Fishers and Plunderers

Theft, Slavery and Violence at Sea

ALASTAIR COUPER, HANCE D. SMITH
AND BRUNO CICERI

'Alastair Couper has exposed the dirty secret of human rights abuse in an industry infested with criminality. This is a call to action.'

DR AWNI BEHNAM, *Honorary President, International Ocean Institute, Former United Nations Assistant Secretary General*

The Scalabrini International Migration Network (SIMN) is a non-profit organisation established in 2006 by the Congregation of the Missionaries of Saint Charles Borromeo (Scalabrinians), to safeguard and promote the dignity and rights of migrants, refugees, internally displaced people, seafarers, fishers, and people on the move.

SIMN fulfils its mission by supporting an extensive network of centres of research, shelters for migrants, refugees, seafarers and fishers, senior centres, orphanages, medical clinics, kindergartens, schools, vocational centres and cultural centres (www.simn-global.org).

Scalabrinian Apostleship of the Sea (AOS) Network

The Scalabrinians have being serving seafarers since they were founded by Monsignor John Baptist Scalabrini, Bishop of Piacenza, in 1887.

The mission of the Scalabrinian AOS Network is to promote the welfare of seafarers, fishers and their families. Its vision is to focus in a maritime world where there are no strangers and everyone feels welcomed and loved.

The Scalabrinian AOS Network responds to the wide-ranging needs of seafarers and fishers by providing free transportation, sim cards, free wi-fi, counselling, advices and support in labour-related matters, and spiritual assistance.

The Scalabrinian AOS Network currently includes Centers for Seafarers in Buenos Aires (Argentina), Montevideo (Uruguay), Rio Grande, Santos and Rio de Janeiro (Brazil), Ravenna (Italy), Manila (Philippines), Kaohsiung (Taiwan), Cape Town (South Africa) and Dubai (United Arab Emirates).

SEAFARERS' RIGHTS

SRI's mission is to promote, implement, enforce and advance all seafarers' and fishers' rights and remedies, including human rights and the rights of other persons on board vessels, through research, education and training throughout the international maritime industry, and advocacy in international, regional and national forums, and to provide a database of materials for the benefit of the international community.

The International Transport Workers' Federation (ITF) represents more than 4.5 million transport workers from 150 countries organised in over 700 unions. Within its transport sectors, ITF represents fishers working at sea and on land. ITF campaigns for better working conditions in an industry that can be harsh and oppressive to those working outside regulation, and believes this book will contribute toward fairer, safer and more sustainable fisheries.

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Acronyms and Abbreviations

AIDS	acquired immune deficiency syndrome
AOS	Apostleship of the Sea
ATS	amphetamine-type stimulants
AVAAZ	a global civic organisation
CARICOM	Caribbean Community and Common Market
CCAMLR	Commission/Convention for the Conservation of Antarctic Marine Living Resources
CCBSP	Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea
CCSBT	Convention/Commission on the Conservation of Southern Bluefin Tuna
CFP	Common Fisheries Policy
CITES	Convention on International Trade in Endangered Species
CLCS	Commission on the Limits of the Continental Shelf
CoP	code of practice
DG-MARE	EU Director(ate)-General of Maritime Affairs and Fisheries
DWFN	Distant Water Fishing Nation
EEZ	exclusive economic zone
EFZ	exclusive fisheries zone
EJF	Environmental Justice Foundation
ENSO	El Niño Southern Oscillation in the Pacific
ETA	estimated time of arrival
FADS	fish aggregating devices
FAO	Food and Agriculture Organization of the United Nations
FOC	flag of convenience
GAM	Gerakan Aceh Merdeka (Indonesia)
GDP	gross domestic product
GFCM	General Fisheries Commission for the Mediterranean
GPS	global positioning system
GRP	glass reinforced polymer
GSP	EU Generalised System of Tariff Preferences
HIV	human immunodeficiency virus
IATTC	Inter-American Tropical Tuna Commission
ICCAT	International Convention/Commission for the Conservation of Atlantic Tunas
ICES	International Council for the Exploration of the Sea
ICIJ	International Consortium of Investigative Journalists
ICMA	International Christian Maritime Association
IFREMER	French Research Institute for Exploitation of the Sea
ILO	International Labour Organization
IMB	International Maritime Bureau
IMO	International Maritime Organization
INTERPOL	international police organization
IOM	International Organization for Migration

IOTC	Indian Ocean Tuna Commission
IPOA	International Plan of Action
ISPS	International Ship and Port Facility Security
ITF	International Transport Workers' Federation
IUU	illegal, unreported and unregulated
IWC	International Whaling Commission
LEDET	US Coast Guard Law Enforcement Detachment programme
LICADHO	Cambodian League for the Promotion and Defense of Human Rights
MAOC-N	Maritime Analysis and Operations Centre – Narcotics
MILF	Moro Islamic Liberation Front (Philippines)
MMO	Marine Management Organization (UK)
MOU	memorandum of understanding
MPA	marine protected area
MSC	Marine Stewardship Council
MSY	maximum sustainable yield
MtS	Mission to Seafarers
MTU	mobile transmission unit
NAFO	Northwest Atlantic Fisheries Organization
NASCO	North Atlantic Salmon Conservation Organization
NEAFC	North-East Atlantic Fisheries Commission
NGO	non-governmental organisation
NPS	new psychoactive substances
NZ	New Zealand
PacWIMA	Pacific Women in Maritime Association
PFF	Pakistan Fisherfolk Forum
PHP	Philippine pesos
PNG	Papua New Guinea
POEA	Philippine Overseas Employment Administration
PRC	Peoples' Republic of China
RD	RD Tuna Ventures, Inc., Philippines
RFMO	regional fisheries management organisation
RNMDSF	Royal National Mission to Deep Sea Fishermen
SEAFO	South-East Atlantic Fisheries Organization
SIOFA	South Indian Ocean Fisheries Agreement
SIRC	Seafarers International Research Centre (Cardiff)
SPRFMO	South Pacific Regional Fisheries Management Organisation
SRI	Seafarers' Rights International
SSF	small-scale fishers
STCW	Standards of Training, Certification and Watchkeeping of Seafarers Convention
STCW-F	Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel Convention
SUA	Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation, 1988
TAC	total allowable catches
UAE	United Arab Emirates
UK	United Kingdom
UN	United Nations

UNCLOS	United Nations Convention of the Law of the Sea
UNDP	United Nations Development Programme
UNODC	UN Office on Drugs and Crime
USA	United States of America
WCPFC	Western Central Pacific Fisheries Commission
WCPO	Western and Central Pacific Ocean
WIFC	ILO Work in Fishing Convention (no. 188)
WMU	World Maritime University

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Alastair Couper
May 2015

Foreword

There are many books written about fishing but virtually none about fishers – the men and women who work in the world's most dangerous occupation. The merchant seafarers who bring goods and energy to the world's consumers are vulnerable to exploitation and abuse. Fishers who bring fish to the world's tables face much worse conditions every day. Yet the fish-eating public have little idea of the human cost of supplying those fish. That is why Seafarers' Rights International supported the publication of this book as part of our mission to promote and advance the rights of those who work at sea.

In today's deep-sea fishing industry, isolation, insecurity, accidents and violence are commonplace. Fishers often work on unseaworthy vessels with worthless or nonexistent employment contracts and poor pay. They may endure bad food, beatings, coercion, sexual abuse and abandonment in foreign ports. In the worst cases, conditions for fishers are akin to slavery. Fishers who attempt to stand up for their rights could be murdered and their bodies disposed of at sea. Sometimes they too resort to violence against their exploiters. The entire industry is heavily influenced by organised crime, and the pressures on fishers create an environment where they can be drawn into criminality through ignorance or economic need.

This has to change. The world's most international workforce needs to be regulated globally. The United Nations Convention on the Law of the Sea (UNCLOS), and its historic conclusions in 1982, provided an international regime for nation states to fish in the 40-plus percentage of the world ocean designated as exclusive economic zones. But as the authors explain, inevitably the Convention was a series of compromises and controversies, gains and losses. The period after 1982 saw a liberalisation of trade, an emphasis on free markets, and concentrations of capital in wealthy transnational companies. They had choices of where to register ships, and how to manage ships, and the greatest economies could be achieved by drawing on cheap labour from the poorest countries in the world. The registration of ships under foreign flags, which then fished on the high seas under those flag laws, have presented notorious problems which, together with those of illegal fishing, have all run counter to the aims and aspirations of UNCLOS.

Today, more than ever, fishers need an international legal and regulatory framework that is capable of making a positive difference to their lives. The International Labour Organization (ILO) has started this process. Following on from the Maritime Labour Convention 2006, the ILO in 2007 adopted the Work in Fishing Convention 2007 (no. 188). This is the global labour standard which addresses the unique working conditions of the fishing industry. It is

designed to ensure decent standards for all fishers in relation to their conditions of service, accommodation and food, occupational safety and health protection, as well as medical care and social security. The 2007 Convention is not yet in force, and it now needs to be widely ratified and rigorously enforced with the biggest fish-consuming nations as well as the states from whose EEZs the fish are caught taking a leading role. Examples of good state laws and practices exist. In New Zealand, for example, the authors recall that all fishers operating within the EEZ must be covered by New Zealand social and labour laws. Perhaps this example should be followed by every coastal state and enforced by every country that allows fishing vessels to use its flag.

This book is a carefully researched, tabulated and referenced testament to the conditions facing the workforce in today's fishing industry. The evidence in the book comes from the fishers themselves. Through case studies and anecdotal evidence, the authors highlight the evils that can result from the desperation of fishers, including laundering and marketing stolen fish, drug smuggling, and piracy and armed robbery. Unusually for an academic publication, in many cases the source cannot be identified for fear of violent retaliation. The book, by shining a spotlight on the real human cost being paid by fishers, will create awareness among the public and should help pressure governments to address the problems of the industry and to prioritise ratification and enforcement of the Work in Fishing Convention.

Fishers are a neglected segment of those who earn a living at sea, and this book serves as a stark reminder of the many ways in which they are put at unfair risk and exploited. Fishing is a globalised industry, facing the pressures of declining fish stocks and overcapacity of fishers. This important book shows us that it is fishers themselves who are paying the price of their industry's attempts to adapt to the economic pressures it faces.

Deirdre Fitzpatrick
Executive Director
Seafarers' Rights International

4 March 2015

CHAPTER 1

Introduction

'It's no fish ye're buyin' – it's men's lives.'

Sir Walter Scott, *The Antiquary*, 11.1 (1816)

What Walter Scott said in 1816 still rings true two centuries later. The main purpose of this book is to raise concerns about the deaths, dangers and deplorable conditions experienced by fishers who earn a living from the sea, and also about the communities that depend on them. This chapter provides a perspective on the book as a whole and its thematic sections.

There are 16.5 million fishers engaged globally, hunting for and landing some 90 million tonnes of fish each year. They comprise a vast diversity of national, ethnic and cultural participants in a fleet of over 4 million different types of craft with equally diverse gears. The largest group are the 15 million small-scale fishers (SSF).[1] They work out of thousands of coastal communities on a day-to-day basis on boats less than 10 m in length. These are usually family owned and are labour-intensive in their operations, supplying food and incomes to communities. The next major national groups of fishers are based at urban ports manning more mechanised commercial vessels of 15–40 m. These employ local wage labour, and also these days migrant workers, and fish the wider national sea areas for national and regional markets. The third major group comprises fishers employed by large companies and consortia on distant-water vessels fishing internationally. The large crews are multinational and the ships are commercial-industrial in type, over 100 m in length, and often have processing facilities on board. These various categories of labour and types of vessel are discussed under specific topics in the book.

The 90 million or so fish landed each year by these seagoing vessels can be divided very broadly into two classes. The pelagic species, both small and large, are near-surface swimmers, moving in large shoals in response to environmental conditions as described in Chapter 2. The other category covers demersals. These are more diverse in type, and are found in deep-water locations and near the seabed. The varied species within and between the pelagic and demersal categories require different gears for capture.

In their work all fishers have to find, catch, preserve and deliver fish to beach landings, ports and processing plants. They occupy the first stage in a supply chain that culminates for many in wholesale markets and at the counters of

retailers. They do so often at the cost of injuries and ill-health, as well as deaths in this, the most dangerous of all industrial occupations, which is prone in some sectors to violence and forced labour at sea.

The wild fish in the sea are increasingly in high demand and much valued in developed societies for both their culinary potential and their health-giving properties. They are a source of protein and omega-3 fatty acids. However, it is unlikely that many of the consumers of fish in the developed world know where the fish they eat has been caught, by whom, and in what circumstances. Why should they? As with an increasing number of the urbanised peoples of the newly industrialised countries of Asia, the expectation remains that both staples and exotic foodstuffs will simply arrive in local shops and restaurants. There is also an increasing demand for fish in the poorer coastal areas of developing countries, but here eating fish is seen as a means of survival in a world experiencing a rapid growth in population. Much of the fish entering the international trade has origins in the sea areas of these developing states.

In contrast to the continuously increasing demand for wild sea fish, production has, as noted in the *Philosophical Transactions of the Royal Society*, ' levelled out at around 90 million tons per annum, with little prospect of a higher yield'.[2] Some stocks have collapsed, and others might follow. This is primarily because of overfishing by overcapacity fleets, made worse by illegal fishing, although environmental deterioration, including pollution together with acidification of estuaries and oceans, is also taking a toll. In some regions, such as the temperate North Atlantic and its adjacent seas, there are also already measurable effects on the behaviour and geographical distribution of fish stocks associated with sea temperature rise brought about by climate change, while the adverse effects of climate on land crops, together with population increase, may create further upward demand for marine resources.

Fishers and Plunderers

The increasing scarcity of fish is reflected in the rise in prices, with public awareness of the deterioration in fish stocks being further enhanced by media news of high-level international meetings to discuss ways of tackling the problems. There have been many such assemblies in the past half-century, at both national and international levels, giving rise to a plethora of United Nations (UN) Conventions, Recommendations and Codes of Practice. However, these have had a minimal effect in slowing environmental degradation and maintaining sustainable stocks of many fish species.

The main cause of depletion of stocks has been reckless competition in the race for fish. Although there is much responsible fishing by well-established vessel owners, a considerable number of vessels have been widely deployed in

the world's oceans by companies financed by venture capital, which operate at international level with little regard for regulation of quantities or species of fish being caught. Less valuable fish have been discarded dead, and fish have effectively been stolen from coastal seas which are under the jurisdiction of a significant number of developing states. Many poorer coastal states have been unable to curtail such fishing, while UN agencies have lacked the authority to take direct action against these and other violations that destroy fish stocks.

Central to this crisis are the fishers at sea and their communities ashore. In several ways they too have been victims of overexploitation. The virtually uncontrolled pursuit of scarce fish has meant that vessels have been spending longer at sea for each unit of catch. The industry has responded to this issue with increased effort underpinned by advanced technology. Fuel, insurance and vessel maintenance costs, together with capital costs, have continued to increase regardless of the level of catches. The only significant operating cost that remains under the control of the fishing companies is labour. In order to retain and increase profits, labour costs have thus been driven to the lowest possible levels. The methods of doing this have included reduced crewing, long hours, minimal victualling, and most of all forcing into service untrained young men and boys from among the poorest people in poor countries. Among these migrant fishers there are higher risks, violence, injuries and deaths. While the statistical evidence for these conditions is weak, the empirical evidence as revealed in this book is extensive enough to confirm widespread systemic abuse, even of children.

The race to the bottom in labour costs in an industry with such depleted resources is a graphic example of the decline in wildlife which often necessitates the increased use of cheap labour to maintain yields. Harvesters of numerous species of wildlife resort to acquiring trafficked adults and children to capture ever scarcer resources, as a way of minimising production costs.[3] This is seen in extreme form in contemporary sea fishing in several areas of the globe. There are, of course, international conventions regarding the life and work of fishers as well as the sustainability of fish stocks. But Daren Coulston, a New Zealand activist in support of fishers who was a former skipper fishing in the Pacific Ocean makes the point:

> The well-being of fisher folk is linked to the health of fisheries that they operate in. Consider, if a person/company/corporation is prepared to enslave another to increase profit from fishing, will they care about the rules, sustainability or the environment? Evidence from NZ experience says No. It is clear to me that a reduction in forced labour on fishing vessels will have a direct positive effect on sustainability, transparency and enforcement. This has global implications.[4]

Coulston is clearly saying that reducing the cost of labour in order to fish longer,

harder and further in overfished seas while avoiding the tenets of sustainability is absolutely the wrong way to manage a declining stock, and further, that it will lead to disasters for both fishers and coastal communities. There are of course regional variations both in these circumstances and in fishers' reactions to abuse and slavery, as is underlined in several parts of this book.

In general, working conditions are always hard and dangerous at sea. Crews following highly migratory big pelagic tunas in distant waters often work in conditions that amount to slavery. However, for large modern pelagic vessels catching herring and mackerel in northern European waters there are good working conditions and no problems in obtaining local labour. It is a different matter on board demersal fishing boats catching cod, haddock and hake, for example. Here the fishers have little respite from shooting nets, hauling, unloading, gutting, cleaning, packing and icing fish throughout both day and night in all weathers. As a result there can be local labour shortages, leading to demand for migrant workers to complete crews. Skippers, who usually belong to the countries in which vessels are registered, in turn often spend 20 hours or so in a single stretch in the wheelhouse, and are expected to find the fish, as well as keep the boat and crew safe in all weathers. Loss of boats because of bad weather is still dominant in fishing casualty statistics. A farmer can lose a crop through bad weather, but a fisher can lose everything including their life. The health and safety specialist Peter Hurst writes, 'One in twenty fishers from the UK risks being killed at work.' The situation is often much worse elsewhere, and taken together with other issues, it does not encourage people to join the fishing industry when there are alternative occupations open to them.[5]

Although the focus in this book is on fishers working at sea, we also consider the differences in fishing communities generated by their other activities. Some families have access to land as well as marine resources, as on the high islands of the Pacific, while on coral atolls and in fishing communities on the margins of larger land areas there are often few, if any, alternatives to fishing. Such communities are typically exposed to variable weather conditions, educationally deprived and politically weak. In many places they have been bypassed by governments which favour renting out their exclusive economic zone (EEZ) entitlements to fish to foreign vessels. People in some of these depressed small-scale fishing communities receive remittances from relatives who have found employment overseas on foreign fishing vessels, but these fishers are often exploited at sea and may return without remuneration. Such small-scale communities are the most numerous of those involved in fishing, as well as being among the poorest in the world. It is from these coastal communities that syndicates can attract or coerce fishers into drug running and piracy.

Farming fish as a substitute for wild fish is often seen as the solution to the depletion of wild fish stocks and the many human problems engendered by it. However, farmed fish also have to be fed, normally using vast quantities of

small and less commercially valuable wild fish. Although it can produce short-term profits, there is little to be gained and much to be lost in fish farming, especially since both disease and the use of antibiotics present substantial hazards in raising farmed fish. Despite the large scale of finfish and shellfish produced by aquaculture, it presents limited opportunities for further increase in the supply of fish for human consumption, as much of the catch is already used for fish feed, although there is research in progress regarding alternative feedstocks, which could take the pressure off wild fish stocks.[6]

To deal with these fundamental issues we have organised this book in two parts. Part I covers some basic characteristics of sea fishery which apply to virtually all modern-day fishers, such as the risks, operations and regulations that shape the highly competitive race for scarce fish. The regulations often stipulate that only set quotas of various species can be landed. However the gear is often not discriminating in the type and quantity of fish captured. The capture has to be followed by a sorting process, and the 'bycatch' (fish caught in excess of the quota, juvenile fish, unwanted species plus mammals) are 'discarded': that is, thrown back to the sea dead. This system also encourages illegal landings of out-of-quota fish.

Part II deals with the plight of fishers derived from this race to fish. It is manifest in people trafficking, abuses at sea, and arrests of vessels and crew in port, as well as in attempts to obviate these problems by direct actions and recourse to law.

Part I The Fishing Industry and the Race to Fish

Chapter 2 provides an outline of the natural processes that make up the food chain, which is exploited at various levels. This includes primary production, and the significance of temperature and ocean circulation in the distribution of fish. There are descriptions of the types of gear and vessels employed, and estimates made by the Food and Agriculture Organization of the United Nations (FAO) on the availability and vulnerability of fish stocks.

Chapter 3 considers the hazards of working at sea on fishing vessels. It covers weather, gear handling, types of vessel loss, and health and safety of fishers. Statistics are available only for total loss of vessels over 500 gross register tonnage (GRT). For the millions of small and medium-sized craft there are no official records. It is however apparent from all the national statistics that are available that in every case deaths of fishers far exceed those of all other occupations in the same country.

Since 1982, any coastal state has had the exclusive right to fish in EEZs up to 200 nautical miles (nm) from the coast, or up to boundaries with opposite and adjacent states.[7] **Chapter 4** shows how many developed states gained most

from this division of the sea. It also discusses the problems of highly migratory stocks, and those beyond national jurisdictions, which affect fishing policies and employment.

The initial intention of the EEZ system was that nation states would distribute the agreed allowable catches by first allocating quotas to their own fishers, then allocating any surpluses to foreign states. However, the system has worked differently in practice. **Chapter 5** discusses how more developed countries acquired rights to fish EEZs in most developing countries. As an example it discusses EU practices in West Africa, which have contributed to the poverty of African fishers.

Chapter 6 looks at other ways in which the fish stocks which should be controlled by developing countries are plundered by richer states. It shows how in most developing regions 20–30 per cent of the fish caught are illegally plundered by vast fleets from richer states. In addition the methods used by these large-scale fleets add to the destruction of the marine environment. The result is further impoverishment of small-scale fishing communities. In desperation some small-scale fishers have also resorted to using destructive methods to obtain fish which they need both for food and to sell to obtain income. There are cases of illegal, unreported and unregulated (IUU) fishing even in developed countries' waters by wealthy fishing companies.

Stolen fish have to be marketed. **Chapter 7** discusses how this 'black fish' is 'laundered' in the supply chain. This involves a series of sophisticated methods at sea and in ports before the fish are sold in the markets of developed states as legally caught. In essence, we uncover criminal conspiracies in the supply chains of international fish trading and processing.

Part II The Plight of the Fishers

The division of the sea into areas controlled by different nation-states is not always respected. Fishers can accidentally cross the invisible boundaries when pursuing schools of fish, and some also cross them by intent in order to effectively steal stocks they are not authorised to fish. Those who are arrested are often sentenced to long periods of imprisonment, even when they are innocent of any intent to break the regulations. **Chapter 8** focuses on disputed boundaries and claims, and instances when fishers are used as pawns in disputes between states. Fishing vessels have been fired on and sunk, and they are also held in port, acting as prisons for their crew, while the owners are traced, which can be very difficult.

There are continual efforts to reduce costs in an over-capacity world fleet, and one tactic that is perceived as successful is to traffic men and boys from the poorest regions and force them to crew the vessels. **Chapter 9** discusses

the issues around trafficking. It shows the routes used in Asia and the methods employed to deliver people to vessels. The costs of these operations are often treated as debts of the fishers, and recovered from their earnings, or collateral payments are demanded from their families. In other cases fishers are forced to agree unfair and bogus contracts. A series of appendices to the chapter provide detailed information on these issues.

Chapter 10 follows the migrant crews on the next phase of their journey: into the slavery system on board vessels. On occasion this involves children. Sometimes vessels are at sea for months and even years at a time, and their crews suffer mistreatment, assaults, accidents and even murder. Over 100 accounts of such events, drawing on the direct evidence of victims and information compiled by NGOs, are given in the appendix to the chapter.

