flag as a flag of convenience may be poorly defined. One method of overcoming this weakness is through the use of a 'Flag State Performance Table' which serves to rank flag states by their compliance with core conventions of the IMO. With this table, cargo owners can "avoid doing business with vessels registered in flag States that are underperforming, thus creating economic disincentives to use such flags."³³² Such tables have been recommended by the 2006 High Seas Task Force, and the United Nations Fish Stocks Agreement (UNFSA).³³³

It is shocking that there is currently no global register of high seas fishing vessels, despite the long existence of such a register of merchant ships in the form of the IMO and IMO number. It is the case that fishing vessels are not required to carry a unique vessel identification number throughout their operational life, a reality which greatly facilitates changing vessel names and registrations, and therefore assists IUU fishers in breaking the law.³³⁴ Such a simple measure is invaluable and in fact necessary for effective monitoring, enforcement and information sharing.

Tackling the problem of inconsistent and weak port state controls which permit the offloading of IUU-caught fish at ports of convenience is another area where international cooperation is required to combat IUU fishing. Strong port controls and well-maintained black lists can empower ports to bar the entry of known IUU fishing vessels, a tool which the Global Ocean Commission notes "can act as a disincentive to IUU fishers

by increasing the cost of their operations (for example, by forcing them to seek out more remote and thus more costly ports)."³³⁵ These methods can also be more cost effective, eliminating the need to patrol large areas of sea, as fish must be offloaded at some port eventually. Often bi-lateral or regional agreements will need to be reached in order to permit strong action on the part of port states. Measures such as the legally binding Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (PSMA) adopted by the FAO in November 2009 begins to address this problem but requires the buy-in of RFMOs and ratification by individual port states.³³⁶

Increased cooperation between the operating, flag, licensing, owner, and beneficial owner states is required, especially in identifying, restraining and seizing assets. All illegal fish constitutes lost tax revenue and all those engaged in this activity are tax evaders. Lost revenue in this area is very significant, and provides potential access to criminal jurisdiction in the developing and developed world, as well as direct access to international criminal and tax evasion co-operation treaties. IUU fishers efforts to evade taxes are sophisticated, complex and transnational. A single vessel may have different states associated with its operation, flagging, licensing, and ownership, which requires cooperation on the part of all of these states if effective action is to be taken. Multi-national actions require a great deal of coordination and cooperation, and in the absence of an international body, coordination may need to be facilitated regional and multilateral agreements and with the help of civil society actors. Increased efforts and international cooperation in combating tax evasion, as it relates to IUU fishing, can not only serve to combat IUU fishing, but also to recover money which could potentially serve to fund other actions against IUU fishing.



1.2 Strengthen and create domestic legislation designed to combat IUU fishing as a criminal activity

Domestic legal avenues may be more streamlined than large-scale efforts, but they often fall short of addressing the crime with the severity it deserves. Laws relating to IUU fishing must be made clear and treated as criminal issues rather than mere regulatory measures, as has been argued throughout this report. As discussed above, in order for IUU fishing fall under the purview of the UNTOC, statutory penalties need to entail a maximum sentence of four years or more. As a result, the statutory penalties associated with IUU fishing may need to be increased under domestic legislation.

Conceptualizing IUU fishing as a form of organized crime is a useful tool for providing the mindset necessary to formulate the tough laws required to combat this growing problem. IUU fishing regulations are lax and filled with loopholes, after not being treated as a serious problem for so long. As Katherine Anderson and Rob McCusker note “fisheries legislation is designed primarily to regulate the fishing industry rather than to combat systematic criminal activity within it. Fisheries legislation in many states and territories is complex and covers a wide range of targets, making it difficult to know easily what is, and what is not, proscribed and what penalties apply to specific conduct.”³³⁷

Laws must be brought up to criminal standards and officials given the powers necessary to properly enforce them. For example, stricter import regulations and electronic catch documentation schemes should be implemented to hinder fish laundering. Officials must be

empowered to properly inspect catches and vessels, as well as provided with the resources necessary to do their jobs. MPAs should be created and effectively patrolled, and those caught fishing illegally in these areas should be effectively prosecuted and punished. Port states must have the legislation and cooperative agreements with other states necessary to allow them to act decisively and effectively against IUU fishing vessels attempting to offload their illicit cargo.³³⁸