Chapter 11 looks at how crew fight back in such circumstances. Periodically the enslaved crews of fishing vessels rebel or escape, although this is virtually impossible when the vessels are on the open sea. Some manage to desert when the ships are in ports, or swim to shore when they are anchored near to it. A few go on strike: an example of a strike in New Zealand is detailed in the chapter. Those who are desperate may resort to suicide, mutiny or periodically the murder of captains and officers. The chapter gives a wide range of examples.

Chapter 12 discusses alternative ways of making a living for fishers from depressed areas which are overfished and suffer from other problems. Sometimes either individuals or entire vessels with their crews find employment in the transhipment of drugs. This is a dangerous occupation and the trade is heavily controlled by criminal syndicates. They often favour the use of fishing vessels for transhipment since they are unobtrusive, can enter small ports and integrate with legitimate fleets at sea. The drugs are typically carried in underfloor spaces and inside frozen fish. When the traffickers are caught, it is the fishers who pay the price, not the gangs who control them.

Fishers are both victims of, and participants in, piracy. As victims they are robbed and lose their catches; bigger boats are sometimes taken to be used as mother ships controlling fleets of pirate vessels. **Chapter 13** details the types of piracy in fishing regimes, and discusses the practice of forcing fishers to pay for 'piracy immunity' certificates to enable them to fish without hindrance.

Chapter 14 brings together the multiple problems that beset fishers in a globalised industry. These are summarised in a table. The discussion focuses on solutions. It outlines the numerous conventions which could be used as frameworks to solve some of the problems. By far the most important is the International Labour Organization (ILO) Work in Fishing Convention 188 (2007). The conclusion emphasises the need for more 'bottom up' pressures from NGOs and the final businesses in the supply chain to force owners and flag states to comply with human rights legislation. This integration of natural and social components is the holistic approach

advocated by the United Nations and described as the 'blue economy' in 'living from the Ocean and with the Ocean'.[8]

Sources of Data

The information in this book is based on fieldwork in West and East Africa, the Indian and Pacific Oceans, the Philippines, Taiwan, Singapore, Malaysia, the United Kingdom and the Mediterranean. Our research drew on a wide range of written material, including publications from official sources, books, articles in academic journals, theses and media reports. Of special importance are the series of statements by fishers and reports of incidents, which underpin the extensive use of examples. We took this approach because there is frequently a lack of quantitative data. It is especially difficult, and often impossible, to obtain quantitative data on issues such as illegal fishing and fishers' conditions of work. We have given anecdotal reports from fishers verbatim, but they cannot always be attributed to individuals because of the dangers of blacklisting and retribution. Important further contributions and related observations are listed in the Acknowledgements.

The photographs of fishers and vessels are intended to give visual expression to several aspects of the study. The sources of these are acknowledged in the captions.

Part I

The Fishing Industry and the Race to Fish

CHAPTER 2

Fish, Gear and Boats

Introduction

> I believe, then, the cod fishery, the herring fishery, the pilchard fishery, the mackerel fishery, and probably all the great sea fisheries, are inexhaustible: that is to say, that nothing we do seriously affects the number of the fish. And any attempt to regulate these fisheries seems consequently, from the nature of the case, to be useless.
>
> T. H. Huxley, Inspector of Fisheries (United Kingdom) 1881–85:
> Inaugural Address, Fisheries Exhibition, London, 1883

This statement by Huxley was not unreasonable, viewed in the context of the time. However, a century later there was widespread evidence of serous depletion of stocks. In 2006 a landmark academic paper[1] underlined the likely inevitable collapse of all commercial stocks by the middle of the 21st century if 'business as usual' continued. The many negative trends could now be reduced only by drastic management measures, including severe restrictions on fishing effort involving large-scale fishery closures, full protected no-take zones and marine protected areas, and greater control of marine pollution.

This chapter first provides a brief introduction to the ocean environment and life in the sea. This is followed by an outline of the fish resources deriving from those fish stocks, fishing technology, the impacts of fishing and the resulting current state of fish stocks.

Marine Life and the Ocean Environment

Stocks of fish that could be exploited commercially are a major constituent of marine biomass, the total life in the oceans. The starting level of this biomass comprises the marine plants and algae which obtain nutrients from the ocean waters, with the aid of energy derived ultimately from the sun, except in deep ocean hydrothermal ecosystems, where primary producers synthesise food. The next level – known as level 2 – consists of animals (herbivores) that eat plants and are termed primary consumers. At the next level up are the animals (carnivores) that eat herbivores and are called secondary consumers. Level 4 consists of carnivores that eat other carnivores, while at level 5 are apex predators which

have no predators themselves, and are thus at the top of the food chain, such as killer whales. Finally there are the decomposers, which break down dead organisms, releasing energy and nutrients back into the marine environment. Energy flows upwards through the system, with the lower levels supporting the upper levels. In reality the system is more complex than this simple schematic suggests, as some organisms feed at more than one trophic level. The whole constitutes a complex food web, which in turn largely defines an ecosystem.

Many commercial fisheries target fish occupying relatively high levels in the marine ecosystem, which are thus more vulnerable to depletion. This is turn exposes other fish lower down the system to greater risk of exploitation, a process termed 'fishing down the food web'.[2] The ravages of such overfishing can be accentuated – especially close to land – by pollution ultimately derived from agrochemicals washed into the sea by rivers. These can cause harmful plankton blooms which in turn create anoxic 'dead zones' inimical to marine fish, while encouraging, for example, the proliferation of jellyfish.

Ecosystems are dynamic, and exist in a dynamic ocean environment. At the global scale temperature is a fundamental variable, which gives rise to the familiar polar, temperate and tropical climate zones and their associated transitional zones on both land and sea.[3] From a fisheries point of view, in polar regions life in the sea has a high biomass, but relatively low species diversity. At the tropical end of the spectrum, for example on coral reefs, the opposite is the case. This pattern is further complicated by the major upwelling regions which bring deep water to the surface. These are characterised by relatively low temperatures coupled with high levels of nutrient production. It is thus not surprising that there is a strong correlation between high biomass regions and major world fisheries, along the western coasts of Chile, California and West Africa in particular.

Patterns of fisheries exploitation are further complicated by the influence of ocean currents and related upwelling, which is associated with important fish migration at a number of geographical scales. Fish commonly migrate between breeding and feeding grounds in response to temperature-induced seasons, as fish are extremely sensitive to temperature variations in the marine environment. Apart from some tropical regions, food production for fish in the sea generally varies from a low in winter to a high in summer. A good seasonal example of migration in temperate zones is provided by North Sea herring, where there is an historical record of the fisheries throughout the modern era of European history. Fishers commonly migrated with the fish from Shetland waters in the summer progressively south to East Anglian waters before Christmas. A similar pattern is seen in the annual pursuit of surface-swimming pelagic fish from Sierra Leone waters for well over 1,000 miles to the coasts of five African countries. In the

open ocean the most impressive migrations are those of tuna and whales – both toothed and baleen – with routes extending across thousands of miles of ocean.

On longer timescales there are more profound geographical shifts of species: in the North Atlantic, for example, there have been detectable northward shifts of species in response to a warming oceanic climate. This has been evident, for example, in the long-term development of the cod fisheries in the North Atlantic, where progressive warming of the sea since the end of the Little Ice Age has been associated with northward movement of the fisheries.[4] Most recently there has been a northward shift of mackerel stocks, leading to conflict between the Faroe Islands and Iceland on the one hand, and Norway and the European Union on the other. In the North Sea 15 of 36 species surveyed over the past three and a half decades have shifted northwards by an average distance of around 305 km.[5]

The third key set of natural variables relates to water depth and the seabed. Most near-surface pelagic fish are to be found in continental shelf waters less than 200 m deep, and in the open ocean to somewhat greater depths. Their distribution is related to planktonic food supply and currents. Demersal fish, which live close to the sea bed, exist mainly on continental shelves down to 200 m, with significant populations also present down to around 500 m on continental slopes, and on seamounts. There are also important breeding or nursery areas in many sheltered inshore locations. The deepest-swimming demersal fish species tend to be more dispersed than large pelagic shoals. These fish congregate especially on sandy and muddy sea beds which provide their main food supply and are most suitable as nursery areas. By contrast, solid rock and other hard bottoms have different faunal assemblages with relatively few fish, although new trawling grounds have been found at greatly increased depths beyond 1,000 m. These are being depleted rapidly (Figure 2.1).

The distribution of fish stocks resulting from the interactions of the ocean environment with ocean life is illustrated in Figure 2.1. The great majority of the world's traditional, artisanal and developed-world small-scale fisheries are located in coastal waters, close to the land, especially in the tropics. These fisheries are often in conflict with distant-water fisheries (see Chapter 6). The most important tropical fisheries in this category are to be found on coral reefs and in lagoon environments, on mangrove coasts, adjacent to large river deltas, on open beach coasts, and in semi-enclosed inlets of various kinds.

Beyond the coastal waters are the oceans and their adjacent seas. Of special importance for fisheries are the temperate oceans, concentrated very largely in the North Atlantic and North Pacific. These contain both pelagic and demersal fish stocks, and form the backbone of the global fishing industry. The main concentrations are in the North-East Atlantic and its fringing seas; the North-West Atlantic; the North-East Pacific and North-West Pacific; and comparatively

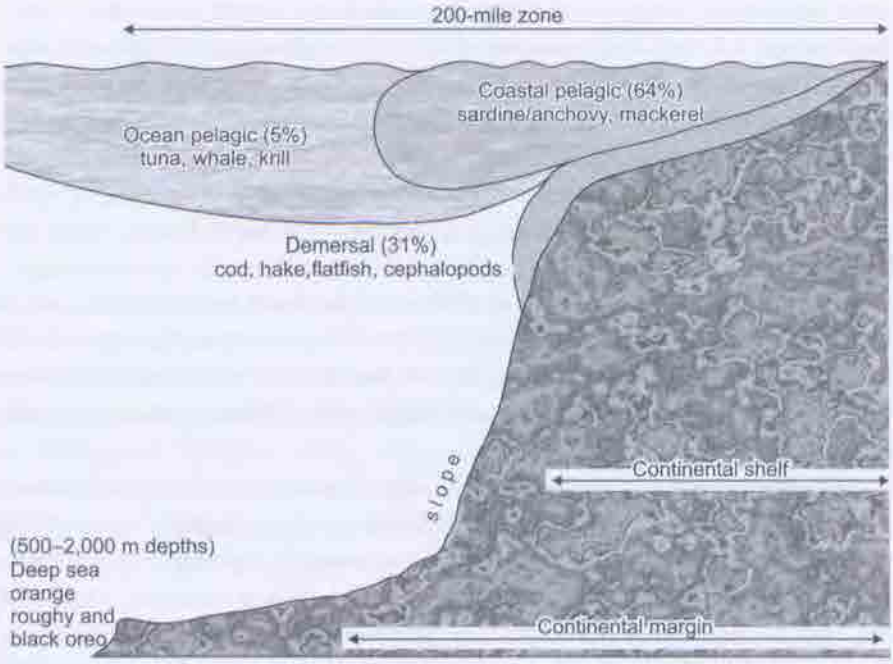


Figure 2.1 Basic distribution of marine catches

Source: K. Lucas and A. D. Couper, Masters in Marine Affairs course materials, World Maritime University (n.d.).

small outliers off southern South America, South Africa, South-East Australia and South Island, New Zealand.

In the tropical oceans the principal concentrations of fish stocks are to be found on the continental shelves in South-East and East Asian waters, and in the Gulf of Mexico. There are also the major upwelling areas already mentioned, which are the location of major pelagic stocks. Of special note are the periodic oscillations in the tropical oceans resulting from temperature and pressure variations in the interacting ocean–atmosphere system. By far the largest of these is the El Niño Southern Oscillation in the Pacific (ENSO), associated with considerable natural variations in the commercial fish stocks of the region including most notably Peruvian anchovy and jack mackerel.

Finally there are the polar oceans and seas. In the Northern Hemisphere these are located on the geographical fringes of the Arctic Ocean, especially the Barents Sea; around Greenland (including the Davis Straits); and north of Iceland. Along the Pacific/Arctic boundary region are the Bering Sea and Sea of Okhotsk. In these regions floating ice might be present for at least part of the year. In the Southern Hemisphere, the upwelling zone of the Antarctic Convergence is a rich area for nutrients, including krill, and roughly marks the

northern limits of the Southern Ocean. Both this region and the northern Arctic boundary regions were the primary locations of the great whale fisheries. In the north these had largely disappeared by the end of the 19th century. In the south whaling on a large scale began in the first decade of the 20th century, but had practically ceased by the early 1960s, other than so-called scientific whaling. There is little fishing south of the Antarctic Convergence, except in the vicinity of the handful of major islands, for example for Patagonian toothfish and krill.

The Resources of Fish

The primary characteristics of the major commercial pelagic species are their closeness to the sea surface, and propensity to swim in large, often dense shoals, both of which influence choice of fishing gear; and their high oil content as a food for both humans and animals. The most important small pelagics are distributed mainly in continental shelf waters in the temperate North Atlantic and North Pacific, and include especially the many stocks of herring and mackerel. The presence of large shoals favours fishing on an industrial scale, especially as these are used both for reduction to fishmeal used as animal feed, and for human consumption.

A second important group of small pelagics are those located in the major upwelling areas associated with certain currents in the deep ocean just beyond continental shelf limits. The most notable examples include, in the Atlantic, the Moroccan sardine associated with the Canaries Current and the South African pilchard associated with the Benguela Current. In the Pacific there are the Japanese sardine of the Kuro Shio Current, the Californian sardine associated with the Californian Current, and the Peruvian anchovy associated with the Humboldt Current. These fish are used predominantly for reduction to fish meal and oil. The largest-scale exploitation of them in modern times has been the anchovy fishery, where landings reached a peak in the early 1970s at around one-fifth of total world catch by weight for a brief period.

The deep tropical and subtropical ocean is the home of the most important large pelagics, including especially the six major species of tuna, all high-value species used for human consumption. It is also the home of the great whales, severely depleted since the middle of the 20th century, even in their last major redoubt in the Southern Ocean.[6] Large-scale whaling ceased in the early 1960s, and a moratorium was established by the International Whaling Commission (IWC) in 1986. However, a limited amount of whaling for 'scientific' purposes was continued by Japan. This has now been deemed illegal by the International Court of Justice.[7]

The Southern Ocean south of the Antarctic Convergence is also the location of the vast krill (a species of zooplankton) population which has partly replaced the

whales in the Southern Ocean Large Marine Ecosystem, and which was in the late 20th century viewed in some quarters as a large potential fishery resource. Fishing commenced in the early 1970s, reaching a peak of some 370,000 tons in 1982, but rapidly contracting to the 100,000–200,000 tons range thereafter; in 2013 some 217,000 tons were caught.[8] Significantly, concern has been raised not only because this fishery is based on the lowest level of the food chain, but also because the market is for animal feed. The krill are used in mass production of fish and poultry.

Further major groups of commercial pelagics are the shellfish, especially the prawns of temperate waters in the North Atlantic, and the tropical shrimp populations found in the Western Pacific fringing shelf seas and similarly in the Western Atlantic. These are destined for human consumption.

The major commercial demersal finfish stocks are located on the continental shelves of the Northern Hemisphere, including the many broad shelves of the North Atlantic and its fringing seas and the margins of the Arctic; and the contrasting narrow shelves of the North Pacific and its fringing seas. The most important single set are the many stocks of cod which, although primarily demersal, do adopt pelagic habits from time to time. Broadly speaking there are two major groupings, which are both often termed 'whitefish' in the industry. One comprises roundfish, including cod, hake, haddock and whiting; the other comprises flatfish, including flounder, halibut and sole. Whitefish are mainly used for human consumption, although occasional gluts caused by imbalances in supply and demand in the markets sometimes lead to these catches being disposed of for meal and oil. In the shellfish category are important temperate water fisheries for several species of crabs and lobsters in the North Atlantic and king crabs in the North Pacific, as well as tropical spiny-rock lobsters. All of these crustaceans are mobile. By contrast there are certain predominantly sedentary key species belonging to the mollusca, which include abalone, winkles, conch, oysters, mussels, scallops, clams and cockles. Most of these fisheries are located in temperate waters in the Northern Hemisphere. Some of the most important shell fisheries are aimed at the high-value end of the human consumption markets. As with salmon, oysters and mussels have been targeted for aquaculture in temperate waters.

Fishing Technology: Gears and Vessels

Fishing technology[9] can be classified first in relation to the resource to be fished, that is, pelagic or demersal. This is turn is related to the mode of operation of fishing gears. The three major means of catching fish are gear that is static and fishes passively; gear that encircles the fish, which includes a wide range of demersal and pelagic seines; and gear that is towed, including pelagic and

demersal trawls. A few important gears use combinations of these classifications, notably pole and line fishing and trolling, which are forms of mobile line fishing; and tow-dragging and fly-dragging seines. Approximately two-thirds of the global fish catch by weight is caught using purse seines and bottom trawls.

Static gears are placed in the water column or on the sea bed, and catch fish as they swim past. The main types include lines with baited hooks, ranging from short hand lines raised and lowered by individual fishers to long lines of varying length either set as pelagic lines in the water column by means of floats, or placed on the sea bed and secured by weights. The best-known examples of modern pelagic long lines are those employed in the tuna fisheries, where several tens of lines are tied together and stretch for tens of kilometres. Demersal long-line fishing on the sea bed is much less common than formerly, as most fishing for these species is now done by bottom trawling and seine netting. Long lines are especially suitable for catching large valuable fish such as tuna in the open ocean, and cod and halibut on the continental shelves of the Northern Hemisphere.

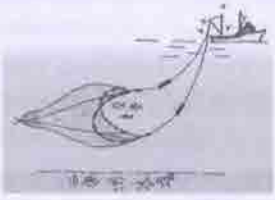
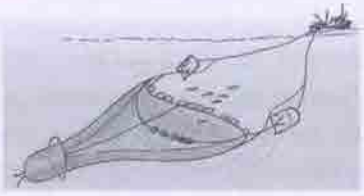
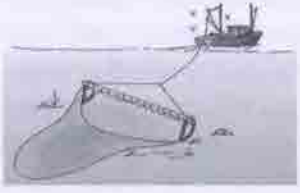
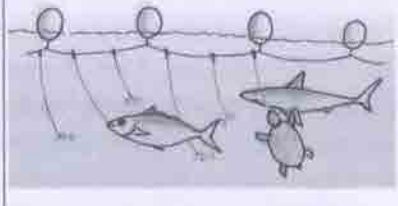
In every fishing activity there are species caught that are not the targets. These are categorised as bycatch and are usually discarded dead into the sea. Some gear such as long lines will also catch sea birds, and some net dolphins and other mammals as well as turtles. Methods have been explored to render gear more selective, but so far they have generally been unsuccessful. A different approach is to adopt a policy that requires everything caught to be landed (see the discussion on EU developments in Chapter 4).

Another important category of static gears is drift nets. These reigned supreme in the European herring fisheries until the second half of the 20th century. Today they are mainly used in tuna fisheries where, as with long lines, these are deployed on a large scale. Drift nets hit the headlines when they are lost, and end up drifting through the open ocean, 'ghost fishing' for vulnerable seabirds, large fish and turtles. Drift nets have also been employed to catch salmon in the open waters of the North Atlantic.

Fish aggregating devices, or FADS, are a widely used type of static gear, consisting of innumerable permutations and combinations of buoys and weights linked by lines which act as attractions for fish. Often the smaller fish arrive first, followed by the larger fish later. FADS may be moored to the seabed, or allowed to drift. They may be fitted with sonar and global positioning systems (GPS), which are used to transmit information on location and fish stocks remotely to fishing vessels. While common in traditional artisanal fisheries since time immemorial, FADS are now especially important in the tuna purse seine fisheries (see below). As well as being associated with significant bycatch of other species, such as sharks,[10] FADS catch between one-third and one half of the global tuna catch.[11]

Fishing on the sea bed using pots and traps is widespread. Potting is especially suited for catching high-value lobsters and crabs. Pots may be operated individually, or in fleets joined up using long lines, and are baited and placed

Figure 2.2 Fishing gears (for sources see overleaf)

Fishing gear	Sketch	Dimensions
Purse seine		1–2 km in length, up to 200 m in depth.
Pelagic trawl		Can be more than ¼ mile wide and longer than ½ mile
Bottom trawl		Can be 12 m high and 60 m wide
Beam trawl		4–12 m wide, weighing from 3–8 tonnes
Long line trolling		Can be over 100 km long and up to 300 m deep with as many as 3,000 short ends
Pole and line		3–7 m long poles and lines with unbarbed and unbaited hooks

Operation	Bycatch (other fish)	Bycatch (others)	Impacts on sea floor
The purse seine is set around a detected school of fish. After that, the net is closed underneath the school by hauling the purse line running through the rings (pursing).	A very high percentage of bycatch is made of noncommercial tuna and bony fish. Shark is also a common bycatch.	Incidental capture of dolphins in certain fishing areas. Special techniques have been developed to reduce bycatch of dolphins	Because of its characteristics there is no impact on the bottom habitat (except when the water depth is less than the height of the seine during the fishing operations).
In trawling, a cone-shaped net can be towed behind a single boat and spread by trawl doors, or it can be towed behind two boats (pair trawling) which act as the spreading device.	Depending on the species targeted, bycatch can be high. Sharks are not uncommon.	Bycatch commonly includes valued species such as dolphins, sea turtles and sharks, and may also include illegal or immature individuals of the targeted species.	None
Bottom trawling is towing the trawl along (benthic trawling) or close to (demersal trawling) the sea floor.	Depending on the species targeted, bycatch can be high. Sharks are not uncommon.	Bycatch commonly includes valued species such as dolphins, sea turtles and sharks, and may also include illegal or immature individuals of the targeted species.	High damage to the seabed depending on the gear used
The beam drags along the seabed in front of the net, disturbing the fish in the path of the trawl, causing them to rise from the seabed into the oncoming net.	Up to three times the number of the targeted catch(by weight) dies in the process of taking them from the ocean, including fish, crabs, sponges and corals	Low	Generally cause considerable damage to the seabed. The beam digs as much as 8 cm into the sea floor.
It involves setting out a length of line, to which short lengths of line, or snoods, carrying baited hooks are attached at intervals.	Sharks are frequently caught on these	One of the greatest threats to seabirds. Species such as albatross, petrels, shearwaters and fulmars scavenge on baited hooks, get hooked, are dragged underwater and drowned.	None
Fished at shoals, using live bait (thrown overboard) supplemented by spraying of water. One fish caught at a time, which unhooks itself as it lands in the boat.	No bycatch	If extremely infrequently a sea bird gets entangled on a line, it can be freed immediately	None

Sources for Figure 2.2: European cetacean bycatch campaign (Eurocbc), 'Man is but a strand in the complex web of life', www.eurocbc.org/page371.html (accessed 5 August 2014); WWF and South African Sustainable Seafood Initiative (SSASI), 'Fishing methods: mid-water trawling', 2010, www.wwfsassi.co.za/?m=4&s=4&idkey=1187 (accessed 12 May 2014); Gulf of Maine Area Census of Marine Life (GOMA), 'Sampling tools for physical capture', 2014, www.gulfofmaine-census.org/education/research-technology/sampling-tools-for-physical-capture/ (accessed 12 April 2014); Northeast Fisheries Science Center (NEFSC), 'Marine mammal bycatch research at the NEFSC', www.nefsc.noaa.gov/psb/bycatch (accessed 10 March 2013); NJScuba, 'Commercial fishing vessels', 2009, http://njscuba.net/artifacts/ship_fishing.html (accessed 13 February 2013); Various authors, *World Ocean Review,* Hamburg, Germany; Maribus, 2010. Sketches by Azmath Jaleel.

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on the seabed. Traps exist in numerous designs, and are especially notable for catching salmon migrating to their home rivers to spawn. The placing of traps requires detailed knowledge of the routes the salmon follow, which results in very efficient gear – so efficient that they were banned for a time on the west coast of Canada and the United States to conserve the salmon stocks.

The second major type of gear operation involves encircling fish, usually swimming in shoals. The earliest versions of this type of fishing are the beach seines still found in the developing world, operated by hand from the shore, often without boats, which are set by hand to encircle shoals swimming very close inshore and pulled in. Often teams of women do this work, wading chest-high in Pacific island lagoons. The large-scale use of encircling seines from vessels, for catching pelagic fish offshore, was pioneered in the herring fisheries of British Columbia in the 1930s, and only widely adopted with the advent of the purse seine in the herring and mackerel fisheries of North-West Europe in the 1960s. Purse seines operate by encircling pelagic fish shoals. The purse seine consists of a wall of netting set from fishing boat with the aid of a small dory to encircle the fish in a cylinder shape, which is then closed at the bottom using a purse line – hence the term 'purse seine'. These nets are also used to catch other species, notably tuna in the open ocean. Here there arises a problem of separating the tuna from other species, including dolphins. Modifications of tuna purse seines are adopted to let the dolphins escape, so that the tuna can be marketed as 'dolphin safe'.

The third major category of gears comprises those that catch fish by being fully mobile, including a vast range of demersal and pelagic trawls, mobile trolling lines, pole and line fishing, and harpoons – the mainstay of the now almost defunct whaling industry. By the most important of these are the demersal and pelagic trawls. A demersal trawl is a bag-shaped net towed across the sea bed, its passage facilitated by near-spherical steel bobbins which both weigh down the footrope and roll along the sea bed, while floats on the headline above, together with otter boards at the side ensure that the net is kept open.

An important variant is the beam trawl used to catch demersals (mainly flatfish) very close to the bottom.

Pelagic trawls operate in a similar way to bottom trawls, but at varying depths in the water column, the bobbins being replaced by weights, and are used to catch large shoals of pelagic fish such as herring and mackerel. Trolling involves towing lines with a limited number of hooks, and is used to catch fast-swimming fish such as salmon. In pole and line technology, used in some tuna fisheries, rods and lines with single hooks are operated from moving tuna boats to catch fast-swimming tuna. Both trolling and pole and line fishing are highly selective, and thus favoured for conservation purposes.

With the exception of some kinds of artisanal fishing, all gear operation is done using fishing vessels.[12] These are variously classified by the types of gear used and/or species caught, as well as by size and geographical range of operation from landing ports. For pelagic stocks, the principal vessel types are purse seiners and long liners, with much more limited use of pole and line and trolling. For demersal stocks the principal gears include bottom otter and beam trawls, seine nets and long lines. Also of great importance is the range of operation, which is related to vessel size. Thus most small-scale fisheries are pursued by vessels under 10 m in length operating mainly in the territorial sea within 12 nautical miles (nm) of the shore, with voyage times of a day or so at most. The major commercial fisheries are based on vessels from 15–40 m in length, operating within a few hundred miles of landing ports, with voyage times measured in days. The distant-water fisheries are characterised by vessels over 40 m in length, operating thousands of miles from landing ports or to mother ships at sea, with voyage times measured in months. There are several size categories extending up to 100–150 m in length, such as the 144 m *Abel Tasman* (formerly *Margiris*), associated with considerable recent controversy in planned fishing operations off Australia.

Apart from the ever-improving design of gear and vessels, fishing efficiency is advanced by the use of fish-finding technology including position fixing and charting technology such as radar and GPS; the use of echo sounders and sonars to locate shoals of fish; and the use of aerial and satellite technology to locate plankton concentrations.

The Environmental Impacts of Fishing

From the perspective of fish stocks, the impacts of fishing on marine ecosystems are most immediately caused by the operation of fishing gears which remove large numbers of fish from the marine environment. These impacts have several manifestations. First, if fishing effort continually increases on a particular stock which was previously in a stable state, an ever increasing proportion of

Figure 2.3 Fishing vessels (for sources see overleaf)

Fishing vessel	Sketch	Size
Stern trawler (small vessel shown in sketch)		30 hp open boat to 10,000 hp factory ship. Length overall (LOA) normally >15 m. Power normally >90 Hp Tonnage normally >25 GT.
Seiner		LOA normally > 15 m. Power normally >90 HP Tonnage normally > 30 GT
Combination purse seiner/ trawler/ long liner/ potter		LOA normally >15 m
Long lining vessel		LOA normally >15 m
Pole and line fishing boat		From small open-topped wooden boats of about 5 m to 30 m fibreglass hulls to larger steel hulled vessels.
Super trawler		Can be up to 144 m long, steel-hulled vessels

Type of fishing	Fishing gear
Commercial trawling is carried out from very shallow waters up to a depth of 2000 m	All trawlers have trawl winches for handling and storage of the towing warps, gilson winches, net drums and other auxiliary winches
Seiners are normally used to catch aggregating pelagic species but there are special applications that target demersal species.	Typical equipment of seiners may consists of a power block or triple roller(triplex), purse blocks and storage equipment such as coilers and net reels for hauling and stowing the net aboard
Species caught by trawlers, seiners and long lining vessels.	Lead of warp and pursing lines is by rollers, blocks, trawl gallows and purse davit with the layout planned to reduce to a minimum the time needed for conversion from one type of fishing to another
Long line is effective in capturing large pelagic species. Most common are bluefin, bigeye, yellowfin and albacore tunas, broadbill swordfish and the istiophorid bill fishes.	Hauling gear, floats, float lines and buoys are required for long line fisheries.
Tuna is the primary species caught by pole and line. Pole and line fishery is practised near the shores as well as in the deep oceans.	Poles and lines and unbarbed hooks are the only equipment required for this fishery. Except for water sprayers, no special gear are required.
Primary species include blue mackerel, jack mackerel, rebait. Practised in deep oceans – can fish for months on end without coming into port	Can catch the equivalent weight of 20 buses in fish per day using nets 600 m long. Can process up to 250 tonnes of fish per day and can store over 6,000 tonnes of frozen fish.

Sources for Figure 2.3: NMA News Direct, 'Giant super trawler banned from Australian waters', 2012, www.youtube.com/watch?v=oE5YJGGhOZU (accessed 7 July 2013); R. Prince, 'Tuna fishing in the Maldives: the fairest catch', 2010, www.telegraph.co.uk/foodanddrink/7413598/Tuna-fishing-in-the-Maldives-the-fairest-catch.html (accessed 5 May 2013); J. C. Sainsbury, *Commercial Fishing Methods: Introduction to Vessels and Gear*, 3rd edn, Wiley-Blackwell,1996; Various authors, *World Ocean Review,* Hamburg, Germany: Maribus, 2010, including bodies Future Ocean, International Ocean Institute, MARE. Sketches by Azmath Jaleel.

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individual fish are removed. Depending on the selectivity of the gear, the older, larger fish are more likely to be caught in greater numbers first. These include the breeding stock. As these decline there is inevitable economic pressure to catch more of the smaller fish, which then never grow to reach maturity. Not only does the overall stock size diminish, there are a greater number of smaller fish below breeding age, so that the process of diminution of stock size is liable to accelerate. If small fish are caught in too large numbers before they grow, a situation of what is called growth overfishing will arise. If recruitment to the parent stock is not conserved by sufficient increases of potential breeding sizes, a stock will increasingly suffer from 'recruitment overfishing', which means that not enough breeding fish are allowed into the shoals.

Whereas in a population unaffected by fishing, birth and death rates will be more or less the same, fishing greatly increases the death rate, which is not likely to be fully compensated by an increase in the birth rate. In reality there are complex dynamic interrelationships involved. This was an important starting point for fisheries research into overfishing, especially in the long stage of economic development which had its origins in the 1930s, with fisheries research in this field gaining momentum in the 1940s and 1950s. At the present time a large proportion of the world's commercial fish stocks are overfished on such measures, although there are signs that the tide may be turning in a very few regions, under the influence of a toolbox of fisheries management measures which we cannot review in detail here.[13]

The second major impact of fisheries is generated by complications inherent in the distribution of fish in relation to the operation of gears, leading to bycatches and discards. For demersal fisheries in particular, individual commercial species are to varying degrees commingled on the seabed. The gears mainly used – trawls and seines – are necessarily nonselective as regards species, so a typical catch might include several species of varying sizes, as well as small fish from them which it is not legal to land and might be uneconomic anyway. Such unwanted fish are bycatch, and liable to be discarded: that is, they are thrown back dead into the sea, especially if it is illegal to land them. In the case of densely shoaling pelagic species, as well as the undersized fish phenomenon, there is a greater danger of a breach of quota regulations inherent in large

catches, or even simply because supply exceeds demand on the fish market, even within quota limits. In these circumstances it is highly likely that dead fish will be discarded, often in substantial quantities.

Bycatches and discards do not only affect both wanted and unwanted stocks directly. If they are geographically concentrated, they also affect the marine ecosystem by altering the balances among species in the context of the food web, and thus the overall operation of the system. By their very nature it is virtually impossible to monitor the levels of bycatches and discards directly, at least without the benefit of independent observers on board fishing vessels – this is carried out in a small number of fisheries – as these activities occur entirely at sea. Bycatches also include mammals and seabirds, while the whole carcass of a shark is often dumped after the fin is removed.

The third major impact arises through the use of destructive gears. Properly speaking all fishing gears are destructive – they are designed, after all, to kill fish. But such destruction inevitably extends to the marine ecosystem and its environment in which the fish live. In reality destruction is a relative term, used when the operation of specific gears exceeds the capacity of the stock to sustain a particular fishery and goes on to damage the ecosystem and environment of that fishery. The most destructive gears are those employed in certain demersal fisheries which destroy habitats on the seabed. The examples are often given of bottom otter and beam trawls, which are dragged along the sandy bottoms, the main location of major commercial stocks. Other candidates on a more limited scale are steel dredges used in shell fishing: for example, for scallops on silty and muddy bottoms. The sheer scale and efficiency of such gears can also render them destructive by virtue of their catching power extending far beyond the sustainability level of stocks.

On the measure of sustainability, as well as the examples already noted, the use of salmon traps, lobster pots and large pelagic trawls can also in some circumstances be regarded as destructive. Perhaps the most iconic and ultimate of destructive gears was Svend Foyn's explosive harpoon, introduced in 1860, which became the main means of slaughtering the world's whale population.

The State of the Stocks

Broadly speaking the aggregated catch of all marine commercial stocks worldwide has now peaked, although there are substantial regional variations which can be grouped into three categories.

The first set of regions are those in certain economic core regions of the global economy, notably the Atlantic and its adjacent seas, which produce around 20 per cent of the global catch and have been declining for many years. Significantly there was some evidence of a halt in the decline by 2010, notably in the

North Atlantic,[14] although there have been occasional spectacular collapses, such as that of the Grand Banks cod stock in the early 1980s, which has not as yet recovered.

The second set of regions, accounting for around half of world marine wild fish production by weight from fishing, includes most of the temperate and tropical regions. Here there are large natural fluctuations in stocks, notably in the upwelling areas. In addition to natural variations, the stocks are affected by overfishing, including illegal, unreported and unregulated (IUU) fishing (see Chapter 6).

The third regional group is the tropical West Pacific and Indian Oceans, which produce some 28 per cent of catches, and where catches are currently increasing.

Meanwhile, total global production of marine fish has continued to increase by virtue of rising aquaculture production. While the total production of marine capture fisheries has been stable at between 80 and 90 million tons per annum since the 1990s, total fish production had increased to 158 million tons per annum by 2012, largely due to aquaculture. Aquaculture, or fish farming, has a long history, extending to over 4,000 years in East and South-East Asia, where the main centres of production are located. Tilapia and shrimp are among the most important species produced, and most production is coastal and associated with other types of farming, for example rice farming. By contrast, in the major urban industrial regions of Europe and North America, large-scale marine aquaculture and related ranching is based on a handful of species, notably salmon, and shellfish such as oysters and mussels. The domestication of species such as these relies on cutting-edge science and technology, which is only feasible for relatively high-value species. The limited expansion into high-value demersal species has been focused on halibut and cod. A major looming issue in aquaculture is its dependence on fishmeal produced from the major small pelagic species, which with present technology will be a strong limiting factor in further expansion, even although aquaculture production now accounts for up to half of fish production in a few regions. However, 1 kg of farmed fish requires 5 kg of fish meal, which is typically obtained by the large-scale extraction of small wild fish. There are consequent impacts on the ecological balance in a number of regions.

Figure 2.4 and Table 2.1 show the pattern of fish catches at a global scale. Care has to be taken in the interpretation of the statistics. For developed countries with sophisticated administrative and scientific infrastructure the figures may be regarded as reasonably accurate, with the very important proviso that the substantial level of discards and illegal landings is not recorded. Countries with more limited public resources devoted to fisheries management struggle to maintain good statistics. In addition, the traditional artisanal fisheries – mainly in the tropics – lie beyond the reach of meaningful statistical compilation in many cases. The practical outcome is significant under-reporting of catches in many

regions, which casts doubt on the statistics on the state of many commercial fish stocks.

In 2011 71.2 per cent of fish stocks were adjudged as still being fished sustainably but 28.8 per cent of the most marketable were considered to be fished unsustainably.[15] However, IUU fisheries discussed at length elsewhere in this book enormously increase the risk of collapse of certain fish stocks, such as deep-water species in the open ocean. These statistics translate into the grim realities of the collapse of the Grand Banks cod stock in the North-West Atlantic, the threatened extinction of bluefin tuna in the Atlantic, the cruelty and waste inflicted on valuable shark species by the finning trade, and the increase in the use of dynamite in reef fisheries.

The components that drive the race for fish and the target aimed at are primarily commercial. The income to the vessel and crew is derived from market auctions. This varies, but averages drawn from the UK markets in 2014 showed herring at US$1.3 per kg and cod at US$3.3 per kg for whole fish. These retail at US$6 and US$24 per kg respectively, after skin and bone are removed. For the Patagonian toothfish, prices internationally are around US$20 per kg: it retails as Chilean seabass at US$100 per kg and above. Bluefin tuna sells on the market at above US$300 per kg, and fetches well above US$1,000 per kg at Tokyo and New York retail outlets.

Conclusion

While there are signs of improvement in the developed world, globally nearly one-third of stocks are being fished unsustainably. IUU fishing is wreaking havoc in the developing world. The task of managing the stocks of fish is further beset by threats to biodiversity. These arise partly from fishing, but also from the slow-acting and difficult to measure effects of pollution and climate change, which are evidenced in ocean acidification and changes in storm frequency and intensity. A recent graphic illustration of fish biomass decline in the world ocean pointed out that the biomass of predatory fish has declined by two-thirds in the past hundred years – an accelerating trend in which over half the decline has taken place in the past four decades – while the biomass of prey fish has increased over the same timescale.[16] However, this situation is liable to be exacerbated in the long run in some areas by industrial fishing for meal and oil, which will in turn deplete prey fish resources.

The challenges to effective management remain immense. However, both science and management ideas are continuing to evolve in response to these challenges. For example, the large-scale *Census of Marine Life* project which came online in 2010[17] represents a major step forward in coordinating knowledge and understanding of the scientific basis of life in the oceans over the past

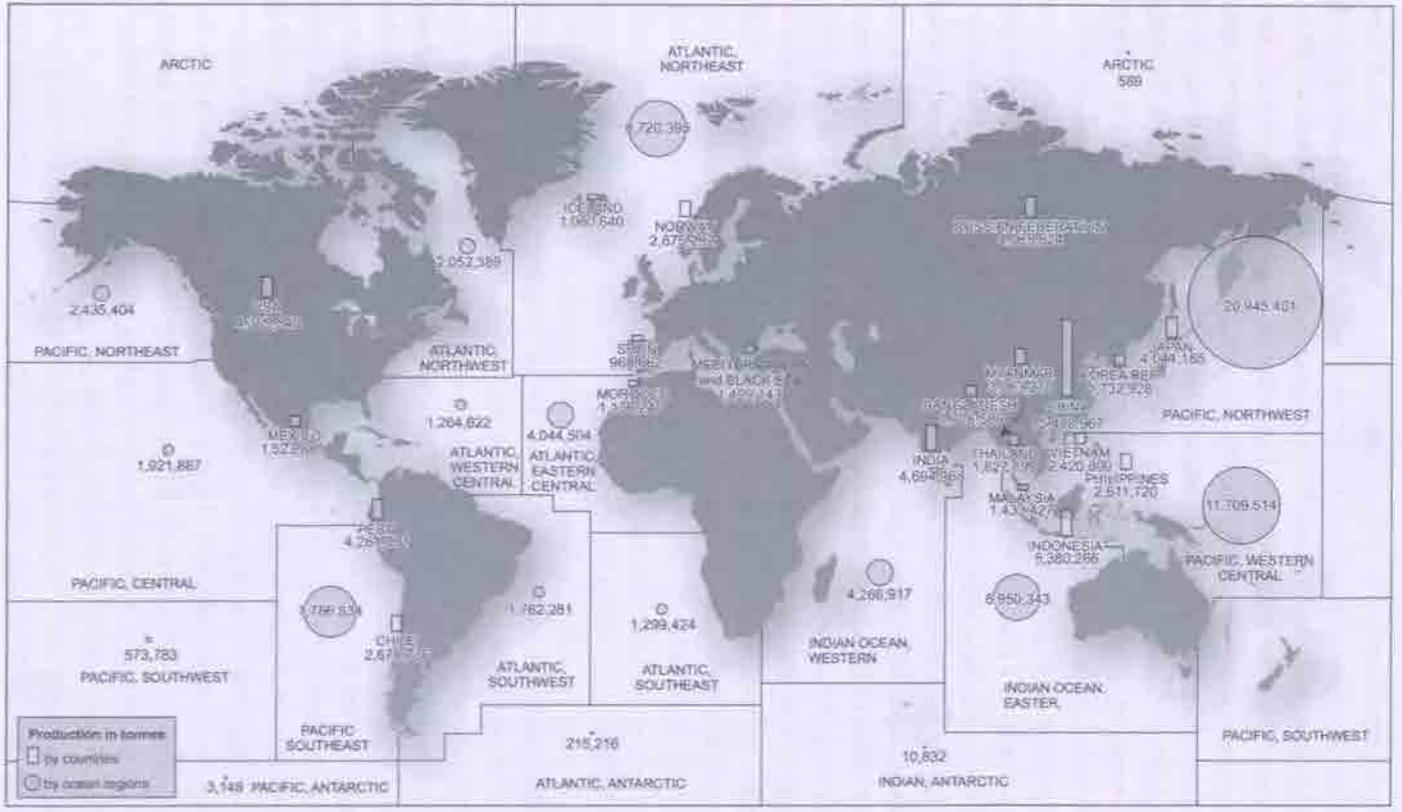

Figure 2.4 Fish production by ocean region and country, 2012

Source: FAO, *State of World Fisheries and Aquaculture: Opportunities and challenges*, Rome: FAO (2014)..

Table 2.1 Fish production by country, 2012

Rank	Country	Production (tonnes)
1	China	13,869,604
2	Indonesia	5,420,247
3	United States of America	5,107,559
4	Peru	4,807,923
5	Russian Federation	4,068,850
6	Japan	3,611,384
7	India	3,402,405
8	Chile	2,572,881
9	Viet Nam	2,418,700
10	Myanmar	2,332,790
11	Norway	2,149,802
12	Philippines	2,127,046
13	Republic of Korea	1,660,165
14	Thailand	1,612,073
15	Malaysia	1,472,239
16	Mexico	1,467,790
17	Iceland	1,449,452
18	Morocco	1,158,474

Source: FAO, *State of World Fisheries and Aquaculture: Opportunities and challenges*, Rome: FAO, 2014.

half-millennium, the period in which human impacts upon marine ecosystems have been appreciable, as well as looking forward to the nature of future impacts.[18] On the management front, an idea which is gradually gaining traction in policy circles is 'balanced harvesting'.[19] In this technique the whole population of fish is targeted for fishing, rather than aiming at individuals above a certain size, a strategy that places maximum fishing pressure on the oldest fish. The success of this for conservation has yet to be established.

To sum up, this chapter has outlined the basic characteristics of the living resources of the sea in their ecological contexts. The distributions, mobility and quantities of species have been considered with reference to temperature, currents, depths, nutrients, the effects of pollutants and especially mortality from fishing. Experienced skippers as hunters understand these aspects as well as something of fish population dynamics, which require the conservation of breeding stocks by limiting catches. This is derived from experience, observations and modern finding and catching instruments and gear. It is undermined by competition over the scarce high-value species that are targeted by most fishers, and by some down the line food web harvesting of small fish. The effects of destructive gear are often ignored in this race for fish. In turn fishers as well as the fish are subject to high risks. The exploration of these aspects of the relationship between fish resources, economics and human hazards is continued in Chapter 3.

CHAPTER 3

The Risks of Working at Sea

Introduction

Although the dangers of working at sea are well known, obtaining concrete data is fraught with difficulty. Broadly speaking, in countries of the developed world with good marine safety administrations there is a substantial quantity of good data relating to accidents, loss of vessels, injuries and fatalities. However, in the developing world such data are largely absent, and more often than not what exists is anecdotal. In the United Kingdom, for example, which has a very good recording system, the fatal accident rate for the fishing industry between 1996 and 2005 was 115 times higher than that of the overall workforce.[1] As there was no discernible reduction in the rate during this period, despite sharp falls in other sectors, it can be concluded that fishing is becoming comparatively more rather than less hazardous, a situation which undoubtedly exists worldwide.

The Risks of Working at Sea

The first consideration is the selection and operation of gear, outlined in Chapter 2. Working on a vessel in both small-scale and commercial/distant-water fisheries inevitably means working amid a complex moving array of nets or lines, warps, winches and power blocks or line haulers, as well as catches of fresh fish which are still at least partly alive and moving. There is ample scope for being caught in the warps or even moving machinery, and for slipping on the deck. These dangers are amplified in bad weather, when the vessel is pitching and/or rolling, with spray and breaking waves coming over the side, increasing the risk of being washed overboard (Figure 3.1).