States must also strengthen their ability to police their own vessels and in particular the actions taken by their vessels on the high seas. Many licenses contain provisions requiring vessels to adhere to specific treaties and the laws of other states (*inter alia*), and breaches of these licensing rules can result in sanctions. It is in this way that flag states can extend their jurisdiction to the high seas. Such measures are only effective as long as a flag state effectively monitors compliance with licensing rules and impose meaningful sanctions for non-compliance on all of their vessels (see below). Strong flag state controls can serve to counteract potentially poor legislative controls and monitoring on the part of coastal and port states.

Self-regulation, reporting and monitoring should be curtailed. Too many RFMO rely on these mechanisms, which ultimately result in putting the foxes in charge of sustainably managing the henhouse. Monitoring and enforcement must be separate from fishers themselves, though of course buy-in from legal fishers is necessary.



1.3 Dramatically increase punishments for IUU fishing

One way to amend domestic anti-IUU fishing legislation and to make this legislation more effective is to impose stricter punishments for IUU fishing. Too often the punishment for IUU fishing is not significant enough to serve as a proper deterrent and fishers simply work fines into the cost of doing business. As Margot Stiles *et al*/ explain, “penalty fines are typically minor compared to the value of stolen fish. Penalties paid within the European community averaged between 1.0 and 2.5 percent of the value of IUU landings.”³³⁹

It is generally the case that penalties determine investigation methods and the energy and resources devoted to investigations.³⁴⁰ Low penalties for environmental crimes like IUU fishing generally translate into less rigorous investigative efforts. Increasing the severity of penalties for IUU fishing will also increase enforcement and investigative efforts.

It has been suggested by many commentators that fines are insufficient to effectively address the problem of IUU fishing, as they are likely never to be high enough to sufficiently deter poachers.³⁴¹ Fishing infrastructure is expensive, and unless fines exceed the value of the catch, vessel and equipment, it is likely that IUU fishers will persist in their activities. The levying of fines also increases the number of opportunities for bribery and corruption.³⁴² Instead, it has been advocated that forfeiture of vessels and equipment as well as long-term professional penalties for individuals involved are seen as superior method for combating IUU fishing.

Vessel forfeiture and confiscation of catches, “cancellation of fishing authorizations and financial penalties of a high order commensurate with the nature of the crime and the quantity and value of the fish harvested” are required if laws are to serve as effective deterrents.³⁴³

As Klas Sander and other researchers at the World Bank

explain, “Recovery of illicitly acquired fish, the proceeds from their sale, and, where appropriate, any equipment used in procuring illegal fish are critical to introduce a chilling effect into the practice of illegal fishing. Recovery will not only reduce the rent-capturing incentive of illegal activities, but at the same time will make legitimate fishing products more competitive on international markets. However, appropriate methods are important for dealing with seized material for use in judicial proceedings and for ensuring that disposal of such material does not benefit criminals or continue to fuel illegal activity. Fines and penalties cannot simply be viewed as a tax on the cost of doing business. Instead, legislation on recovery should be viewed as a vehicle for authorities to seize criminal assets. Further, fines and penalties have to be designed commensurate with the value of the asset and damages and with the frequency of contravention.”³⁴⁴

Classifying IUU fishing as a form of organized crime is an important step to making this activity fall under existing applicable organized crime legislation. Many states already have legislation which allows for the large-scale confiscation of funds and other assets earned through organized crime, such as the Racketeer Influenced and Corrupt Organizations (RICO) act in the United States, robust laws which can only be applied to organized crime.³⁴⁵

Removing profits is only the first step, in order to effectively combat IUU fishing, sanctions must also remove the means of generating profit. This means punishments include not only the forfeiture of illicit catches, and the equipment used in catching these fish, but also involve removing licenses, quotas, and the minimal step of excluding illegal fishers/fisheries from receiving public subsidies. Albanese suggests the imposition of ‘long-term professional penalties’ on those involved in IUU fishing, such as “occupational disqualification and exclusion from competing for public contracts,” as these types of



penalties might have a greater deterrent value as compared with simple monetary penalties.³⁴⁶