A particular danger which sometimes results in accidents is the snagging of especially the demersal seine and trawl gear by obstructions on the sea bed. These obstructions include 'hard' bottom such as exposed rocks, and wrecks. If the fishing operation is halted by such obstructions, intolerable strain is put on the net and warps connecting the net to the boat, which is transmitted to the deck gear including blocks and winch, and thus to the boat's engine and propulsion and ultimately to the boat itself. This may result in the tearing and loss of the net on the seabed, and/or the breaking of one or more warps on

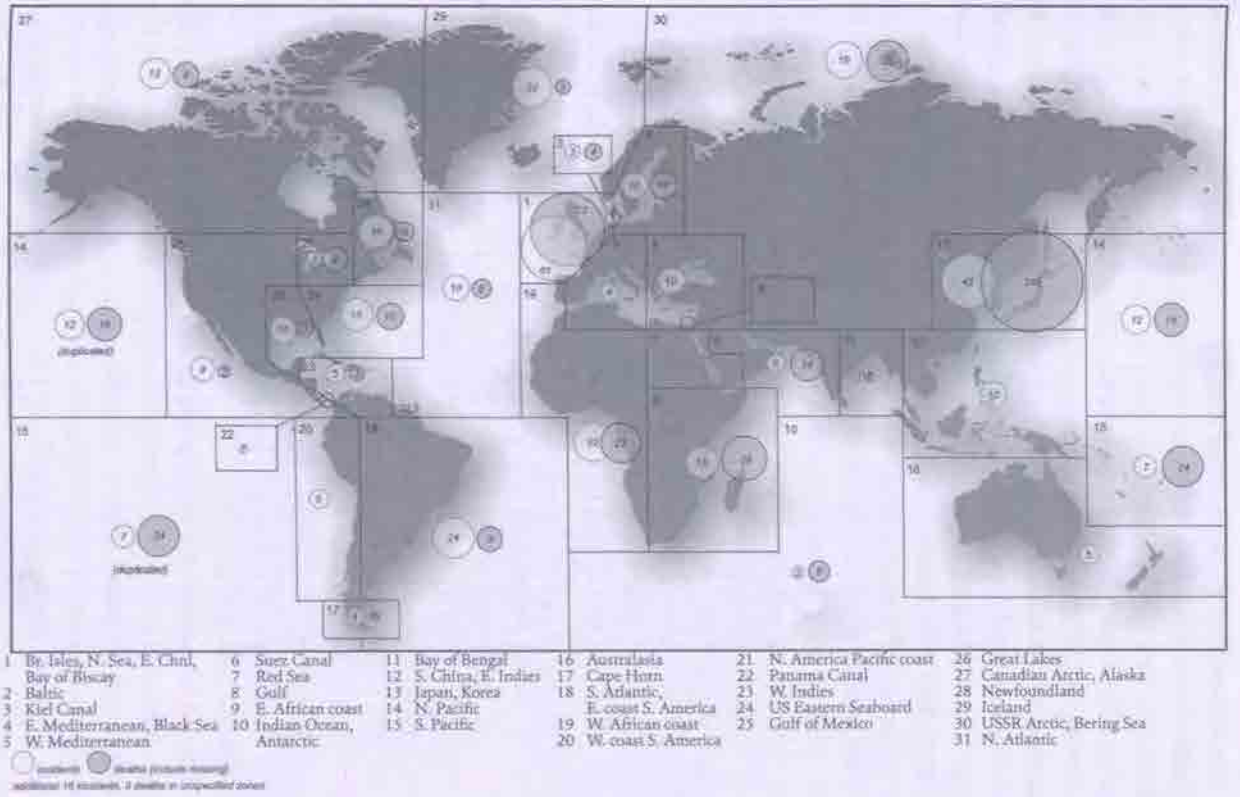

Figure 3.1 Reported fishing vessel (total loss) incidents and associated number of lives lost, 2000–10

Source: Lloyd's Register of Shipping, World Casualty Statistics, London (Annual).

the deck. A warp broken in this way is potentially lethal if it strikes a fisher. If all the gear components hold, vessels – especially in small-scale fisheries – might be pulled under and founder, placing the fishers at risk from drowning or related serious injury. In at least one case, in routes frequented by submarines, a small boat has been lost by its gear becoming entangled with a moving submarine.[2]

So great are these risks that in both the United Kingdom and France, government agencies (the UK White Fish Authority – now Seafish – and IFREMER in France) have developed charting systems to record the obstructions. In the UK Kingfisher chart system,[3] for example, obstructions are recorded on navigational charts originally overlaid by radio position-fixing Decca coordinates, with data provided from both the wreck records of the UK Hydrographic Office, and a constant stream of information from the fishers, often gained by bitter experience. In the case of purse seines catching large pelagic shoals, care has to be taken that these do not snag on the sea bed.

For the fishers a second immediate concern is the weather – the state of the ocean–atmosphere system on the relatively short but variable-length timescales of individual fishing trips. The most obvious dangers arise from storms, ranging from persistent bad winter weather, especially in the Northern Hemisphere where fisheries are concentrated, to the tropical hurricanes of the Atlantic, cyclones of the Indian Ocean and typhoons of the western Pacific. Such storms cause loss of vessels and lives in all sectors of the industry. In severe storms vessels may be lost by foundering as a result of being directly overwhelmed by the sea through large waves or structural hull failure, for example (especially if a vessel is overloaded with its catch); or by capsizing or being driven ashore, with the same outcome. Some vessels simply disappear as a result of such events. On 1 December 2014 the South Korean *Oryong 501* was lost with 52 lives in the Bering Sea off the Chukotka peninsula while fishing for pollock, when the fish hold was flooded in stormy conditions. Just before that the *SSF Ocean Way* of Fraserburgh went down in the North Sea, and the Scottish skipper and two of the three Filipino crew lost their lives.[4]

More difficult to quantify are the injuries, deaths and vessel and gear damage arising from fishing in generally bad weather conditions, made necessary by the economic pressures discussed later in this section. An example is the *Oyango 70,* which foundered because of an overload of catch. Although the crew wanted to cut away the gear, the captain could not face the likely consequences from the vessel owners if he authorised this, and chose to go down with the ship (see Chapter 11). For small craft especially, the effects of waves and tides can be magnified by those of currents – especially tidal currents – running against the wind and waves, which increases both the steepness of waves and the likelihood of their breaking.

On longer timescales, there is evidence of changes in the weather, most

notably storm frequency and increasing wave heights, where increasing severity and heights have been seen in the North Atlantic and North Pacific respectively.[5] A warming of the Arctic has led to a decrease of risk from icing in the Northern Hemisphere since the middle of the 20th century. The risk of icing is located largely on the margins of the Arctic and Southern Oceans in winter, and has been comparatively rare. The most well-known example was the loss of British trawlers to the north of Iceland between 1948 and 1968 during severe weather.[6] Extensive icing of superstructures and deck equipment including masts and rigging caused vessel instability which, allied with high winds and large waves, led to vessel loss and loss of life:

> They tried hard to clear the ice, couldn't beat it, and the skipper got everybody on the bridge and into the radio room – they were in contact with the UK, and they all had telephone calls home. Said goodbye, and eventually were just turned over and were lost.[7]

Ashore in the commercial world in which most of the fishing industry operates, pressures arise most immediately from the logistics and handling of catches – getting the fish from the fishing grounds to the port – and sorting, landing and selling the catch. Underlying this are the costs of acquiring, maintaining and operating vessels. These costs continue to rise, not least because of the great increase in the relative and absolute costs of fuel. A likely consequence is an increase in the number of poorly maintained and hence unseaworthy vessels. Beyond this are the pressures arising from the market – the ever-varying balance between supply and demand expressed in the constantly fluctuating price of fish – first for the fishers, then the merchants and processors, the transport and storage involved in getting the product to the consumers, and finally the price to the consumers in retail outlets. The most obvious immediate consequences of both the technological modes of fishing and the economic pressures noted above are long hours of working with associated lack of sleep and extreme fatigue,[8] all of which may be exacerbated by weather and general working conditions on board, discussed further below.

Small-Scale Fisheries

Small-scale fisheries (SSF) are found worldwide, and constitute the origins of all fishery development. At the end of the first decade of the 21st century, there were some 4 million fishing vessels, 60 per cent of which were engine-powered, the vast majority being small-scale fishing vessels in the developing world. Small-scale fishers constitute some 90 per cent of fishers worldwide, with about 357 million people directly dependent on this sector .[9] In the developed

world they still provide a significant contribution, but it is greatly diminished compared with the main commercial and distant-water fisheries.

These fishers operate on an individual basis or as very small crews, often working part-time. Boats and gear are owned on an individual or a small-crew basis. The boats are small, generally under 12 m in length. Individual trips are short, from fractions of a day or night to one or two days. The distance to grounds is correspondingly short, and the fish targeted are those living close to the shore. For example, in temperate regions this includes high-value shellfish such as lobster and crab, and valuable finfish such as sea bass and mackerel, which can be caught using pots, hand lines or small nets. In the tropical developing world the high biodiversity of fish stocks is reflected in a wide range of especially demersal species landed. Landings are into small ports to local markets, although high-value shellfish enter national and international logistics chains. The fishers are subject to the technological, physical and economic risks already outlined, although those working part-time often face less economic pressure, as they are likely to have alternative sources of income.

The causes of accidents and incidents in the developed world may be categorised as those related to the vessel itself, and those related to fishing operations and human factors. They are documented by safety agencies such as the European Agency for Safety and Health at Work,[10] and in marine accident reports by agencies such as the UK Marine Accident Investigation Branch.[11] Causes concerned with the vessel include poor design, old or inadequately maintained boats, cramped small workspaces and dangerous machinery. Human and operational factors are closely intertwined: most obviously these include long working hours with associated high levels of fatigue, and the increasing incidence of fishers working alone at sea. Another issue is failure to properly identify hazards in good time. Not least among these are hazards related to weather and sea conditions such as freak waves which can swamp a boat if hold hatch covers are not in place, but the hazards also include, for example, awareness of vessel stability and the dangers of gear operation. Another important issue is the failure to provide or use safety measures such as lifebuoys, lifejackets and protective clothing. There is an understandable reluctance among fishers in confined spaces in small boats in to wear heavy protective gear, and in some circumstance they are liable to discard it. Efforts are regularly made to mitigate this risk. For example, in 2013 the Scottish Fishermen's Federation promoted an initiative to provide free lifejackets to every fisher in Scotland, aimed at both small-scale fishing and fishing in larger vessels.[12]

In the developing world, mainly in the tropical regions, boats and gears are often of great antiquity, both individually and in their design. In contrast to the small-scale sector in the developed world, the majority of boats are undecked, and around 40 per cent are nonmotorised. [13] Thus they are particularly vulnerable to sea conditions, posing a substantially greater risk to human life. While

most of the fish resources are close to the shore, including the reef populations of coral atolls and mangroves, there are important grounds farther offshore as well. The fisheries are based on traditional local knowledge, often extending back through many generations. While the technological and physical risks are present, the economic risks are those of subsistence or semi-subsistence societies – more directly entwined with local conditions, rather than the global economy in a direct sense. The exception is the competition for fish resources from distant-water fleets, discussed below.

There is widespread evidence from fisheries administrations and fishers' organisations that fatality rates in particular are increasing.[14] Furthermore, the consequences for dependants are extremely serious: the lack of alternative income for families coupled with the absence of a welfare state means that widows and children may be left destitute. These circumstances are highlighted by the vulnerability of fishers to tropical cyclones. In May 1998, for example, some 4,000 fishers were listed as missing in the wake of a cyclone in the Bay of Bengal.[15] More recently, in November 2013 typhoon *Haiyan* destroyed a substantial proportion of the fishing industry in the central islands of the Philippines, destroying numerous fishing villages, sweeping away boats and gear, and causing large-scale loss of life. Over half of the fishing industry in the Philippines appears to have been affected to some degree.

Main Commercial and Distant-Water Fisheries

The major commercial fisheries are notable in that they make up by far the greatest economic component of the global fishing industry. It is difficult to generalise because of the complexity of this sector, but prominent elements can be classified primarily in terms of gear used, and sometimes by the associated fish species. The categories include large pelagic purse seiners targeting herring and mackerel, pelagic trawlers, demersal trawlers, demersal seiners, and multipurpose vessels which are equipped to use several types of gear. These boats range mainly from 20 to 40 m in length, and voyages are generally only a few days from the landing port. Fishers operate as members of substantial crews – of 5 to 20 or more – and large boats may have two crews in order to operate more or less continuously. Many vessels are share-owned by the crews and sometimes shore-based owners; others are company owned, each vessel representing with gear an investment of several million US dollars. The fishers, whether owners or crew members, are full-time, and subject to the technological, physical and economic risks outlined above, with all the stresses engendered by these, as well as broader risks of injury and loss of life.

The distant-water fisheries are based in a handful of nations in North America,

Europe and East Asia, including especially the United States, France, Spain, China, Taiwan, South Korea and Japan. The vessels range upwards of 40 to well over 100 m in length, and operate on voyage times measurable in months from home or landing ports. Sometimes vessels are permanently based at sea and work to mother ships. Many of these enterprises can be described as primarily species-based, especially in the Pacific, including the tuna clippers of the United States, and the Alaska pollock vessels operating from Japan. Vessels are company owned, with fishers as employees. This part of the industry is the primary employer of fishers from developing countries who work elsewhere in the world. These crews too are exposed to all the technological and physical risks already outlined, but it is the manifestation of economic risk through IUU fishing, fatigue and language difficulties, abuse of crews, and illegal use of fishing vessels that is particularly prominent. These issues are discussed in Chapter 6.

The life and work of a fisher on this kind of distant-water vessel is graphically illustrated by an interview with a Philippine fisher who suffered from the cold:

> We are 24 hours a day, without respite and most of the time we are soaked to the teeth. In a typical day, once it gets dark, we start moving, looking for a rich fishing ground. The search could last for hours and we don't stop until we find one. When we have identified the target, we cast out the net and again it takes time. Then we wait for hours after which we retrieve the net hoping that we have caught a lot. When the haul is good, there is no rest until the catch dissipates [sic]. Once we are done, the difficult task of folding the net, arranging it carefully, untying knots, takes place. It takes time and we are exposed to the elements. We are usually wet and shivering. The cold gets to the bone. It's unbearable.[16]

There is a consistency in the complaints from fishers working under different circumstances. A Ukrainian working on a Russian crabbing boat in the Arctic said:

> We slept only two hours a day and all the time we were working. Sometimes people got really hurt when they were standing next to the crab traps. Sailors were standing and literally almost sleeping. The traps were falling and sometimes people lost their hands or legs. Nobody cared about this there.[17]

For accidents and incidents, consistent statistics at global level only exist for vessels of over 500 gross registered tons (GRT), and for total losses – in effect for the distant-water sector together with the largest vessels in the major commercial sector. Reliable statistics for SSF and major commercial-sector fisheries only exist in countries with fully developed fisheries and maritime safety administrations: for example, in North America and Western Europe. Individual country studies, for example relating to the United Kingdom, point to a consistently

high level of accidents and incidents over an extended period dating from the mid-20th century to the present, despite the enormous changes in the structure and operation of the fishing industry that have taken place over that period. Data for countries with reliable statistics – in effect the developed world – reveal that around the year 2000, occupational fatality rates in their fishing industries were far above their national averages for fatalities at work. In the United States at 160 per 100,000 the rate was 25–30 times the national average. Australia had 143 fatalities, equivalent to 8.1 per 100,000 fishers per year. In the United Kingdom in 2000, 0.54 per cent of the fleet (39 vessels) were lost and there were 32 deaths.[18] Examples of trends in fatal accident rates over the second half of the 20th century are given in Table 3.1.

There are also differences in the casualty rates that are correlated with the origins of the fishers, with migrant fishers being at much greater risk than those working in their home country. For example, 75 per cent of those dying (six out of eight) on UK fishing boats in 2008 were migrants from Eastern Europe or the Philippines. The Filipino death rate at 350 per 100,000 fishers/year is much higher than the UK death rate of 102 per 100,000 fishers/year.[19] Behind these statistics lie especially extreme working hours in difficult physical conditions offshore, without adequate breaks.

The situation for major commercial and especially large distant-water vessels is summarised in Figure 3.1 and Table 3.2, which provide an analysis of total loss incidents and associated lives lost in the first decade of the 21st century for this sector of fishing. The most obvious pattern on the world map is the concentration of incidents in the North-East Atlantic and Western Pacific, and to a lesser extent in the Western Atlantic. This is a direct reflection of the intensity of fishing in these regions, which are the water bodies nearest three most prominent urban industrial regions of the global economy. The figures on total losses classified by fishing vessel type are primarily informative because of the continuing high level of losses. The basis of classification changed in 2004, but in effect the majority of these are large or otherwise distant-water trawlers of various types. Vessels on the open sea are mainly lost through foundering. Near the coast the main reasons are either wrecking or stranding. A significant cause of loss is fire and explosion on board ship. Again human and operational factors are at work in most incidents, including high levels of fatigue, inappropriate risk taking in navigation, choices taken in dealing with weather conditions, and overloading of vessels and gear.

By far the most common cause of death is drowning, and deaths are normally recorded as from drowning if a body is not found. Where bodies are recovered and autopsies are carried out, deaths might be recorded as from hypothermia, immersion or drowning. As with the SSF, the operation of the gear poses the main source of danger, and probably accounts for half the fatalities. It can lead to injuries and to fishers falling or being pulled overboard, especially in

Table 3.1 International comparison of commercial fishing-related fatality statistics

Country	Scope	Year published	Study period	Fatalities	Population at risk	Fatality rate/yr
Australia	National	1994	1982–1984	47	32,867	143
Canada	Newfoundland	1990	1975–1988	30	14,579 (trawlers)	206
	Newfoundland	1999	1993–2000	46	N A	N A
	Newfoundland	2002	1990–2000	59	N A	N A
	Maritimes	1990	1975–1983	84	183,378	46
	National	2002	1990–2000	287	788,425	36
Iceland	National	1992	1966–1986	132	147,649	89
New Zealand	National	1987	1975–1984	79	N A	272
	National	1990	1975–1984	79	30,385	260
	National	2001	1985–1994	58	N A	226
	National[a]	2002	1985–2000	105	63,040	167
Norway	National	2001	1961–1975			150
Poland	Baltic Sea	1997	1975–1984	33	48,113	69
	Deep Sea	1997	1975–1984	11	64,044	17
	Small-scale fishing industry (<24 m)	2004	1960–1999	177	198,920	89
South Africa	National	2003	1996–2002	198	122,180	162
Sweden	National	1995	1975–1986			110
UK	National	1985	1961–1980	711	420,710	169
	National	1989	1971–1980			170
	National	2004	1976–1995	527	440,355	120
	National	2001	1994–1998	120	N A	N A
USA	National	1994	1982–1987	648	1,378,723	47
	National	1999	1994–1998	396	N A	N A
	National	2004	1994–2000	466	N A	N A
	Alaska	1990	1981–1984	103	32,227	320
	Alaska	2001	1991–1998	167	392,000	43
	Alaska[a]	1993	1980–1988	278	67,052	415
	Alaska[a]	1993	1991–1992	70	34,800	201
	Alaska[a]	1999	1991–1998	162	139,200	116
	Alaska[a]	2001	1990–1999	217	175,000	124
	Alaska[a]	2001	1991–1998	167	140,000	119

Table 3.2 Categories of vessels above 500 GRT where lives were lost resulting from total losses of the vessel, 2000–10

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Factory stem trawler	1	0	0	2	0	0	11	5	2	0
Fish carrier	0	0	0	2	0	17	0	0	0	0
Fishery research vessel	0	0	0	11	0	0	0	0	0	0
Fishing vessel	23	15	10	10	10	39	4	39	18	41
Stern trawler	14	31	0	7	8	18	6	27	9	6
Trawler	2	1	0	12	17	4	0	4	3	1

Source: Lloyd's Register of Shipping, World Casualty Statistics, London (annual).

bad weather conditions which make gear operation much more difficult and hazardous. However, few fishers are nowadays swept over the side simply because of heavy seas, due to improvements in the safety design of vessels. Many of these are aimed at enclosing all or part of the working deck space, so that fishers can work under cover rather than on the open deck. A significant proportion of accidents to vessels can be traced to fatigue. This can lead to fishers making errors in, for example, navigating to and from ports, or their grounding the boat because of inattention to navigation. Finally, as with SSF, the failure to take basic safety precautions is of considerable significance.

Occupational Health

The characteristics of fishers' lives that impact on their long-term physical health, as distinct from accidents and injuries, include constant exposure to weather and sea conditions in a variety of subpolar, temperate and tropical maritime climates; long hours of work coupled with lack of sleep and irregular, disturbed sleeping and eating patterns leading to extreme fatigue and poor diet; heavy physical work particularly in the operation of gear and handling of fish catches,

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Table 3.1 notes and source

Fatality rates (per 100,000 fishers/year) and population at risk are reported where available.

* Indicates fatality rates are based on full-time equivalents (FTEs).

Source: M. J. S. Windle, B. Neis, S. Bornstein, M. Binkley and P. Navarro, 'Fishing occupational health and safety: a comparison of regulatory regimes and safety outcomes in six countries', *Marine Policy*, 32, pp. 701–10 (2008). (Full individual sources are given in this document.)

frequently in extreme weather and sea conditions, giving rise to skin problems and muscular-skeletal disorders, notably affecting the back, hands and fingers; and the cumulative prolonged stress generated by all these issues. This can lead especially to obesity, alcohol problems, cardiovascular disorders and respiratory illnesses. A classic case was the now defunct UK distant-water trawling industry located in sub-Arctic waters, which was associated with high levels of physical and mental stress, and correspondingly high levels of cardiovascular, respiratory and gastrointestinal diseases. Sexually transmitted diseases including HIV/AIDS are also widespread in some regions, notably South-East Asia and Papua New Guinea.[20]

When it comes to mental health, the fishers' lifestyle is once again the starting point for many problems. The first set of circumstances is related directly to the nature of the routines involved: long hours on a daily basis, long voyages with short turnaround times, and lack of time ashore. This is associated with social and personal isolation leading to loneliness, particularly because of the separation from spouses, families and friends, and with fatigue and stress. Alcohol and drug problems may arise as a consequence of these circumstances. The second set of circumstances relate to job security, which is related to the economic pressures already discussed. On some major commercial fisheries and especially distant-water fisheries, multinational crews may experience cultural conflicts associated with the different nationalities, food preferences

Table 3.3 Causes of work-related deaths from disease among fishers employed in the UK fishing industry, 1965–2005

Cause of death	No. of deaths	Mortality rate per 100,000 fisher-years
Circulatory diseases:		
Ischaemic heart disease	147	17.2
Stroke	6	0.7
Subarachnoid haemorrhage	3	0.4
Other circulatory diseases	20	23.0
Respiratory diseases:		
Pneumonia	7	0.8
Chronic obstructive pulmonary disease	3	0.4
Other respiratory diseases	3	0.4
Gastrointestinal diseases	5	0.6
Malignancies	4	0.5
Diseases of the nervous system	3	0.4
Endocrine and metabolic disorders	2	0.2
Ill-defined diseases	9	1.1
Total	**212**	**24.8**

Source: S. E. Roberts and J. C. Williams, *Update of Mortality for Workers in the UK Merchant Shipping and Fishing Sectors*. Report for the Maritime and Coastguard Agency and the Department of Transport, Swansea: Swansea University, 2007.

and languages among the crew. This is common in commercial shipping. The stresses on trafficked and bonded crews are especially severe (see Chapters 10 and 11). A recent study of fishers in Norway indicated that language difficulties are a source of stress, but appear not to directly affect the ability of fishers to do their job at sea.[21] Finally there can be more extreme circumstances, in which fishers are subject to bullying and abuse, criminalisation and piracy (issues discussed elsewhere in this book). The outcomes include depression, addictive behaviour, suicide[22] and sometimes homicide, and fishers have been known to disappear at sea for unknown reasons.

Conclusion

In both the developed and developing world, sea fishing remains the most dangerous of occupations, with death rates far greater than for any other industry. This is true for both commercial (including distant-water) fisheries, and the SSF of developing countries. The major risks arise not only from the obvious hazards of bad weather and sea conditions, which are associated with the dangers of being washed overboard, and loss of vessels and crew through sinking and shipwreck, but also from the dangers of working with heavy machinery on crowded decks.

To the injuries and deaths sustained by these dangers may be added the hazards of working long hours with minimal sleep and irregular eating patterns, resulting in severe fatigue, which increases the likelihood of errors that lead to accidents. Also of great importance are the occupational health risks caused by working for long periods with high levels of both physical and mental stress, which is associated with cardiovascular and respiratory illnesses as well as alcohol-related problems. Also significant are the mental health issues of depression, addictive behaviour and even suicide. There are also the pressures on fishers imposed by negligent and sometimes unknown vessel owners, not least the beatings, injuries and deaths from abuses described in Chapters 9 and 10.

One of the major problems in attempting to analyse the risks of working at sea on fishing vessels is the absence of adequate statistics. An often quoted number is 24,000 deaths per annum in world fishing. However, there is no sound basis for the figure because there are few reports from the majority of countries. Information on losses at sea may never get beyond the level of local communities. Meanwhile illness as a result of working as a fisher is barely recognised even at this primary level, and injuries are rarely even considered worth mentioning in small-scale fishing.

What we can deduce from the information available is that the mortality rate in fishing is higher than for all other occupations. This is not only because

of the intrinsic hazards but also because of the difficulty or impossibility of giving adequate medical attention to those injured when a vessel is at sea. An injured fisher or one experiencing coronary arrest consequently has a much lower chance of survival than most people ashore. Finally it is worth noting that some accidents occur very suddenly. The time from realising that major storms and large waves are imminent to the flooding and sinking of vessels is often extremely short. This means that there is little chance of making a distress call, let alone being rescued as a result, unless a floatable automatic emergency beacon is released. This is not always carried on small vessels.

CHAPTER 4

Nation States' Rights to Fish

Introduction

This chapter shows the extent to which several of the developed countries emerged with great advantage from the negotiations on enclosures of the sea, and through technical, financial and corrupt methods held on to dominance in areas such as Africa.

There is a long history regarding the controversy over the exclusive rights of nation states to harvest the fish adjacent to their coasts: the concept of *mare clausum* (literally, the closed sea) clashes with the view of freedom of the sea under *mare liberum* (the open or free sea). From the mid-20th century it became increasingly evident that much more comprehensive and binding agreements among states were required for sharing, harvesting and conserving the living resources of the sea. Thus between the mid-1950s and early 1980s a series of meetings were convened under the auspices of the United Nations to codify an updated law of the sea. The first Convention on the Law of the Sea (UNCLOS) was concluded in 1958, followed by further limited negotiations ending in a second Convention in 1960. A much more ambitious effort to cover all the uses of the sea was convened for the Third UN Conference on the Law of the Sea, which opened with an inaugural session in Caracas in 1973. After nearly a decade of annual sessions, this Conference concluded a new Convention on the Law of the Sea in 1982 at Montego Bay, Jamaica (UNCLOS 82). The Treaty entered into force in 1994 upon accession of the 60th signatory, although most states began to adopt the provisions of a 12 nautical mile (nm) territorial sea and a 200 nm exclusive economic zone (EEZ) (or at least exclusive fisheries zone, EFZ) both during and after the negotiations. Not every state has ratified the Convention, but as far as fisheries are concerned, all recognise the regime of the EEZ or EFZ as customary international law.[1]

Although this brief account gives the sequence of events, it does not cover the underlying concepts, ambitions or suspicions that motivated the nation states. It is useful to recall something of this since the world has inherited the outcome as the basis for governing the seas.

It took nearly 25 years from the start of the discussions at UNCLOS I to the adoption of UNCLOS III during 1982. During this time new countries emerged from decolonisation and partition, including some landlocked countries with

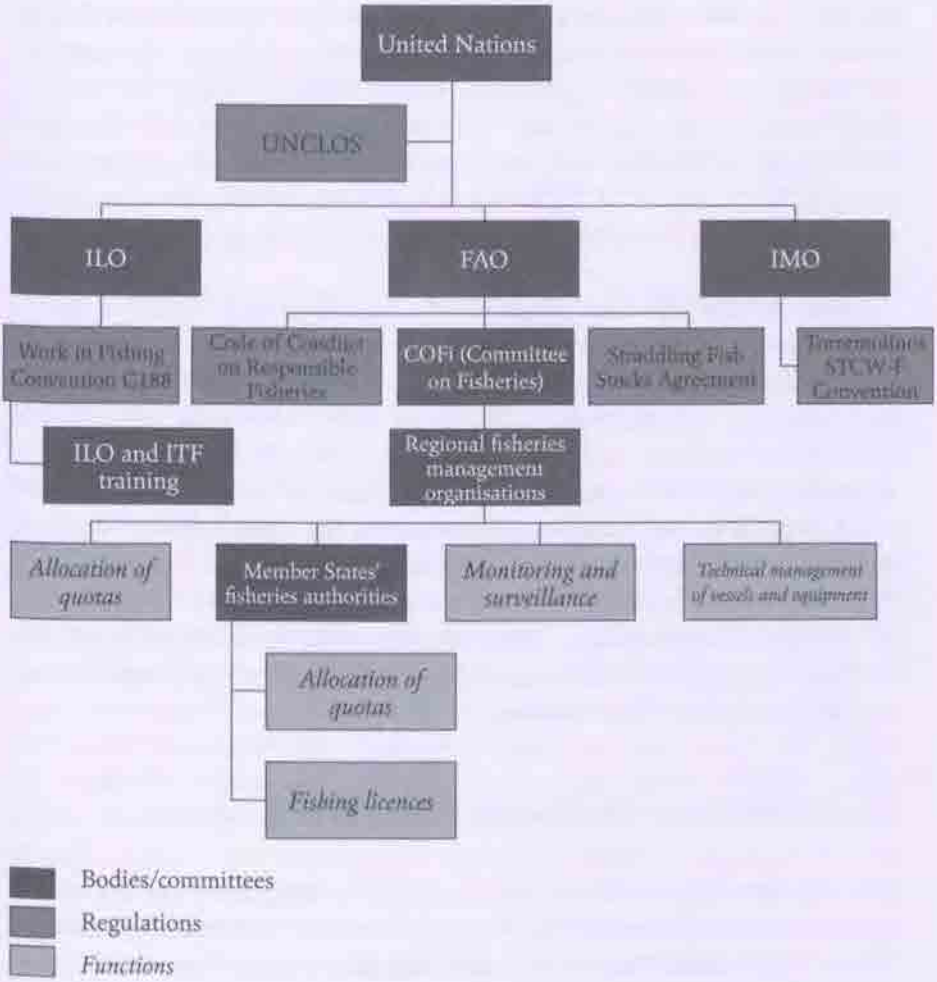
little prospects of sharing in ocean resources. A spokesman for the poor of the world at UNCLOS III was Dr Arvid Pardo, who envisaged that ocean resources should be the 'common heritage of mankind'. There was no chance of this being adopted as a guiding principle, but he refocused on that ethical concept for the exploitation of the seabed beyond national jurisdiction as the sea divisions proceeded. He was partially successful in this respect. Also influential in guiding principles was Elisabeth Mann Borgese, who founded the body Pacem in Maribus (Peace at Sea) in 1959, the same year as the 'cod war' arose between Britain and Iceland.

Iceland was not alone in unilaterally extending jurisdiction over the living resources contiguous to its coast. The United States had already done so under the Truman Declaration of 1945, and some South American countries followed. The UNCLOS meetings were intended to regulate such geopolitical moves and to develop rules over freedom of navigation, international straits, fishing, deep seabed mining, protection of the marine environment, military use of the sea and other possible conflicting issues between nation states, including the demarcation of boundaries, and always with the complication that many of the living resources to be shared are mobile and hence transnational regardless of political boundaries.

It was at a ten-week meeting of 5,000 delegates that UNCLOS 82 with 320 Articles was opened for signature. The articles reflect many compromises between the 'common heritage of humankind' sharers, and the market 'finders are keepers' schools of thought, both of which still pursue their ideologies in a new globalised marine economy.

One of the most important outcomes of UNCLOS 82 for fishing which has continued unchanged was the establishment of the EFZ or EEZ, covering the rights of coastal states to the living resources of the water column and the mineral resources of the seabed extending for 200 nm from the coast. The Government of the United States declined to ratify the Convention's view that seabed minerals should be treated as a common heritage, and failed to agree that fish moving from the high seas through EEZs would become the exclusive property of the coastal states of those EEZs, although the US Government complied with most of the other Articles of the Convention, including a compromise on the seabed which was agreed later.

The results of UNCLOS 82 were Articles governing rights, obligations and dispute settlement procedures applicable to marine space and all sea uses for state parties to the Convention, upon which are based a wide range of codes, recommendations and guidelines. Dispute settlement between states has been further strengthened by the establishment of the International Tribunal for the Law of the Sea alongside the already established International Court of Justice, which had previously dealt – and still does deal – with certain maritime cases. The Convention also more strongly underpins the activities of the UN



ITF = International Transport Workers' Federation
STCW-F = Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel Convention

Figure 4.1 The UN System applicable to the legal bases of fisheries

Source: information from UN Agencies.

agencies and bodies dealing with the oceans (see Figure 4.1). As far as fisheries are concerned these include especially the Food and Agriculture Organization (FAO), which supports the science, statistical administration and management of fisheries worldwide, especially in the developing world; the International Labour Organization (ILO) which deals with all aspects of employment; and the International Whaling Commission (IWC, established much earlier). The International Maritime Organization (IMO) is concerned with safety, training

and the protection of the marine environment, while the World Health Organization is concerned more generally with the health of seafarers. These agencies individually and collectively deal with fishery matters. Among the measures adopted through the agencies are the International Convention for Standards for Training, Certification and Watchkeeping for Seafarers, as applied to fisheries (SCTW-F); the 1995 UN Fish Stock Agreement covering straddling stocks; and the 1996 FAO Compliance Agreements, all of which are legally binding in international law.

These were the 'top-down' expressions of the laws defined within the various UN bodies. At the same time the views of functionaries such as Arvid Pardo and Elisabeth Mann Borgese helped galvanise 'bottom-up' pressures for state ratification and implementation. The major non-governmental organisations (NGOs) that had emerged during and after the UNCLOS 82 negotiations were able to get involved at various levels. These included the Law of the Sea Institute, which is based at the University of Hawaii and has a multinational composition, the International Ocean Institute based in Malta, Pacem in Maribus with Elisabeth Mann Borgese in Malta and Canada, and many other very active and often hands-on bodies such as Greenpeace, Friends of the Earth, Sea Shepherds, Environmental Justice Foundation, the trade union movements, missions, and concerned end users of sea resources.

The Dominance of the Distant-Water Fishing Nations

These epoch-making conclusions of UNCLOS 82 brought over 40 per cent of marine space containing some 90 per cent of the world's sea fish under the several forms of state jurisdiction set out in the treaty, greatly extending national rights to fish. Most states have reserved a narrow zone of the territorial sea and EEZ ranging from 3 to 15 nm for small, local fishing boats. Beyond the EEZ lies the high seas, covering close to 60 per cent of marine space, with some 5 per cent of valuable, highly migratory pelagic fish. Many of the latter constitute 'straddling stocks' which cross both high seas and several EEZs at different times in their migration. Both these and other fish stocks also move across adjacent EEZs. The expansion of state jurisdiction has been further strengthened by Article 76 of the Convention dealing with states' rights to access in waters overlying natural prolongations of continental shelves, and claims for seamounts and ocean ridges beyond 200 nm. These claims are now being handled by the UN Commission on the Limits of the Continental Shelf (CLCS), a process which is likely to take decades and result in a further significant transfer of fishing rights from the high seas to coastal states.

Table 4.1 EEZs of selected countries (in thousand sq km)

	Mainland	Overseas	Total
USA	2,450	9,786	12,236
France	335	10,700	11,035
Australia	6,633	2,611	8,974
Russia	1,400	6,696	8,096
UK	774	6,031	6,805
New Zealand	3,423	3,273	6,696

Source: P. Nolan, 'Imperial archipelagos: China, western colonialism and the law of the sea', *New Left Review*, 80 (March–April), pp. 77–95 (2013).

Advantages to the Developed States

Most gains from the adoption of UNCLOS 82 accrued to some of the more developed states. Those with long coastlines and politically relatively unimpeded offshore areas such as the United States, Iceland, Norway, Russia, Australia and New Zealand have been the main beneficiaries. In contrast, states that had previously fished widely under an open seas regime, such as Thailand, South Korea and Taiwan (Chinese Taipei), have lost out, because they have legally become confined to their own EEZs and limited areas of the high seas. In Europe, where both types of state are located, the European Union in effect has combined national EEZs and EFZs under the Common Fisheries Policy (CFP). Together with the overseas territories of member states, this created at 25 million sq km the largest politically unified regional fishing zone in the world. The aggrandisement of European interests was greatly assisted by the colonial inheritances of France and the United Kingdom, respectively the French *Territoires d'Outre-mer* and the UK Crown Dependencies. The same is true of some other developed economies (see Figure 4.2 and Table 4.1).

The major issue that remained to be resolved for fisheries was the rights to stocks in the high seas beyond national jurisdiction. An apparent, if partial, solution was found by a development of regional fisheries management organisations (RFMOs) to manage some stocks common to both the high seas and EEZs following Article 64 of UNCLOS 82 (see Table 4.2). However, the management rules can only be implemented by the flag states in which fishing vessels are registered. This is not a problem for vessels from states parties to the relevant RFMO convention and UNCLOS 82(3), and vessels registered in a number of other countries compliant with these conventions. However, many distant-water fishing nation (DWFN) vessels belong to open registries (also known as flags of convenience, FOCs), and are based in states with no interest in, or capabilities for, the implementation of the RFMO rules. Indeed, this has proved to be a main attraction of FOC for a number of major fishing enterprises based in the leading fishing nations of Western and Eastern Europe and East Asia in particular.

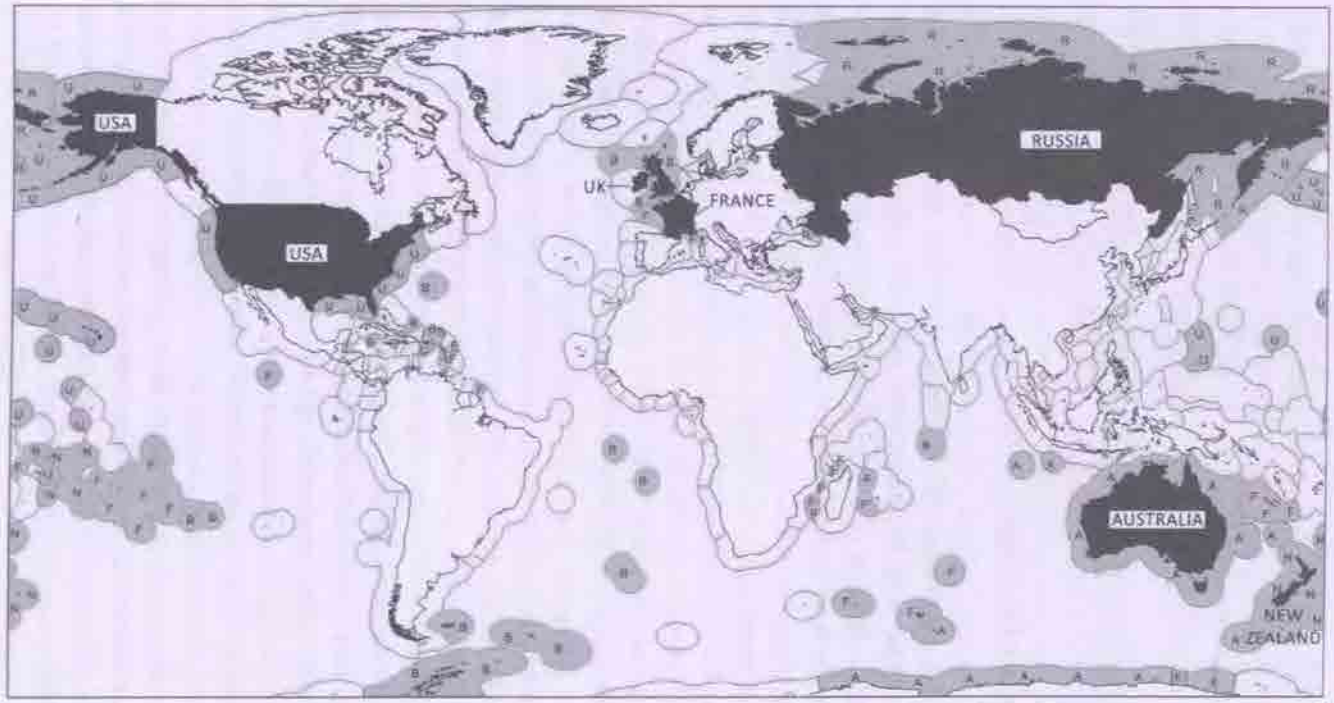


Figure 4.2 The global 200 nautical mile zones and advantages of imperial inheritances

The shaded area is the EEZ.
Compiled by the authors from multiple sources.

A Australia
B United Kingdom
F France
N New Zealand
R Russia
U United States of America

Table 4.2 Regional fisheries management organisations

RFMOs that manage highly migratory species, mainly tuna	RFMOs that manage fish stocks by geographical area
International Commission for the Conservation of Atlantic Tunas (ICCAT)	North-East Atlantic Fisheries Commission (NEAFC)
Indian Ocean Tuna Commission (IOTC)	Northwest Atlantic Fisheries Organization (NAFO)
Western and Central Pacific Fisheries Commission (WCPFC)	North Atlantic Salmon Conservation Organization (NASCO)
Inter-American Tropical Tuna Commission (IATTC)	South-East Atlantic Fisheries Organization (SEAFO)
Agreement on the International Dolphin Conservation Programme (AIDCP) (sister organisation to IATTC)	South Indian Ocean Fisheries Agreement (SIOFA)
Commission for the Conservation of Southern Bluefin Tuna (CCSBT)	South Pacific Regional Fisheries Management Organisation (SPRFMO)
	Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR)
	General Fisheries Commission for the Mediterranean (GFCM)
	Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea (CCBSP)

Source: European Union, 'Regional fisheries management organisations (RFMOs)', 2013. http://ec.europa.eu/fisheries/cfp/international/rfmo/index_en.htm (accessed 12 December 2013).

The situation with regard to fish landings is further complicated by port state jurisdiction arrangements. Agreements among states that vessels violating fisheries regulations be refused access to and/or arrested in ports can be avoided by using 'ports of convenience' where no enforcement takes place. Alternatively, catches are transferred to refrigerated cargo ships (reefers) at sea without logbook information on catch locations, as part of the general subterfuge involved in illegal methods of fishing (see Chapters 6, 7 and 8).

Transnational Mergers and Subsidies

The period after 1982 saw a liberalisation of trade, an emphasis on free markets, and concentrations of capital with mergers into multinational corporations. In

the fisheries sector several of those that emerged were highly vertically integrated organisations with their own fleets fishing under licence in many EEZs and high seas, landing and processing catch at subsidiary plants in areas with low labour costs, and exporting the products to their market outlets in the most developed countries. This is a flow of foodstuffs referred to by Noam Chomsky as from the needy to the greedy.[2] These companies could choose not only the location of their corporate headquarters but also the flags for their ships, and they favoured tax havens and few regulations. Furthermore, with globalisation they could crew ships by drawing on cheap labour from the poorest countries in the world.

Several of these private companies were also able to gain from the policies of national governments and international bodies. Thus the European Union, for example, has provided grants in the form of ship modernisation funds, and subsidies towards operational (including fuel) costs to enable vessels from member states to transfer their activities from overfished northern to more bountiful southern seas. In addition the European Union has paid two-thirds of the fees required to obtain access to the EEZs of certain foreign states, with the shipowners paying the balance. The United States has made similar provisions for American companies, particularly in the Pacific. In these ways the developed countries have not only been able to secure greater quantities of fish for their markets, they have also reduced fleet overcapacity and perhaps for a time even ameliorated overfishing in their home waters.

Subsidies have increased overcapacity of many fishing fleets and contributed to overfishing. They have enabled vessels to pursue scarce fish further and for longer than the commercial costs of normal fish operations would allow. These payments have also been unfair for poorer fishers since they undermined the comparative advantage developing countries have in lower labour costs in the sale of fish.

As will be detailed in subsequent chapters it is in the crewing of vessels that perhaps the greatest economies have been achieved through globalisation. The wealthy transnational companies are able to obtain low-cost 'crews of convenience' through external manning agencies recruiting from the poorest countries of Asia, such as Cambodia. This international division of labour also extends to establishing fish processing plants in low-wage coastal locations with suitable land and water access. Whereas in the past catches were unloaded in the ports nearest to the fishing grounds, in the present globalised system vessels, ports and processors are connected in a vertically integrated chain determined by the logistics of least cost and highest added value for each link in the chain. The aims of EU policy as applied to less developed fishing areas are one example of these trends.

The Fisheries Policy of the European Union

The importance of the European Union in global fisheries derives from the huge scale of the fishing operations of its member states, both within home waters and around the world, together with its very large market as an ultimate destination for global fish catches. Both EU fisheries and their management through the CFP are also especially notable in being by far the most complex fisheries management system in the world. In the European Union, fisheries policy and management measures have to be carried out in conjunction with adjacent states, notably Norway, the self-governing Faroe Islands and Greenland, Russia, Turkey, and the states on the southern shores of the Mediterranean. In relation to more distant regions EU member states also enter into agreements with foreign states in accordance with the policies of the European Commission and countries controlling the waters off the western coasts of Saharan and sub-Saharan Africa, and in the Indian and Pacific Oceans.

The development of fisheries policy and management in the European Union is focused on the Directorate-General for Maritime Affairs and Fisheries (DG MARE, combined with DG Environment into a single portfolio under a new Commissioner for the Environment, Maritime Affairs and Fisheries in September 2014), which comprises six directorates with responsibilities for implementation of all aspects of the CFP, including the technical management of fisheries, structural aspects of the European fishing industry, the regulation of EU fish markets and trade, and international relations, thus covering the total supply chain. The CFP evolved from rudimentary beginnings in the 1970s, and gained much greater urgency with the accession of the major fishing nations of the United Kingdom, Ireland and Denmark in 1973. By 1982, after a period coterminous with the UNCLOS 82 negotiations, the first fully comprehensive policy was complete, and it entered into force in the following year. It has subsequently undergone decadal revision in 1992, 2002 and 2012, but is generally recognised to have largely failed in its objectives, at least with regard to stock conservation, although arguably much less so with regard to maintenance of catching power, structural support and market regulation.