Finally, treating IUU fishing as a crime would suggest criminal sanctions be applied to transgressors, and laws be amended to allow for the imposition of such sanctions. Some countries are already imposing jail sentences for illegal fishers. For example in 2014 the Philippines jailed 12 Chinese nationals found guilty of illegally fishing,³⁴⁷ and in Canada in 2014, a British Columbian man was jailed for six months for seven counts related to selling fish caught without a license.³⁴⁸

Given the widespread nature and scale of IUU fishing, these cases remain few and far between. The increased and more consistent application of criminal prosecutions for IUU fishers will serve as a further deterrent to those contemplating fishing illegally, and help meet statutory thresholds for the UNTOC.

Effective Deterrents – Confiscating and Destroying Vessels



Indonesia's Minister of Maritime Affairs and Fisheries Susi Pudjiastuti recently formed a fish theft eradication task force to investigate violators of fishing rules. IUU fishing is estimated by the FAO to cost Indonesia as much as \$24.7 billion USD per year.³⁴⁹ These efforts produced results very quickly; on December 5, 2014 the Indonesian Navy sank

Sinking illegal fishing vessels guarantees that these vessels will not fish illegally again.

three vessels impounded for fishing Indonesian waters illegally.³⁵⁰ These three vessels represent a tiny portion of the hundreds of Vietnamese IUU fishing vessels impounded by Indonesia authorities. Sinking illegal fishing vessels guarantees that these vessels will not fish illegally again – as impounded vessels can otherwise be released due as a result of corruption or diplomatic pressure, and is likewise cost effective, as impounded vessels need to be stored, processed and potentially disposed of or sold. But the act of sinking these vessels was also explicitly symbolic. Indonesian President Joko Widodo, known as Jokowi, declared that “the message we want to convey is no foreigners should steal from Indonesian waters.”³⁵¹



2 Significantly strengthen capacity for monitoring and enforcement

Enforcement is predicated on strong monitoring. Increased monitoring and inspections of fishing operations on the part of authorities and civil society actors at all levels at ports and at sea is desperately needed. Inspection should not just focus on catches and monitoring operations at sea, but also examine equipment and methods employed, labour standards on board vessels, accounting practices, etc. Not only does monitoring catch IUU fishers but also serves as a deterrent. Monitoring programs can also educate the public about the problem of IUU fishing, and also fishers themselves, informing those currently engaged in IUU fishing out of ignorance of the law.

Monitoring and enforcement works both as a means of capturing IUU fishers, but also as an effective deterrent. For example, prior to Australia allocating a vessel to patrol the EEZ of Heard and McDonald Islands (sub-Antarctic islands claimed by Australia) it was estimated that as many as 70 vessels were engaged in IUU fishing in these waters. Patrols were initiated in 2004 and the Australian government currently claims that the number of vessels fishing illegally in the EEZ of the Heard and McDonald Islands is zero.³⁵²

While patrolling works, many actors are simply lack the capacity, either in the form of money, personnel or equipment, necessary to carry out the types of patrols necessary to effectively combat IUU fishing. Australia

may have been able to effectively patrol the EEZs of its sub-Antarctic claims, there remains the entire Southern Ocean and beyond, and Australia is a developed country with considerable resources at its disposal. Developing nations and small island nations with limited resources

Many actors simply lack the capacity to carry out the types of patrols necessary to effectively combat IUU fishing.

and vast EEZs in desperate need of patrols may require assistance in building capacity. States should consider assistance from as many avenues as are available to combat IUU fishing; from bi-lateral agreements and vessel-sharing between states, to working with local fishers and NGOs. Assistance from civil society should not be discounted; conservation NGOs engaging in direct enforcement and monitoring of laws,³⁵³ anti-corruption and anti-Mafia groups fighting to uncover money launders, to individual citizens inspecting fishing gear and catches and recovering derelict gear, all have positive and sometimes substantial outcomes. In fact civil society's efforts to monitor and enforce fishing laws are not only effective and important in their own right, but are especially vital when state actors are unwilling or unable to provide assistance.