In the present context, in Europe itself, special interest attaches to the technical management measures applicable to the catching side. The policy is operated on an annual basis, and centres on an end-of-calendar-year meeting of the fisheries ministers of the member states. At the heart of the essentially political negotiations, where ministers are duty bound to look after the interests of their national fishing industries, is the concept of total allowable catches (TACs). These are based on a combination of track records (the annual landings of individual vessels belonging to national fleets) and the principle of relative stability, which is designed to minimise as far as possible shocks to the system. The determination

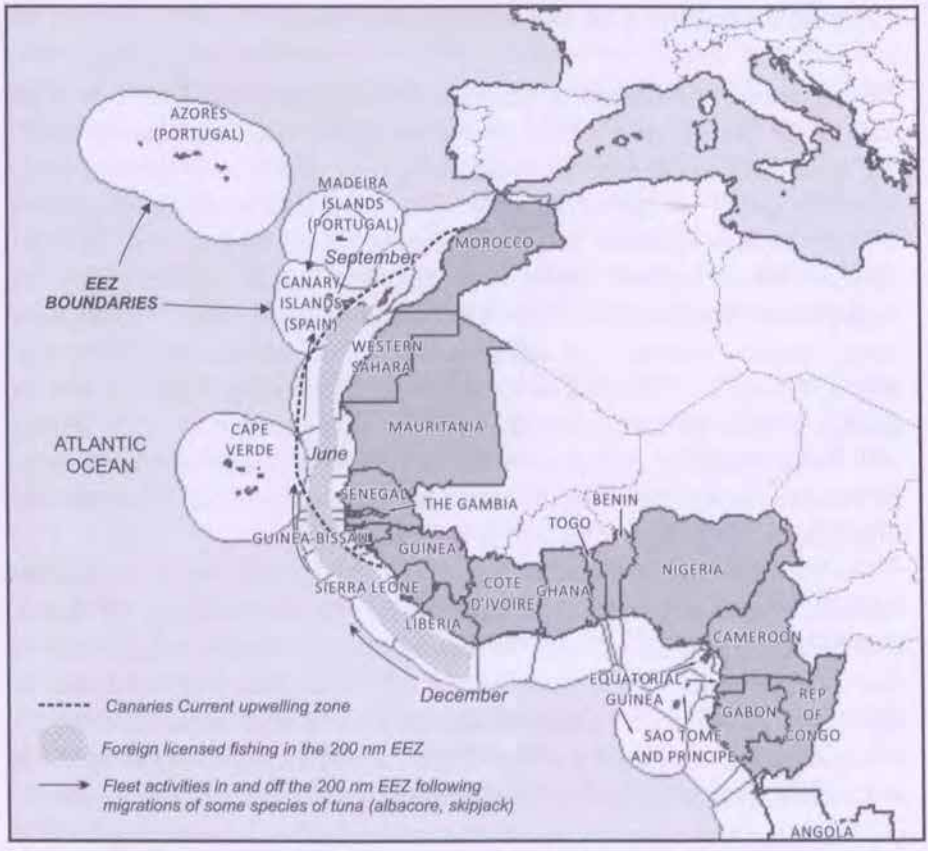


Figure 4.3 Foreign fishing activities in EEZs of the West African states

Source: adapted from V. M. Kaczynski and D. L. Fluharty, 'European policies in West Africa: who benefits from fisheries agreements?' *Marine Policy*, 26(2), p. 89 (2002).

of catch levels is also informed by scientific advice from the International Council for the Exploration of the Sea (ICES), an intergovernmental organisation linking a significant number of the member states (together with other states). ICES is in reality an institution for ensuring cooperation between the fisheries laboratories of its member states, and pooling scientific expertise and knowledge.

Up to the time of writing, and prior to the full introduction of the latest iteration of the Policy (March 2014), there has been a long-term trend to look after fishing interests as a top priority. This has resulted in persistent overexpansion of fleets and overfishing, both in and beyond the European region. The ministerial meetings are strongly lobbied by the various players in the European fishing industry. Scientific advice – itself not infallible – has often been sidelined or otherwise downplayed. The situation is further complicated in that DG MARE is now also responsible for implementing the new Integrated Maritime Policy of the Union, which deals with the full panoply of marine activities, while the

provisions of the also relatively new Marine Strategy Framework Directive dealing with the maintenance of good environmental quality also have to be taken into account. Thus fisheries policy is becoming increasingly integrated with other marine uses and environment policies – and perhaps becoming less politically influential as a result.[3]

A key part of the provisions is that once quotas are set at European level, they are shared among the member states, which implement them via regional producer organisations. Producer organisations and their vessel members are not allowed to exceed quota allocations. Any excess has to be discarded, together with fish which may not meet other technical regulations, such as those to do with gear. In the latest iteration of the policy a discard ban was introduced, since it was acknowledged to be a problem that a large percentage of catches (variable, but over 20 per cent in many cases) was being discarded. This discarding of normally dead fish was seriously undermining the conservation dimensions of the policy. The problem is exacerbated by illegal landings of fish, which occur to varying but unknown extents (see Chapters 6 and 7), so that the statistics so painstakingly provided by the national fisheries offices and ICES are inaccurate, in some cases appreciably so.

An Example of Distant-Water EU Policy: West Africa

In the case of the EU distant-water fisheries, the expansion of European activities has occurred against a backdrop of traditional fisheries development common to all the countries in the region of West Africa. The northern part of the region adjacent to the Sahara is characterised by strong upwelling and associated rich marine life, which supports among other activities the Moroccan sardine fisheries. Further south there are also rich fishing grounds which have always been a main source of protein for coastal peoples. For centuries hundreds of canoes would follow migrating small pelagic fish coastwise. Later, during the period of colonial rule the fishers were still able to visit hundreds of beach landings to land fish. Head fishers in these places would charge fees for landing and residence from visiting fishers. There were many unwritten rules and customs common along the coast, with breaches punishable by head fishers.

During the period of expansion and globalisation of the world economy in the second half of the 20th century Ghana became a leading centre of fisheries development in the region. The Ghanaian fleet fished throughout the West African coastal areas with both canoes and larger wooden-hulled vessels, all of which were locally built, while steel-hulled trawlers were also used, being initially acquired from elsewhere, then also built in Ghana. The period between 1960 and 1980 was particularly prosperous for fishers in Ghana. This came to an end first with the gradual prohibition of beach landings among the newly independent states

(for example, Ghana itself gained independence in 1957), which was followed by the declaration of EEZs following UNCLOS 82, which greatly reduced the size of Ghana's fishing industry.[4] The subsequent period was characterised by the search by developed maritime states for new sources of fish. Foreign fishing vessels descended on West African waters in great numbers, originating from EU member states – including the United Kingdom, France, Spain, Portugal, Italy and Greece – from China, South Korea and Japan, and later also from Cuba. Vessels fished hard and competed for the same fish stocks. Most paid fees under bilateral agreements with each of the 14 coastal states in the region, although significant numbers fished illegally without reporting their presence or paying fees.

The European Union as an integrated group of developed states was and remains the major participant in the continued exploitation of West African fish stocks. The EU policy of redeployment of fishing vessels from north to south was governed by several motives including reduction of fishing effort in European waters, securing supplies of food for EU markets, maximising access to the most productive African EEZs, and maintaining employment for EU fishers and EU-based processors. The aims of EU policy were achieved by the application of strong diplomatic pressure as required to each African state in turn, as well as by the European Union directly paying African governments two-thirds of the required licence fees (while the shipowners met the remaining third) and by the provision of other operational subsidies. On average there have been 800 EU vessels fishing off West African states at any one time, with some 3–4,000 EU fishers directly involved, as well as many hundreds of foreign vessels from other parts of the world operating under bilateral agreements concluded with their own countries, with even more engaged in illegal fishing without licences.

The combined effect on West Africa of these measures and subsidies in support of EU and other DWFN fishing enterprises has been to destroy any possibility of the African fishing industry competing effectively – or at all – in international markets. The agreements made did not have catch quotas, so they enabled the foreign fleets to catch unlimited quantities of fish. Meanwhile, the seafood available to coastal communities has diminished, a problem exacerbated by the hundreds of foreign vessels fishing illegally. This has not been passively ignored. For example, attempts were made in the Gulf of Guinea to organise 'vigilante' groups, but to no avail (see Chapter 10). A graphic illustration of the state of affairs is the detailed assessment made by Kaczynski and Fluharty of the impact of EU policies on Guinea-Bissau, one of the poorest countries in the world:

> The EU fleets can exploit coastal resources of Guinea-Bissau with little control by the coastal state. Guinea-Bissau receives no economic benefits from these resources beyond compensation from Brussels and licence fees paid by EU vessel owners. This is because the EU operators take their catches direct to European markets.

The authors point out that:

> Yearly licence fee revenue received by the Guinea-Bissau Government was $8,250,000 in 1996, while the ex-vessel value of coastal resources taken back by EU vessels to Europe was $78,000,000. After processing in EU plants the value of the fish was $110,424,000.[5]

Criticism of the quasi-imperial EU policy and the policies of other DWFN states has come from NGOs, the International Transport Workers Federation (ITF), the Environmental Justice Foundation, and trade unions in Senegal and Ghana, as well as from members of the European Parliament, which has itself become more involved by demanding reforms that will end the high volume of fish discarded. Demands for fair fishery agreements have also been increasing. By 2012 there was general agreement that EU policy covering the member states was extremely wasteful and environmentally damaging, and there was a need for drastic changes.

The emerging policy responses from the European Commission include that in future catch levels will be set at maximum sustainable yield (MSY) rather than TACs, with limits on individual species based on ecosystem management, taking due account of reproduction rates; there will be no more discarding of above-quota fish, with everything being landed and vessels simply stopping fishing when quotas are reached; and that unwanted catches should be curtailed by the use of improved gear. It has also been agreed that more support will be given to small-scale fishers in the European Union and beyond, with member states being encouraged to work together more independently of top-down management from Brussels. In its revised 'partnership' schemes, the European Union has declared that the social and economic implications of future agreements will be taken into account. Poverty reduction will be aimed at by encouraging joint ventures ashore in processing, as well as the employment of a percentage of local nationals as fishers at sea. The European Union has also stated that it will help in the eradication of illegal fishing, although there remain suspicions in West Africa that joint partnerships will simply legitimise more extraction efforts, with real power remaining in the hands of large foreign fishing enterprises.[6]

Conclusion

This chapter has concentrated on the background and principles of UNCLOS 82 regarding the rights of nation states to claim the fish within their coastal waters up to 200 nm from shore. It has focused on the basic processes involved, but not the disputes over boundaries, or the issues of highly mobile straddling

stocks and illegal fishing. These are considered in future chapters. The treaty in general is of enormous significance. In the pre-UNCLOS period the areas beyond recognised state territorial seas were regarded as common, and there were great dangers of anarchy with the rapid advances in vessel and fishing technology, together with trends towards more distant-water fishing. Conflicts were likely between fishing states, such as the 'cod war' between Britain and Iceland.

UNCLOS provided international agreement on state entitlements to fish in the more than 40 per cent of the world's oceans that is designated as EEZs. Inevitably in a document with 320 articles on many related issues there were inherited compromises and controversies in the treaty. As we have shown in this chapter, these included rights within and beyond EEZs concerning highly migratory species. The registration of vessels under the flags of states without genuine links between flags and owners but fishing under FOC state laws on the High Seas has presented perennial problems. Together with the issue of illegal fishing, the trends have all run counter to the aims and aspirations of UNCLOS, as have the devious ways in which African countries have so far been deprived of opportunities to benefit fully from the EEZ system.

CHAPTER 5

Employment and Poverty in Fishing Communities

Introduction

In the 1980s the prospects of prosperity for fisher people from the acquisition of nation state sovereignty over the natural resources of their exclusive economic zone (EEZ) appeared very favourable. It was up to governments to decide who could fish, where, and what quantities and species could be harvested. In the European Union and several other regions a quota system was adopted. The initial share-outs between companies and vessels were made mainly on the basis of historic catch records. This favoured the biggest established companies which were awarded the highest quotas. It disadvantaged small-scale commercial fishers, and virtually disqualified the subsistence sector where it still existed.

This chapter considers first the employment records in the industrial fishing sector typical of the developed countries, and the impacts there on the small-scale sector of employers and fishers. We then assess the successes, or otherwise, of the UNCLOS 82 allocations which had a stated aim of benefiting poorer fishing communities in the developing world through their utilisation of the resources of the adjacent seas. We draw examples from the Pacific and Indian Oceans. The numbers of fishers in the two sectors in question are indicated in Table 5.1. This shows that the industrial sector with moderate and distant water capabilities comprised nearly 1.5 million fishers, and the small-scale, mainly coastal fishers number about 15.2 million on a world scale.

Industrial Fishing in Developed Countries

It is in the industrial sector of the developed countries that the greatest technical advances have been made. The vessels are based at urban ports and at some of the bigger villages. These boats fish the greater part of the EEZ as well as the high seas, and include the types of craft referred to in Chapter 3. Advances in gear and navigation systems have meant rapid increases in catching effort. The fishing power of most large vessels increased between 200 to 300 times after

Table 5.1 Number of fishing vessels by tonnage group and number of fishers

Tonnage group (GRT)	No. of vessels	No. of fishers	Approximate categories of fishers
> 1,000	2,500	150,000	Distant-water fishers and industrial fishers
500–1,000	2,800	112,000	
100–500	40,300	1,200,000	
< 100 decked	1,212,600	5,500,000	Small-scale fishers
< 100 undecked	1,000,000	4,400,000	Small-scale fishers and artisanal fishers
Undecked, no mechanical power	1,800,000	5,300,000	
World total	**4,058,200**	**16,662,000**	

Source: ILO, *Conditions of Work in the Fishing Sector: A Comprehensive Standard (A Convention Supplemented by a Recommendation) on Work in the Fishing Sector*, International Labour Conference 92nd Session 2004, Report V(1), Geneva: ILO, 2003, p. 6.

the 1970s. This was facilitated in EU states by subsidies.[1] At the same time the numbers of fishers employed on these vessels were reduced, with the exception of the factory ships, where processing was transferred from the shore to the vessels. In the United Kingdom, for example, in 1994 there were 10,297 fishing vessels and 15,640 full-time and 5,063 part-time fishers; by 2012 there were 6,406 vessels with 10,283 full-time and 2,162 part-time fishers.[2] Similar structural changes occurred in most developed countries.

The reduction in numbers of fishers in the United Kingdom typifies national trends elsewhere in the developed world and in some of the newly developed countries in Asia. In the UK pelagic sector, quotas for fishing mackerel and herrings were allocated primarily to several big companies. This enabled them to invest in giant vessels with enormously enhanced catching power, with new technology such as side thrusters, shelter decks and high speeds, and to install single-berth cabins for the fishers. These vessels centralised their activities at major port markets. By the 1990s some 30 vessels fishing out of two Scottish ports were catching most of the national allocation for pelagic fish, and caught even more out-of-quota fish illegally (see Chapter 6). This policy of going for bulk virtually put an end to hundreds of smaller boats and fishers for herring that had supported many communities on the east coast of the United Kingdom. By 2014 the fleet of modern high-capacity pelagic vessels had reduced to 26.

They could now take the allotted quota quickly and have profits enough to lay up the ships for about quarter of the year.

By 2013 pelagic fishing in the United Kingdom was in the hands of six companies. These were nearly all of the Scottish giant pelagic vessels under the ownership of skippers and families, as was the crewing. There were also several giant ships out of ports in England owned by other EU companies. These were sailing under the British flag, with some British crew but landing catches in other parts of the European Union. This was much resented by the impoverished small scale fishers, and a campaign against this was conducted by Greenpeace. The vast profits being made merited comment in the national press. One family company with three of these ships was noted as 'netting £17 million payments for the year 2013'. The family, the report said, 'all work as crew members on their vessels'. The 11 directors of the company were also paid a salary, and 'last year [2013] the best paid crew members would have earned more than £2 million'.[3] Consequently these very technically efficient pelagic giants have no problems in obtaining seagoing labour almost entirely from among their own kin.

The situation regarding allocation of catches has been somewhat different in the demersal fisheries of the developed states. The finfish species are very diverse and dispersed, and more difficult to locate, thus hard work and long hours have to be put in; while less mobile shellfish such as lobsters and crabs involve long hours of work irrespective of the quantities caught. If there is a share system dividing up the returns between the boat owner, the skipper and the crew, then earnings are variable depending on the catch, which can make it difficult for fishers to finance vessels and gear. In parts of the developed world where there are alternatives to going to sea, the task of obtaining reliable crews often presents problems. The trends in the demersal industrial fishing has increasingly been towards the employment of migrant fishers drawn from developing countries in harvesting the national EEZ resources (see Chapter 10).

Industrial Fishing and Employment in Distant Waters

Many of the boats from parts of Europe and the developing countries in Asia that fish distant waters as well as the EEZs depend on recruitment of crews from the poorer areas of the world. In Asia only the skippers of the catchers and captains of the support 'mother ships' are likely to have the same nationalities as the owners and managers from Japan, South Korea, Taiwan, Thailand, the Philippines or Indonesia. Most of the foreign migrant fishers are recruited by independent agencies, or through informal and sometimes criminal channels. They constitute a substantial proportion of the 1.5 million fishers in the mainly distant-water fisheries, which land approximately 50 million tonnes of fish

per annum from 45,000 vessels above 100 GRT (see Table 5.1). The vital role of Thailand in the supply of migrant fishers to the fleets of Taiwan and other developed countries is discussed in more detail in Chapter 10.

Taiwan is an important fishing nation with some 300,000 full-time fishers. It is a prime example of the implications of globalisation for the fisheries. The distant-water sector is almost totally dependent on migrant crews from mainland China, Viet Nam, the Philippines and Indonesia, a proportion of whom arrive via Thailand and Singapore. Many of the ships are under FOC, including those of Honduras, Equatorial Guinea and Panama. These vessels fish worldwide for many months and even years at a time, unloading their catches in Singapore, Mauritius, the Canary Islands, South Africa, and at sea to mother ships for transfer mainly to Japan. As it is necessary under Taiwanese legislation for the captains and first engineers to be Taiwanese, special inducements have to be made to officers, since as the government claims, 'the younger generation does not want to work on fishing boats'. Thus, in order to cope with crew shortages the Taiwanese Fisheries Agency in August 2013 announced an annual bonus of US$30,000 per annum for the first three years of service as a senior officer on Taiwanese-owned fishing vessels with otherwise migrant crews.[4]

The Philippines government facilitates the employment of its nationals overseas through the Philippines Overseas Employment Administration (POEA), which produces model contracts for recruitment agencies and companies. These are not always observed. Many Filipinos also find work on foreign fishing vessels through spurious private agencies, and through 'scouts' who target likely individuals through informal meetings for jobs at places such as Rizal Park in Manila. The actual methods of employment are detailed in Chapters 9 and 10.

Overall, the systems used in all places to obtain low-skilled migrant fishers for industrial fishing in more developed countries are often secretive, and the individuals recruited are not always aware that going to sea is involved. There are a number of consistent features. The demand in foreign countries is for subservient young, unemployed and uneducated men and boys who will accept low wages and long periods away from home under hard conditions. They are sometimes drawn from rural areas far from the sea, or from poorer parts of larger urban centres, as well as from prisons, with brokers paying for their release (see Chapters 9 and 14).

Small-Scale Fishers

Most of the world population of people directly dependent on the sea for sustenance and for incomes are in the small-scale fisher (SSF) sector. They number some 15 million and are primarily from the developing countries of Asia. Commercialisation has been spreading rapidly, but many still live in relatively isolated communities which have been governed by local customs and laws since

time immemorial. The gear is simple and fishing is carried on using open boats, often locally built. Landings are made to beaches. Some fish enter exchange systems, but much is locally consumed in a subsistence sector which has been gradually diminishing. There is a growing cash sector, with access to local markets through buyers on the beach or by local women travelling as vendors. This system shades into the more commercial small-scale fishing category (see Table 5.1). Boats are often family-owned and run on a share system, although there may be wage earners on board who also share in the catch proceeds. The following account discusses the poverty trap, the violent reactions to poverty by some communities, the enforcement of job creation by some, and the policies of others in trying to recover resource value from their fishing through marketing environmentally sustainable catches of high quality.

In these small-scale fishing communities there were hardships as measured by modern standards long before UNCLOS 82 changed the fishery sector. Increasing demands by the growing cash economy and growth in local populations were breaking down customary rules, leading to overfishing in coastal waters such as reefs, as well as considerable poverty. Thus SSFs were increasingly moving offshore with inadequate craft, leading to longer times at sea and increased risks of accidents, including some that led to drowning. There was increasing awareness in remote coastal and island locations of the large foreign boats from urban ports fishing close inshore, for example in pursuit of shrimp. These vessels were intercepting shoals at sea using arrays of heavy gear including large fish aggregation devices (FADS – see Chapter 2), as well as scooping up vast catches in trawls, including bycatches of non-target species and juveniles which they discarded dead. The SSF knew this was bound to impact on the ecology of coastal fish stocks and was an increasingly important cause of their growing poverty. The desperation of knowledgeable fishers is recorded by skipper Geoff Bourne in his observations of SSFs dynamiting reefs in Tanzanian waters.

The poverty trap which affects millions of SSFs results from declining local fisheries, population pressures and the impact of both permitted and illegal competitors. Some of these impoverished communities are located at the geographical margins of growing economic regions, such as the Philippines. The example drawn from the Philippines is based on field observations by Dr Nelson Turgo.

Neglect and Poverty in the Small-Scale Fishing Communities of the Philippines by Dr Nelson Turgo

Those who go to sea for a living from coastal communities are particularly disadvantaged in the modern age, even in recently emerging economies such

Box 5.1 Small-scale fishers

Fishers are not stupid, ill-educated and ignorant with regard to many spheres of life outside fishing. When it comes to fishing in their waters, few know the habits, underwater terrain, species and lifecycles better than them. I shall always remember an example of this precise knowledge I encountered while on a coelacanth searching expedition off the northern Tanzanian coast. We could not find the elusive fish which fishers had been hauling up in their nets over the years, so we spoke to a few of the local fishers who had caught the coelacanth. They described a rock that was hanging over an underwater wall; the depth of the rock was approximately 100 m. They were absolutely correct and habitats if not the fish were found at the position indicated by landmarks. How on earth these people know the intricate details and description of this exact rock and topography at 100 metres depth remains a mystery to me, but they did! Fishers are also organised. When netting the channel between Pemba and Zanzibar islands (Unguja), they arrange the nets in a pattern determined in a meeting before the night's fishing begins. And yet dynamiting continues despite the knowledge of its destruction, despite the conservation organisation inherent in the fishing communities, and despite both national fisheries', government and international concern. Why?

Source: from the reports by skipper Geoff Bourne, 2014.

as the Philippines. The Philippines has a population of 104 million. There are 7,017 islands of which around 2,000 are permanently occupied, with settlements ranging from numerous villages to large urban areas. Production of wild fish is around 2.3 million tonnes per annum. Of this, over 50 per cent comes from SSF municipal fisheries. Approximately one million fishers are from these settlements. They and their families depend almost entirely on the sea for both subsistence and cash income. In the Philippines as a whole, fish is second only to rice as an important staple in the diet.[5]

The marine community that features is this case study has economic and social characteristics typical of many others in the Philippines. Livelihoods are highly dependent on fishing, there is excessive overfishing, the human population is growing, there is coastal pollution, and large craft from distant areas are making incursions into coastal waters. Because of the reduction in catches relative to effort there is also resort to illegal blasting and poisoning techniques in fishing. The possibility of total collapse of the fishery resource at local level is well recognised. Assistance in the past has aimed at improved technology, such as better engines for boats. Now it is recognised that vastly reduced fishing

effort is required. However, this solution would also entail a collapse of the community into dire poverty.

Life in most such fishing communities is precarious. Fishing as a source of income is always unpredictable; thus, amongst fishers and their families it is difficult to plan money-related activities. People live on what they have on a daily basis. At times a good fish catch provides an economic bonanza that lasts for weeks, but such occasions are few and far between. Most of the time catches pay only for daily expenses such as food and gas for cooking. What little is left is set aside to pay for school fees and other contingencies. Other less urgent needs have to wait. When sickness strikes, what little money has been saved is easily exhausted and the ritual of asking for help from friends, relatives and often local politicians is set in train.