2.1 Information sharing and cooperation between enforcement actors

One of the challenges in combating transnational organized crime is that it spans multiple jurisdictions. As we saw IUU fishers use of ports of convenience, criminals often engage in jurisdictional arbitrage; using transshipment or flags of convenience to shield themselves from enforcement, or obfuscating vessel ownership through constant name changes and re-flagging and through a complex web of corporate ownership. Law enforcement must be highly coordinated and transnational in order to combat a highly organized and transnational target. Complex transshipment schemes designed to smuggle illegal seafood products can only be effectively detected by officials working in tandem.

Intelligence sharing, either formal or informal, is vital to combat organized crime.

Intelligence sharing, either formal or informal, is vital to combat organized crime. Likewise maintaining, updating and sharing blacklists of IUU vessels, and frustrating the activities of these vessels (through for example limiting access to ports) can be an effective way to change the current economic incentives behind IUU fishing and ultimately to drive these criminals out of business.

Such efforts should involve as many actors as possible, from inter-agency organizations such as INTERPOL, intergovernmental organizations and RFMO, top level government officials and agencies, local fishers groups, civil society organizations and individuals. One such effort is The Black Fish's Citizen Inspector Network, which engages and trains hundreds of volunteer inspectors to monitor compliance with fisheries regulations in European ports and coastal areas, in active cooperation with governmental enforcement agencies.

2.2 Facilitate civil society involvement in enforcement

Increasingly civil society actors have a role to play in fisheries enforcement by assisting with monitoring, investigations and active surveillance at sea and in fishing ports. As stakeholders with the resources and will to engage with the issue, civil society actors can play vital roles at all levels of fisheries enforcement in the face of a lack of capacity and interest on the part of government agencies. Civil society actors are often uniquely placed to engage in direct enforcement or monitoring of fisheries laws, and, given their transnational nature, can often facilitate information sharing and the transmission knowledge (such as best practices), skills, expertise, and resources more efficiently than state actors.

Community groups often organize around enforcing laws at a smaller, local level. Recently a number of local fisher organizations in Mexico have emerged with the purpose of protecting local stocks from over-exploitation by outsiders and with the enforcement of local protected areas. The organization Eco-Alianza has helped found the group Pescadores Vigilantes (Vigilant Fishermen) in Loreto Mexico, as a response to sporadic official enforcement of fishing regulations and permits which lead to fishing from mainland fleets threatening the Loreto fish stocks and the violation of permit schemes in the Parque Nacional Bahía de Loreto.³⁵⁴ A host of similar organizations have sprung up across Mexico. While most



of these organizations work essentially as monitoring groups, as a presence to deter would-be poachers and to report poaching incidents to the authorities, they also confront poachers.

Another such group is the Mendocino Abalone Watch in California, USA, whose stated purpose is “to enhance regulatory enforcement and protection of the abalone resource along the Mendocino Coast.”³⁵⁵ This organization has been known to make citizen’s arrests of abalone poachers.³⁵⁶ Civil society groups, journalists and NGOs often carry out this work with little or no protection from the criminal groups they work to expose. As this report highlights, many people have paid the ultimate price for such efforts.

We recommend for intergovernmental organizations, top level government officials and agencies to acknowledge the importance of civil society involvement in tackling illegal fishing and the contributions made by such groups and individuals. Furthermore we recommend for them to actively support and enable cooperation between governmental and civic actors. It has already been proven that information-sharing, training and logistical support can make a profound difference to the effectiveness of enforcement actions that governmental and non-governmental organizations can achieve collectively.

2.3 Innovative Solutions – Technology and Strategy

New technology offers potential solutions to many of the challenges found in combating IUU fishing. For example, marine and aerial drones can serve as cost-effective methods of gathering intelligence and monitoring ongoing and potentially illegal fishing operations. Strengthening and monitoring AIS to prevent fraud is another.

Sometimes solutions do not rely on new technology but rather innovative strategies. Increasingly NGOs are incorporating elements of direct enforcement into their activities; that is non-state actors taking an active role in not only monitoring compliance, but also enforcing compliance through the use of direct action.³⁵⁷ Local fishers can also be given exclusive fishing rights to a specific area, and empowered to patrol and monitor these areas. These methods can work, and sometimes are as simple as involving new actors, experimenting with new technology, or even re-imagining uses for old technology.

In one such example an international conservation initiative was launched early 2015 to affect aerial monitoring for different types of environmental crimes through patrols with small civilian-owned aircraft. The Wildlife Air Service was founded from the idea that mobilises the civil aviation community can help enable private pilots in need of maintaining flying hours, and those still in training that need to build up such flight time, to actively aid the monitoring of illegal activities. The activity thereby involves a new demographic of civil society in conservation work, makes a substantial amount of aviation resources available for cost-effective enforcement work, while allowing pilots to log necessary flying hours more easily. Illegal fishing has been chosen as one of the organisation’s main initial focuses, to assist in the identifying of illicit practices at sea.³⁵⁸



Innovative Monitoring Solutions: The Black Fish's Citizen Inspector Network



The Citizen Inspector Network is an international fisheries enforcement programme initiated and operated by The Black Fish. Central to the initiative is the idea that ordinary citizens can be effectively involved in the monitoring of fishing activity and exposing of potential illegality.

Volunteers, called Citizen Inspectors, are trained over a four-day course on fishing gear types, fish species and port inspection procedures, and typically join investigations for ten day periods. This allows for the involvement of people with work and family commitments as only two weeks a year enable participation in the programme. Many people seek to combine such activities with their summer holidays.

The Black Fish's approach is to ensure increased levels of independent and cost-effective surveillance of fishing operations in European seas by carrying out inspections in fishing ports, markets and coastal areas. General census of ports to investigate trends in fishing operations and identification of suspected practices is rarely carried out by mandated enforcement authorities, who often lack the resources or the will. Corruption of fisheries enforcement officials has already been documented by Citizen Inspectors as another cause for the lack of adequate monitoring and surveillance of fishing activities, since the organisation started the programme in 2013. Evidence collected by Citizen Inspectors is used to aid policy work of

other organisations and The Black Fish is working to actively initiate prosecution itself in selected cases.³⁵⁹

Citizen Inspectors greatly increase the number of individuals providing oversight of fishing operations, with The Black Fish working to train at least 1,600 Citizen Inspectors by 2025, essentially doubling the total amount of EU licensed fishing inspectors in all of Europe within 10 years. Intelligence gathered by the Citizen Inspector Network has already been used by states to enforce fisheries laws. Most notably,



The Black Fish reached

an agreement with the Italian coastguard to combine resources and share intelligence in order to combat illegal



fishing in the Mediterranean Sea,

after collected evidence

successfully aided the coastguard in a series of enforcement cases.³⁶⁰





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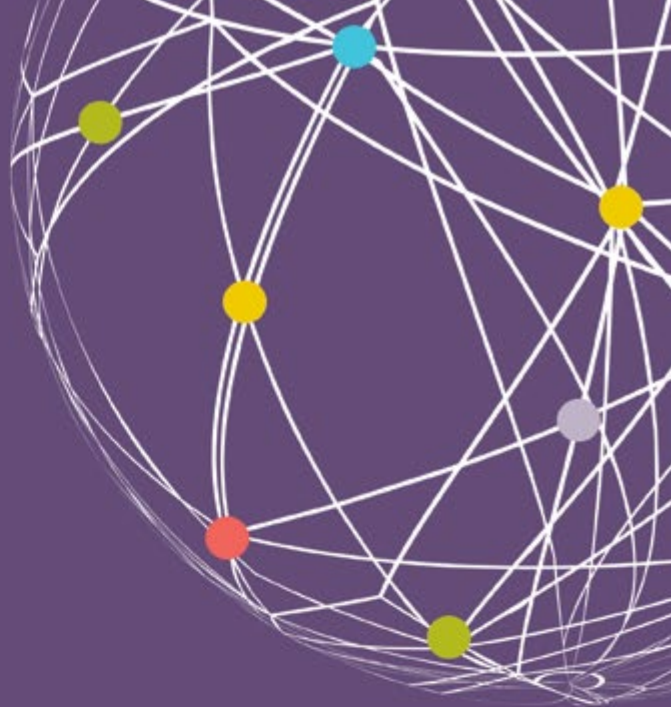
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