While economic insecurity seems prevalent among all people living in these fishing communities, the most economically disadvantaged are fishing families who do not have their own boats and rent their labour to boat owners. While boat owners can go fishing any time, those who have no boat are dependent on the boat owners. In addition, those whose boats are not equipped with an outboard motor (*sangwanan*) suffer in equal degree as they can only fish in certain spots not far from the shore. The size of the boats limits their range and consequently opportunities to explore richer fishing grounds farther away. This considerably affects their income since they fish in areas that are mostly heavily exploited already and therefore relatively unproductive.

However, having a mechanised boat does not translate automatically into a better income. The high price of fuel and the competition posed by industrial seine net fishing vessels from urban ports, as well as foreign ships, prevent many fishers from exploiting the richer marine resources of the surrounding seas. While national legislation, in the form of the Philippine Fisheries Code of 1998, limits the exploitation of the municipal waters to SSF within a range to 15 km from the shore, its implementation is patchy at best. There really is no organised effort between national and local government to patrol this area to prevent fishing by the large fishing vessels commonly known as *buli-buli*. The competition posed by large foreign and Filipino fishing vessels further reduces the income of SSF. In addition, rampant illegal dynamite and cyanide fishing by the fishers themselves contributes to the degradation of the marine environment and the depletion of fish stocks, which in turn affects the volume and quality of catch. On average a fishing family has an income of PHP2,000–3,000 (£35–50) per month. This is a generous estimate; during the lean months from September until January when fishing is dangerous because of strong winds, fast currents and torrential rain, incomes are much lower.

In addition to economic insecurity, land tenancy is also a major concern among the people from fishing communities. Most families squat on private lands which are owned by ruling political elites. The most attractive of these

coastal areas tend to be developed for tourist-related facilities. The threat of losing their homes is always a looming dark cloud on the horizon. Aside from their paltry income, the realisation that some day they could be driven off the land makes most people in fishing communities reluctant to build better and stronger houses. A typical fishing family's house is built from wood and galvanised iron salvaged from the shore. While some houses are built from concrete, many still resemble a lean-to. The houses are usually on stilts, with a basement where people keep some of their bulky fishing gear or maintain limited numbers of poultry or a crude pigpen. Keeping animals provides extra income, an insurance against unforeseen expenses such as medical bills, provided that the poultry and pigs are not stolen or drowned by floods, which are frequent in the last two months of the year.

Most houses are a one-room affair. There are no living rooms, bedrooms or separate kitchen – just one open space where people eat, cook and sleep. There are a small table and chairs in some houses, but most houses do not have any furnishings. They are also devoid of modern conveniences such as running water and a toilet. People have to use communal public toilets which are perpetually dirty, or defecate on the shore at night during low tide. There is only one public tap in the community and queues are invariably long. Some houses have electricity while others rely on lamps. Appliances are limited to radios and a few television sets. There are no telephone lines, although the use of mobile phones is common, especially among young people.

People normally eat sitting on the floor using their bare hands. The usual fare consists of fried fish and rice, and when people are lucky some meat and boiled or sautéed vegetables. The fish consumed are those that command the lowest price in the market; the most expensive fish are sold. It is not unusual for most fishing families to not taste the fruits of their labour. Fishers often comment that they have not eaten red snapper for years. These are fish for the rich and therefore not suitable for the fishing families. Fishing communities are also very vulnerable to the frequent typhoons. Houses are destroyed and property is lost. Fishers and their families are accustomed to repairing their house every year. It is a ritual of a sort, so no one complains unless there is a total disaster.

These fishing communities are politically weak at both the local and national levels. While poverty should have become a rallying cry for fishers and their families, it is the very reason for their political lethargy. They are easily intimidated by the prospect of explaining themselves at big political meetings. They are also afraid of displeasing local politicians who might perceive their grumblings as a sign of political opposition. Political families wield enormous power, and people who rebel against them are often either excluded from receiving support from the local government – which the political elite often lead – or worse, verbally threatened, physically harmed or killed.

Since people cannot rely on fishing alone, most families do odd jobs to

augment their income. There are many small shops in the community. Women also wash clothes for the affluent families from other communities. Some work as home helps, while grown-up children work in the city. Since the educational attainment of most people is low, few compete in the regular jobs market. If they can travel to an urban port they may find temporary work in fish trading houses whose supply comes from industrial fishing.

The general economic problems including dire poverty, together with tenancy concerns, are further aggravated by the feeling of social marginalisation experienced by people from fishing communities. There is an unspoken belief that fishers and their families are mostly uncouth, illiterate and violent. House break-ins, burglary, gambling, too much drinking, drug addiction and murder are most of the time attributed to people from fishing communities. This is not helped by the fact that more often than not fishing communities have become a magnet for newcomers from other towns. The political realities and vulnerability of SSF communities are underlined by comments by informants in the Philippines made in response to the contents of this chapter (see Box 5.2).

Resistance by Small-Scale Fishers

Elsewhere in South-East Asia there have been a number of serious disturbances involving direct action against the takeover by large urban-based commercial and distant-water vessels. For example, in December 1966 on the west coast of Malaysia fishers made their way in a thousand small boats to Weld Quay in Penang with the intention of burning down the office of the Trawl Owners' Cooperative. The convoy was turned back with promises of controls. It was later reported that trawling had increased, a circumstance replicated elsewhere in the region.[6]

In Indonesia in the 1970s larger trawlers, often operating at night without lights, occasionally rammed smaller boats and damaged or destroyed gill nets and other small-scale gear. Similar incidents have also been reported in Malaysia, Thailand and the Philippines. Faced with a declining resource base and being pushed off their traditional fishing grounds, some SSFs responded with violence. In Malaysia between 1970 and 1973, over 60 boats were sunk and 23 fishers were killed.[7]

From 1980 to 1982 unemployed local fishers in Indonesia took to throwing Molotov cocktails onto trawlers at sea, and there were killings of foreign fishers ashore. Because of this the government of Indonesia eventually banned large trawlers on the north coast of Java, and in the Malacca Straits sector of Indonesian waters. Conner Baily reported that the ban had resulted by 1993 in marked increases in the employment of north Javanese fishers by 150,000 and in the Straits by 100,000. He went on to note that 'Indonesia's trawler ban represents

Box 5.2 Vulnerable small-scale fishers

It could be that owners of big fishing vessels would resist fishing reforms and given the context of local politics, where graft and corruption are rampant, it is not unusual to hear about government projects being aborted to benefit a particular segment of society to the detriment of others. It is in this context that though some marine conservation projects have been successful, a number of these were not, and in other places conservation projects could not be initiated for the reasons cited above. Thus, while other fishing communities find ways to address the depletion of their marine resources, others are still grappling with how to address theirs with local politics, most of the time, getting in the way. This is the case of the fishing community in this study.

And again:

Although many coastal communities had become immune to being battered by strong waves, heavy rains and wind during the typhoon season, nothing prepared many for the destruction made by Typhoon Hainan, considered to be the strongest typhoon to make a landfall. Entire towns and villages were wiped out. Tacloban, a thriving city in the Visayas, was so badly hit that the entire city was almost destroyed. Around 6,000 people were killed, and many of them were from the coastal areas and most probably from fishing families. Again, in this case, fishing communities were the most affected, with most of their houses destroyed and fishing implements damaged or totally wiped out in the aftermath of the storm surge.

Note: The January 2014 estimate for the Philippine fisheries as a whole is the loss of 120,000 small boats. There is also the effect of the disappearance of people in all coastal areas resulting in a taboo against eating those fish that are still being caught, because there are human corpses in the sea.

Source: from the fieldwork of Dr Nelson Turgo, 2014.

one nation's dramatic response to a problem shared by most other countries in South-East Asia.' However, it proved to be only a temporary solution, as trawl fishing increased both there and in other regions. An example of this type of conflict can be found even in the more prosperous economy of the United Kingdom. The small island of Fair Isle situated between Orkney and Shetland has a population of around 70, which is partly dependent on fishing. Every night large industrial trawlers arrive from elsewhere and scoop up as much fish as possible. Such a small community is powerless to prevent this.[8]

Alternative Policies to Create Employment for Local People

The reactions of traditional fishing communities to political neglect have clearly ranged from apathy, as in the case described from the Philippines, to violent opposition to intrusions of rapacious and destructive vessels from other countries. A few governments have used access payments by foreign companies to provide social assistance to the more depressed coastal communities. However, this is unusual: in most cases the income from fishing access payments is at best absorbed into the national economy with few benefits to the traditional communities. At worst the payments are mysteriously reduced when passing through ministries and administrations. More positive measures have also been introduced, under which employment generation is made part of the conditions for obtaining an access licence. This might involve locating processing plants onshore in the area, or the allocation of a percentage of crew positions on the ships to local seafarers. The latter is made difficult because most foreign ships arrive with full crews. Finally there is the alternative outlined in our case study below, in which a small island group has successfully engaged in fishing for a special market which increasingly values high-quality environmentally sound practices in fishing, and has obtained certification from the Marine Stewardship Council (MSC), established as an international organisation to promote such policies.

Employment Creation in the Pacific Islands Region

There have been attempts by small Pacific island communities to link payments for access licences to employment generation. The 22 island states and territories of the Western and Central Pacific Ocean (WCPO) have a combined land area of 550,000 sq km and EEZs of 165,000,000 sq km (see Figure 5.1). The WCPO produces over 2.5 million tonnes of fish per annum with an ex-vessel value of around US$ 4 billion. At any one time there are some 3,000 vessels from 30 or so countries fishing the EEZs and high seas, the principal owners being companies in the People's Republic of China, Taiwan, Japan, South Korea, the Philippines, EU member states and the United States. These vessels catch 90 per cent of the fish caught in this area. They pay around US$80 million in access fees, although over 30 per cent of ships in the West Central region never pay, and elsewhere they do not all make accurate declarations of catches.[9]

The sea has always been dominant in the history, culture and economics of the Pacific region. However, the traditional coral reef fisheries are in decline, accompanied by much habitat degradation. In the past the local communities traditionally managed both reef and sea resources, but this has been eroded in recent years by central planning support for individual enterprises and Western market economic policies. Local experts such as Joeli Veitayaki have

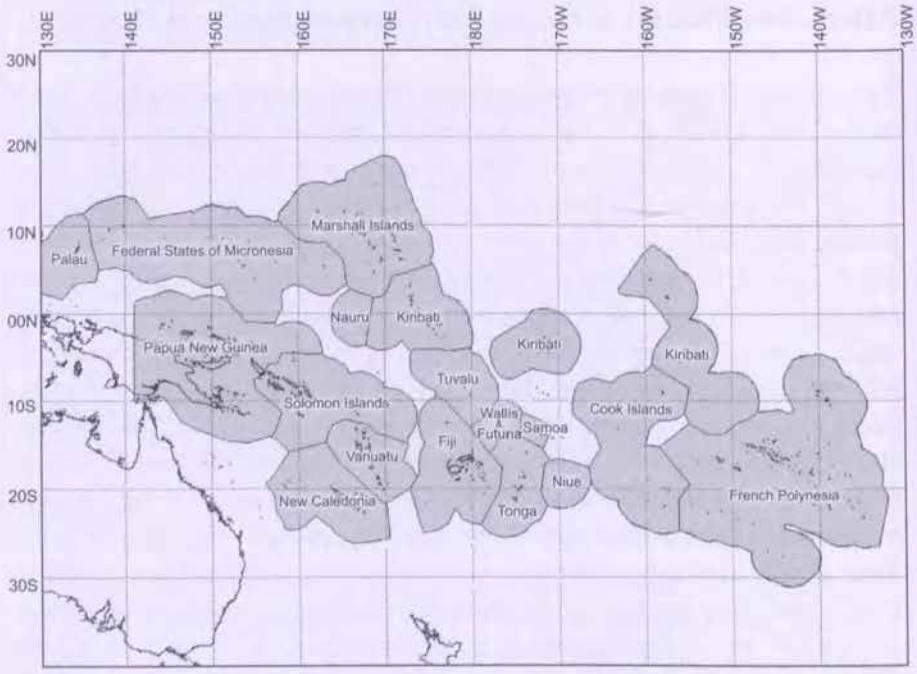


Figure 5.1 EEZs and high seas in the Western and Central Pacific Ocean

The shaded areas are the EEZs with the names of the country that has designated them

Source: A. Willock and I. Cartwright, 'Conservation implications of allocation under the Western and Central Pacific Fisheries Commission', WWF Australia and TRAFFIC Oceania.

made the case for combining both traditional practices and elements of Western methods as the most suitable policy approach for environmental protection and sustainable fishing. He points out:

> Community-based marine resource management is suitable in the Pacific Islands because in most of these communities, the right of individuals is related to the group's overall position. Decisions are based on consensus which ensures the cooperation of everyone in the community. The decision-making procedure is appropriate because the marine resources are collectively owned. Hence, once the community decides on a course of action there is little need for any formal enforcement arrangements.[10]

However, the present trend is not always to acknowledge the value of traditional local management systems for regulating uses and controlling access to reef and near-water fishing. Decentralisation from national to more local levels can help to return some influence to SSF. As in other regions, there are regional variations which demonstrate more general themes. Here are two examples from Papua New Guinea and Kiribati.

Table 5.2 Pacific islander employment in locally based tuna industries on vessels and in onshore facilities, 2008

	Onshore	On vessel
Cook Islands	10	12
Fiji	1,250	150
Federal States of Micronesia	140	25
Kiribati	70	15
Marshall Islands	116	25
Nauru	0	0
Niue	18	0
Palau	20	0
Papua New Guinea	8,550	440
Samoa	40	255
Solomon Islands	826	107
Tokelau	0	0
Tonga	35	45
Tuvalu	10	65
Vanuatu	30	30
Total	11,115	1,169

Source: K.Barclay, 'Impacts of tuna industries on coastal communities in Pacific Island countries', *Marine Policy*, 34(3), pp. 406–13 (2010).

Location of Processing Plants as a Condition of Access in Papua New Guinea

Papua New Guinea (PNG) is the largest of the island states, with a population of 6.3 million and an EEZ of 3 million sq km producing 630,000 tonnes of fish per annum. It has deep pockets of unemployment, especially in urban areas, allied to considerable poverty and public health problems. The income from fishing licences is estimated at US$45 million per annum. Until recently, fish caught in PNG waters was landed for processing at low-cost port hubs in Thailand, the Philippines and elsewhere before marketing. The export value of the PNG-caught fish is estimated at US$760 million per annum, and when processed and marketed it fetches over US$1 billion. This has motivated the PNG government to induce DWFN companies and states to land catches for local processing. This not only creates substantial added value in taxation for the country, it also creates employment ashore and on fishing vessels.

Six plants have been established employing some 10,000 workers. The processing plants and canneries are owned by transnational companies based in the Philippines and Taiwan. These firms consider the locations remote from markets and lacking in economies of scale. From the workers' point of view the work is hard and unskilled, with long hours and low pay. The workforce includes a high proportion of women. This brings social problems through their separation from villages, with the women's domestic work still to be carried

out when they go home. The factories are close to urban centres and the more remote fishing villages do not benefit. Only a few fishers are employed on the boats that bring the fish to the plants.

PNG fishers operating on their own account complain that the migrant fishers chase their boats away from the traditional grounds, and that processing plants pollute the near-shore fisheries. Other disadvantages reported include increased alcohol use and prostitution in places where fish is landed for the plants. However, the government considers that the processing plants and canneries make a welcome addition to gross domestic product (GDP) and provide some relief to the critical level of unemployment at national level, although in 2009 86 per cent of the catch was still being transported overseas for processing, and there was minimal employment at sea.[11]

Requirements for a Percentage of Sea Employment for Access in Kiribati

The islands of Kiribati are small, remote and spatially widely fragmented. They comprise 33 coral atolls and reef islands with a combined population of 93,707 in 2010; a land area of 726 sq km; and an EEZ of 3,550,000 square km. Foreign fleets catch between 80,000 and 500,000 tonnes of tuna each year. The fluctuations are caused by the *El Niño* Southern Oscillation (ENSO) of warm and cool water across the equatorial Pacific. In 2007 the catch was 164,000 tonnes from 337 foreign vessels licensed to fish. Of these 171 were purse seiners which caught 156,938 tonnes, 160 were long liners (6,149 tonnes), and 6 used poles and lines (128 tonnes). The value of the catch was US$234 million. Fees paid to government came to US$25.5 million. This represented 45 per cent of government revenue. As there are insufficient supplies of potable water and land there are no possibilities of building processing plants. The only other marine-related work ashore was stevedoring for about 100 men in transferring catches to reefers at Tarawa.

Access payments from foreign vessels are the main source of government income. Local vessels from Tarawa catch about 7,000 tonnes per annum for sale, and the many subsistence craft in the outer islands catch around a further 15,000 tonnes. With the development of ice manufacture in half of the outer islands, commercial opportunities have increased, but local demand for fish is great, as the per capita consumption of marine resources is the highest in the world.[12]

Employment on foreign vessels has not been significant. This is because the tuna companies frequently charter ships which are already supplied with low-cost migrant workers as crews. There would be few problems in getting local young men to go to sea on these vessels. Kiribati already has a good

record of maintaining maritime employment conditions, having supplied 2,000 merchant seamen to German merchant shipping companies with negotiating powers on wages attested by the ITF. It was one of the first states to ratify the STCW-F Convention. Japan has arranged fishery training in Tarawa and there are 325 I-Kiribati (people from Kiribati) on Japanese fishing vessels, with a further 100–200 on South Korean and Taiwanese vessels. In addition 200–300 fishers are working on other foreign fishing craft in the Pacific. Australia has also produced some funding for fishery training, possibly mainly for observers to accompany the larger foreign-owned vessels.[13]

Vessels of EU member states have been fishing in Kiribati waters since 2003. In 2012 the European Union and the Government of Kiribati entered into a new Fisheries Partnership Agreement. There were attempts in this negotiation to find a model of fairer arrangements for EEZ rents and employment conditions. The new agreement is for three years for ten EU-based vessels to fish 15,000 tonnes per annum. The agreement is for payment of the licence fee to Kiribati to be split between the European Union and the shipowners. Each vessel is to have a mobile transmission unit (MTU) for surveillance, Kiribati observers shall be carried on specified vessels and be treated as officers, and each EU vessel shall undertake to employ at least three Kiribati seafarers, or pay €600 per person. The ILO Declaration of Fundamental Principles and Rights at Work shall apply, and wage conditions for Kiribati seamen shall under no circumstances be below ILO standards. This EU Agreement is an advance on many other arrangements, but commentators in the region consider it is defective as regards conservation measures in protected areas, and in crewing requirements. A typical crew complement of 28 on an EU purse seiner in 2010 comprised 15 EU citizens, ten of other nationalities, two I-Kiribati, and possibly one I-Kiribati observer.[14]

Gender Issues in Pacific Fisheries

In the Pacific in the past, going to sea on fishing vessels was predominantly a male prerogative. In most island societies women carry out essential marine food gathering by gleaning at low tide on reef flats, communal net drives in shallow lagoon waters, and also sometimes in family hand line fishing from canoes inside barrier reefs. The reasons given for this exclusion include the dangers of the ocean beyond the reef, and the dependence of the family on its women members. There are dangers from pulling through the surf, and in Kiribati there are also the dangers of loss of life from vessels being carried away by the Equatorial Current, especially in modern times when vessels without sails suffer engine failure or run out of fuel. Women do predominate in local markets everywhere, and also as wage earners in the new processing plants established in PNG port areas where transhipment takes place.

However in Kiribati, with many young men going to sea in foreign merchant ships, the male status and secrets of ocean fishing have been eroded. While it is very difficult for women to serve on distant-water fishing vessels not least because of lack of suitable accommodation for females, nonetheless changes are coming about, at least in Fiji, with new training facilities and the influence of women's organisations, including the Pacific Women in Maritime Association (PacWIMA). One example is a young (29-year-old) Fijian woman who records that after qualifying from the maritime school in Suva, and working on merchant ships, she 'joined an American jig boat as fishing master/chief officer, catching albacore in the North Pacific and discharging in Ilwaco and Honolulu. I sailed out of Honolulu for another six months on long liners returning in 2002.'[15]

Nonetheless there remains in most Pacific societies a certain ambiguity in relation to gender in maritime employment. The social impact of current changes has brought other difficulties, particularly the rise of commercial prostitution with foreign fishers. *Korakorea* is a term in Kiribati derived from earlier assignations of girls with Korean fishers joining boats off the outer islands. There are also accounts of abductions of very young girls on such occasions in several places.[16]

Traditional Fisheries and the Environmentally Aware Global Market: the Pole and Line Fisheries of the Maldives by Dr Azmath Jaleel

The final theme of the present chapter examines a situation in which the methods of traditional fisheries have been increasingly valued by the global market, in this case based on the local tuna resources and traditional pole and line fishing technology. This account is by Dr Azmath Jaleel, based on fieldwork for the study during 2013.

Pole and line fishing using live bait has been practised for centuries. Gray in 1889[17] referred to the Arab traveller Ibn Battuta's accounts of the importance of tuna to the Maldives during his visits to the islands between 1334 and 1336. There is also anecdotal evidence of tuna fishing as far back as 1153. Until relatively recently it was a small-scale subsistence industry, and tuna was the major – sometimes only – source of animal protein for the island communities, as well as the major provider of employment. The traditional fishing crew was composed of a skipper and about six crew often close relatives and friends. They fished from a *mas dhoni*, a traditional wooden sailboat used exclusively for pole and line fishing. Although the fishery still maintains its close relationship to the island communities, it has become more commercialised, vessel sizes have increased and sails have become almost redundant since the mid-1970s, with the advent of diesel engines.

Today over 98 per cent of the *mas dhonis* are mechanised. There have been three stages in the evolution of these boats, beginning with the first-generation traditional design which was 8–10 m in length with a fishing platform aft which could accommodate about six fishers. The second-generation longer craft had a more efficient transom aft and mechanised water spray systems. Now the third generation of boats have glass-reinforced polymer (GRP) hulls over 30 m in length, space for about 16 fishers on their transom fishing deck, and accommodation space. The fishery now employs around 30 per cent of the workforce, with an economic significance second only to the tourist industry. Although tourism is the chief contributor to GDP, the tuna fishery is the major source of export earnings.[18]

Fishing begins in the early morning hours and usually ends in the late afternoon. Weather permitting it is carried on every day except Friday, which is a public holiday. The fishery consists of two separate components: an inshore reef fishery for live bait, and an offshore tuna fishery. The first stage of the daily routine begins with catching bait, usually just before dawn under natural light, although some fishers start earlier using artificial lights and sometimes divers. Using artificial lights has often caused conflict among competing fishers and resulted in media headlines that describe it as undesirable. The live bait is stored in flooded wells in the vessels ready for use in the tuna fishery. On average, for every 10 kg of tuna caught, 1 kg of bait is used.[19]

The boat then sets off for the tuna fishing grounds, which are sometimes close to the islands, and at other times 20–30 nm or more offshore. Depending on the ocean currents, sea conditions, time of year, foreign fishing activities and the state of the stock, catches range from very good to nothing. Shoals are located visually by the presence of seabirds, other large fish and cetaceans such as dolphins, and the general level of sea surface activity indicating presence of fish. Sometimes floating objects that attract tuna may be frequented by fishers for several consecutive days. Traditionally naked-eye observations were the norm, but today almost all fishing boats have binoculars. More recently, the government has deployed FADs to attract tuna.[20] Catches are generally good in the vicinity of FADs. Often many boats, usually from the same island regions, fish together on the same shoal.

When the boats are fishing, live bait is scooped from the hold and thrown overboard, augmented by a water spray to reduce the quantity of bait needed. This brings the fish to the surface. The fishers stand on the transom platform with long flexible poles and cast their lines with barbless hooks, which enable the fish to be self-released as they are landed aboard the vessel. If the fish are plentiful and biting, the poles are replaced by shorter, stiffer rods about 3 m long, and the fishing continues at a faster rate, with crew members often in a kneeling position. Pole and line fishing virtually eliminates bycatch, making it friendly to other species such as dolphins, sharks, turtles and also to juvenile

fish. When the boat is full or there are no more fish, the trip home begins. The main tuna species caught are skipjack, yellowfin, frigate, kawakawa, dogtooth, bigeye and bullet.[21]

While co-management is not yet practised to a great extent, the government occasionally holds large-scale meetings which include community representatives from all the regions to discuss social, economic and environmental issues, as well as matters directly relating to the fisheries. Fishing has always been community-based, with crews from the same community as the boat owner; and a substantial proportion of the islands' communities are engaged in the industry. Traditionally the catch was brought to the boat's home island and distributed among the crew after a share had been allocated to the boat owner. Some fish were and are consumed locally; the rest are smoked, or smoked and dried, before being sold. The smoking and drying, a laborious and time-consuming process, is carried out by women.

Today, with the development of freezing and canning plants, fish-collecting vessels are deployed in areas where fishing is good at a particular time. In most parts of the country, fishers sell their catches to these vessels on their way back from the fishing grounds, and return home sometimes with just enough for their own consumption, or a few fish to be sold to individuals as soon as they are landed. Fishermen in the vicinity of Malé, the capital island, often bring their catch straight there, to meet the high demand and thus high prices the fresh fish fetch. Sometimes the fish are frozen and then sold in the market. In the modern industry the traditional role of women has diminished, but some are employed in the fish factories.

The fish bought by commercial organisations in the Maldives, both public and private, are generally exported, while some are introduced back into the local market. Skipjack are often cooked, canned or pouched, and exported, mainly to European markets. Bigeye and yellowfin are usually frozen whole and sold to international markets, mainly in Asia. Larger fish are loined. In 2011 exports of fish came to 57,500 tonnes and 63,400 tonnes of fish were consumed locally.[22]

The Ministry of Fisheries and Agriculture manages the fisheries resources, while the Ministry of Trade and Economic Development is responsible for licensing foreign vessels in the EEZ, between 75 and 200 nm from the shore. Initially these licences, which were based on royalties, were issued only for long-line fishing, which was carried out with transponders activated during the boats' operations within the EEZ. However, because of local fishers' complaints about these foreign vessels' use of nets, and their catching large quantities of tuna and accompanying bycatch, the practice has been stopped, so that no foreign vessels now operate legally within the EEZ.

With its nationwide pole and line fishery, totally devoid of purse seining, trawling or similar gear, the Maldives is one of the most environmentally friendly fishing nations in the world, ensuring the filtering out of juveniles

and species other than tuna and thereby totally eliminating bycatch. Further, it is very proactive in its campaign to promote this type of fishery, and takes a leading role in the broader agenda relating to climate change. Though a small nation, it actively participates in the Indian Ocean Tuna Commission (IOTC) in pursuing this agenda. In 2010 it also introduced a ban on the fishing and exporting of sharks. As a result the Maldives was awarded MSC certification in 2012. Showcasing the Maldives as an example to other developing nations Rupert Howes, chief executive of the MSC, stated:

> Assessment against the MSC's sustainability standard is an incredibly rigorous process and I'd personally like to congratulate the MSPEA and the Government of Maldives, as well as the pole-and-line fishers themselves on the successful outcome of the assessment and for choosing the MSC programme to demonstrate the sustainability of this important fishery.[23]

With an MSC-approved label the Maldives tuna on the racks of European supermarkets should be even more attractive to consumers.

Greenpeace also promotes and advocates the purchase of fish caught by environmentally friendly and sustainable means. In the summer 2014 edition of *Greenpeace Connect*[24] it urged consumers to be particular about the tins of tuna they choose. It emphasised the need when purchasing canned fish to prioritise fish caught by pole and line over environmentally unfriendly methods such as purse seine, and also to choose skipjack before other tuna species because they are less exploited than most other tuna. In recent years, over 90,000 tonnes of the pole and line fishery of the Maldives has comprised skipjack. However, it should be noted that some of the tuna exports are canned in third countries in Asia and exported to Europe labelled as 'tuna caught by pole and line in the Maldives'; there is a risk of laundering other fish in such arrangements (see Chapter 8).

It should finally be noted that the sustainability of the tuna fishery was assisted by the Maldives status until the end of 2010 as a 'least developed nation', which enabled it to export to the European Union under preferential import duty terms. The country's recent graduation from this status has removed this privilege.[25] However, the Maldives was able to seamlessly access the EU Generalised System of Tariff Preferences (GSP) system which allowed it to continue preferential access. Unfortunately, citing political reasons, the European Commission has now removed this status.[26] Although this decision has no doubt made access more difficult, the Minister for Fisheries and Agriculture, Dr Shainee, has said that the Maldives will continue exporting to the European Union despite the cancellation of the preferential terms agreement.[27]

Box 5.3 The story of a Maldivian pole and line fisher recorded by Dr Azmath Jaleel

Abdul Sattar Yoosuf, aged 59, the son of a subsistence farmer and a father of six, has been a pole and line fisher throughout his entire working life. Sattar, as he is commonly known among the island community, started fishing at the age of 15 with his friends, has been a fisher for the past 44 years and is the oldest practising fisher on the island of Eydhafushi, which has a population of more than 4,000. While one of Sattar's two sons goes fishing with him, on his own boat, the other works at a nearby tourist resort. Sattar has three brothers who are also fishers, serving as skippers of fishing boats operating from the capital island of Malé.

Sattar recalled the changes since the time he started going out to sea:

> During the early days, on sail vessels, we were at the mercy of the wind. We had to wake up very early in the morning at about 2 to 3 o'clock. When I wake up, I wake my wife up to make some tea and then go around the village knocking on doors to wake up my fishing crews. We had to be by a reef by dawn to catch bait fish and then venture out to the sea by light of day. If there was light or no wind, we were unable to venture out to sea and often returned home empty handed. Yet there were times when fishing was good just off the island, when we returned home as early as 7.30 to 9.30 in the morning, fully loaded.
>
> Sometimes when pole and line tuna fishery was not good, we went trolling for the likes of rainbow runners, mackerel and wahoo or even did reef fishery.

He chuckled and continued, 'With the mechanisation of the vessels, fishing has become very much less arduous. We don't have to wake up as early. We can venture out further and usually return home much earlier as well.' According to Sattar, while they were able to venture out to about 25 miles (about 40 km) in favourable winds, with the mechanisation of vessels 'we now have a range of 50 to 60 miles [80 to 96 km] or even more. So our chances of getting a good catch are much better.' Sattar also explained that bad weather during the North Easterly and South Westerly monsoons prevented fishing for about two months each year, on average.

He recalled the changes to the way the catch is shared. During the time of sailing vessels, 26 per cent of the share was taken for the boat and the rest shared among the skipper and crew. With mechanisation and the subsequent

costs of the operation and maintenance of the engine, only half the catch is now shared between the fishers. Another contrast that Sattar made was the role of women in the fishing industry:

> We used to bring the catch home and the women would boil and smoke/dry the fish for preservation and for export. However, with the development of the industry and the provision of the fish collecting vessels in different parts of the country, today most of the fish are sold to these vessels immediately after the catch and the fish processing at home is no more or very limited at best.

'Fishing is a good profession, with a decent income. I have built a comfortable house and provided for my family and provided education for my children from my work as a fisherman. The fishing boat I own though is a gift to me from my children.' Sattar continued with a sad look, 'The younger generation are not keen to be fishers. Perhaps they want an easier life. Perhaps the burgeoning tourism industry has provided them with better, more attractive opportunities that we did not have.' He went on, 'What is clear though is that an island well known for fishery, which had about 18 fishing vessels with a smaller population than now, has only about four.'

Source: from an interview by Dr Azmath Jaleel, April 2014.

Conclusion

SSF have not benefited much from the acquisition of state sovereignty over the living resources of the EEZ. Many have suffered from the state licensing of foreign vessels and the encroachment of urban-based large craft upon traditional fishing grounds. Unlike the highly mobile industrial sectors, the SSF cannot move to alternative grounds when there is clear depletion of local fish stocks. The solution of marine reserves prohibiting fishing in these coastal areas is also not very feasible. This would allow fish to regenerate, but for the SSF would imply an even more marginal existence, and any significant cutback in their already limited fishing could well spell total disaster. This dilemma exists both in the Philippines and elsewhere. Only the communities that have been able to insist on employment generation supported through licensed interests have been able to make small gains from the EEZ. For many states the attraction of quick and easy income from renting the EEZs with little care for home fishers and development has remained dominant. The exception of the Maldives lies in its focus on quality export markets underpinned by a sustainable fisheries technology.

CHAPTER 6

Destruction and Theft of Fish Stocks

Introduction

The 1980s prospect offered to coastal fishing communities of benefits from controlling the utilisation of fish stocks in their adjacent sea areas was dashed when governments made allocations on a 'grandfather' basis and sold access licences to foreign companies, a policy which favoured big vessels and companies. It was also dashed by vast numbers of vessels illegally plundering the stocks. It is the universal persistence of illegal, unreported and unregulated (IUU) fishing that has run counter to most subsequent attempts to achieve fair national allocations and sustainable management of stocks. This is in numerous ways a feature of fishing in most exclusive economic zones (EEZs) of both developed and developing countries, although especially in the latter, as well as on the high seas. Illegal fishing, which amounts to theft of fish from communities, provides many benefits for vessel owners, and sometimes for skippers, but has detrimental consequences for marine ecosystems, involves destruction of fish stocks, impoverishment of coastal communities, and has grave dangers for the crews of fishing vessels engaged in it. This chapter reviews the known extent of illegal fishing in the principal regions of the world's oceans, and the implications for fisheries and fishing communities.

Illegal fishing may be defined as the operation of unlicensed craft, either national or foreign, fishing in contravention of national, regional and international fisheries regulations. It includes catching over-quota fish, catching proscribed species, violating closed areas and seasons, and using prohibited or otherwise illegal gear. Unreported catches involve the suppression and misreporting of species and quantities of fish, although it is worth pointing out that for artisanal fishing in many developing countries this is simply the result of the lack of administrative means for recording landings at thousands of locations remote from government fisheries offices. Unregulated catches include those made by vessels able to ignore the rules of regional fisheries management organisations (RFMO) because they use flags of convenience (FOC), flags of other non-compliant states, or are vessels without genuine registration.

It is difficult to accurately quantify IUU fishing as a proportion of catches,

with estimates ranging from US$10 billion to $23.5 billion annually.[1] This represents between 15 and 40 per cent of global fish landings. Because illegal fishing vessels discard bycatch it also means there is a staggering proportion of wasted fish. However, the figures for IUU fishing, albeit approximate, require careful interpretation. To begin with, there are large regional variations (see Figure 6.1). For example, it is likely that West Africa experiences among the worst impacts, with some states effectively losing up to 40 per cent of the catches made in their EEZs. Further, much IUU fishing, especially pelagic fishing on the high seas, is aimed at high-value stocks at the apex of the food chain, which are not readily replaced. The removal of top predators in pelagic fisheries has impacts further down the food chain, for example in the spread of jellyfish in the Norwegian fjords, and the increases in the quantity of krill in the Southern Ocean after the large-scale removal of the whale population, although there is also a danger of commercial overexploitation of the krill. Bottom fishing in turn is likely to severely damage benthos on continental shelves and deep-water seabeds of seamounts underlying the high seas, such as the cold water corals in the North East Atlantic. The human impacts are similarly serious, both for individual fishers engaged in these fisheries by choice, coercion, desperation or ignorance, and for the coastal communities to which they belong.

There is a vast fleet of distant-water fishing nation (DWFN) vessels engaged worldwide in various forms of illegal fishing. The main crimes involved are plundering of fish from the waters of poorer coastal communities, and the destruction of ecological systems on which local people depend. Because of this some coastal communities likewise have to resort to illegal destructive practices to obtain sufficient food and income. Similarly, many local vessels pursue fish across political boundaries and are arrested (see Chapter 8). The scourge of illegal fishing by richer nations has multiple impacts on small-scale fisheries (SSF) and the economies of poor countries. These aspects are examined in this chapter. The methods by which the illegal catches are marketed globally are discussed in Chapter 7.

Illegal, Unreported and Unregulated Practices

The beneficial owners of vessels regularly engaged in IUU fishing are likely to be untraceably hidden behind corporate veils. The craft are often old and not very seaworthy, although fitted with modern gear, and usually registered under FOC. With the exception of the skippers, the crews are generally drawn from poorer areas of low-income countries. The driving forces include combinations and permutations of the greed of the owners; oversupply of fishing vessels, which is in turn partly the result of government subsidies; scarcity of high-value fish because of overfishing; and either no or minimal punishments for owners and abandonment of crews if the vessels are arrested. While the apparent initial

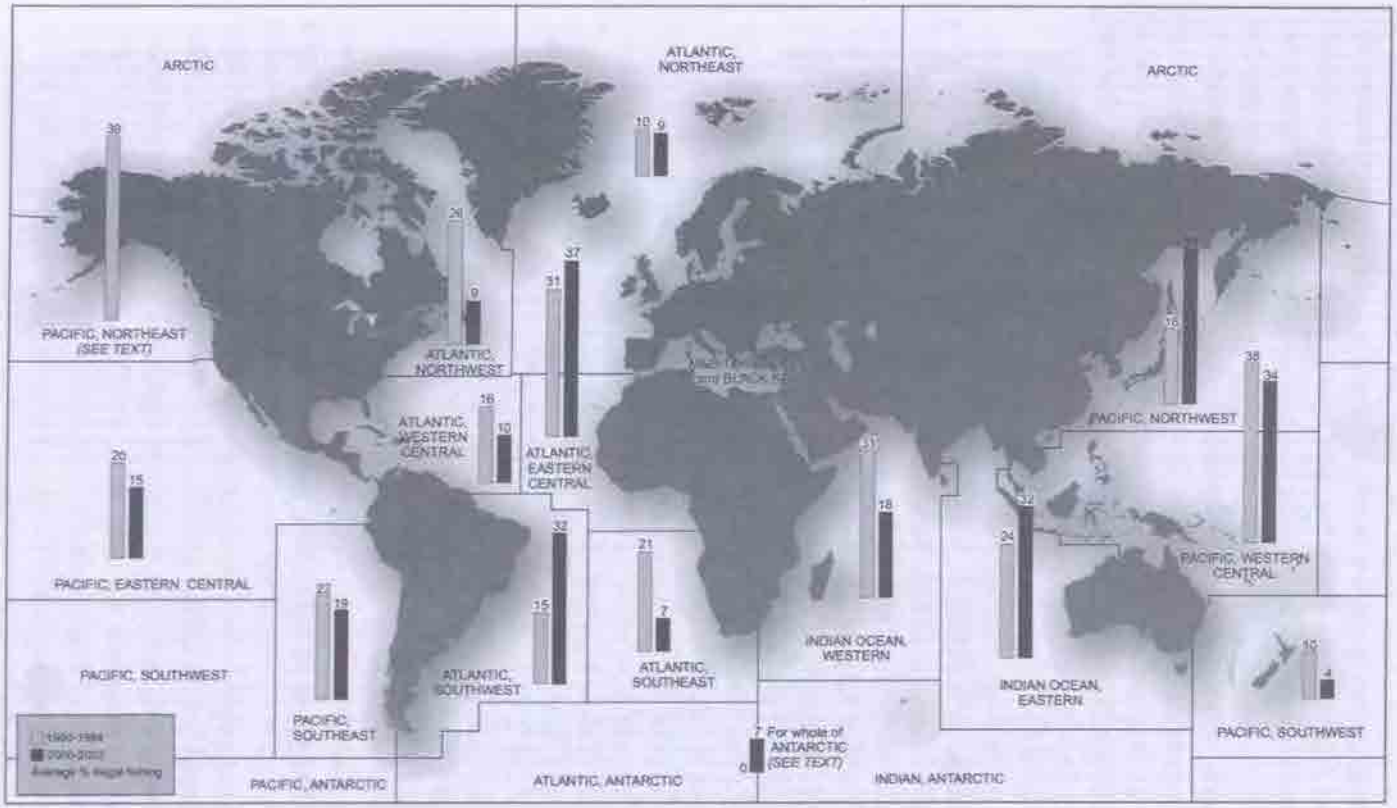


Figure 6.1 Regional patterns of IUU fishing as percentages of total catches

Source: David J. Agnew, John Pearce, Ganapathirajau Pramod, Tom Peatman, Reg Watson, John R. Beddington and Tony J. Pitcher, 'Estimating the worldwide extent of illegal fishing', *PLoS ONE*, 4(2), e4570 (2009).

advantage to fishers is gaining employment, the advantages to the owners include avoidance of licensing fees, catch regulations including quotas, and taxes, together with the reduction of operating costs which comes from employing labour under the lowest possible conditions of wages, work and living expenses. There is no doubt that rising costs, excessive vessel capacity and scarcity of fish are factors driving even owners with new craft into the illegal sector to solve a general problem of their own making at the expense of fishers and poorer communities.

The adverse ecological effects of IUU fishing arise from consistently targeting high-value fish such as bluefin tuna and cod; the pursuit of endangered species, such as the Patagonian toothfish and deep sea orange roughy; and overfishing shellfish, including lobster, shrimp and prawns. Most juvenile and lower-value bycatches are discarded. Economically and socially the impacts of IUU fishing include reduced national incomes for some of the poorest states and lower earnings for legitimate fishers. IUU fishing operators have little ongoing commitment to specific regions, and they do not respect codes governing, for example, the destruction of turtles, cetaceans or seabirds. Long periods at sea involving loss and dumping of nets and other fishing gear contribute to pollution and 'ghost fishing', where drifting nets continue to catch fish, turtles, cetaceans and seabirds for years afterwards.

Many attempts have been made to curtail IUU fishing. In 2001 the FAO introduced an International Plan of Action to Prevent, Deter, and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU).[2] This called for preventive measures by flag, coastal and port states as well as RFMOs and private-sector entities such as fishing companies. Several states have incorporated aspects of IPOA into national legislation, as has the European Union with its Community Action Plan 2002,[3] while in 2008 the United States strengthened the Lacey Act (first introduced in 1900) making it unlawful to land fish that have been illegally caught in American ports.[4]

As is so often the case, the problems lie in the implementation. One of the obstacles to implementation of IPOA and related legislation is the use of FOC by IUU owners. FOC registration is easily obtained, and means that a vessel sighted at sea engaged in illegal activity can quickly have its name and registration changed (flag-hopping) to hamper subsequent identification at a port. For example, the trawler *Ray* had had four changes of name and shifts of flags among Belize, Mongolia, Equatorial Guinea and South Africa before it was finally arrested. Even if the catch of such a vessel is challenged by a complying port authority, the skipper might obtain a certificate from a remote FOC state validating that the fish was legally caught, without the need to submit proof. The port might well have to accept this in the absence of very sound evidence to the contrary. Some owners license a single vessel in their fleet and simultaneously operate several unlicensed vessels using the name and flag of the original ship, laundering the illegal catches of all the others (see Chapter 7).

Many IUU fishing vessels are defective in safety standards and are badly maintained for cheapness of operation, just in case they are arrested and confiscated. This makes the ships even more hazardous for crews at sea, but also means both vessels and crews are likely to be abandoned when arrested in port if the owners cannot be contacted. There are also some new vessels built specifically with FOC in mind; several are 23.9 m in length, thereby avoiding many conventions that apply to craft of 24 m and above. The beneficial owners of most FOC fishing vessels that can be traced are resident mainly in the European Union and Taiwan. In the EU case, half of the companies concerned are located in Spain.[5] Other vessels regularly engaged in illegal fishing have owners in South Korea and China. When they are operating illegally in the EEZs of countries that are poor and politically weak, there is little danger of being arrested. On the other hand, in the waters of South-East Asia there are many states with large local fishing fleets and foreign joint ventures. EEZs are commonly subject to competing national claims, and there are many arrests of vessels and crews (see Chapter 8).

Fishing vessels are subject to the Law of the Sea which aims at balancing the principle of freedom of the sea with the principle of state sovereignty over specific sea areas and resources. Fishing vessels have freedom of navigation on the high seas and in the EEZs which for purposes of navigation are high seas. They also have navigational rights of innocent passage in the territorial sea and in straits and archipelagos. They are not allowed to fish in these zones other than by agreements with the coastal states. They have freedom to fish in the high seas but, as discussed in Chapter 4 may come under regional agreements. When it comes to jurisdiction on board this is governed by the flag state, other than when the vessel is in violation of specific laws. In the case of illegal fishing the coastal state can intercept a vessel if it is engaged in fishing without a licence, or is considered to have been fishing, based on evidence such as wet gear on board, or even if it appears that there is an intention to fish. On these occasions, if the vessel is fast enough, the skipper can decide to 'make a run for it' into an adjacent national zone or the high seas. The patrol boat then has the right of 'hot pursuit' across maritime boundaries, including the contiguous zone adjacent to the high seas, and may fire warning shots. Some vessels stop and try to repel boarders. On all such occasions, both before and after arrests, fishers are in danger from violence and imprisonment, most notably in South-East Asia (see Chapter 8).

Theft of Fish from Small-Scale Coastal Fishing Communities

West Africa and the Atlantic East Central

The chances of interception of the thousands of ships illegally fishing worldwide are minimal, and the punishment if caught is minor. The loss of the value of

fish they steal from the EEZs of typically underdeveloped states is disastrous for the coastal state (and its gain is enormously profitable for a rogue vessel). The Environmental Justice Foundation (EJF) calculates that for sub-Saharan Africa the total value of illegally caught fish is approximately $1 billion per annum. Sierra Leone alone has been losing $29 million each year. The fleets of these ships are vast. For example, EJF and Greenpeace monitored the sea area of Guinea-Conakry over a two-week period. Out of 104 vessels fishing there, they established that 53 were either engaged in, or linked to, IUU fishing activities.[6]

Most illegal vessels hide their identities and resist investigation. Nevertheless, NGOs active in Africa can sometimes succeed in forcing exposures. For example 'On 19th October 2008 the bottom trawler *Puyu 6002* flagged to China, was illegally fishing in Sierra Leone approximately 1nm from the shore.' During the course of these illegal activities the *Puyu 6002* also ran through and destroyed 900 yards of net, lines and floats owned by a local fisher. This gear had a value of US$5,550. In a country where most of the population earn less than $1 a day this was ruinous, while the chances of recompense were zero. Even to make a claim would involve the fisher travelling to the capital to launch legal proceedings. After completing complex forms and presenting evidence the case would eventually be returned to the region of occurrence for investigation and consideration. The probability of the arrest of the vessel, even if no corruption was involved, and there was no change of registry, is low. In this case the fisher was simply told to 'await news'.[7]

Illegal fishing can also involve child labour. A particularly unsafe practice is the use of a large mother ship with a deck-house wooden structure capable of accommodating over 200 persons, but in atrocious conditions. These ships use a convoy of small canoes, each crewed by five or so boys aged between 14 and 16. They are engaged in illegal line fishing along African coasts and unload alongside the ships, where they stay the night in the deck house and fish holds. The vessels observed in the combined EJF and Greenpeace investigation included the *Five Star* and the *Marcia 707*. The investigators reported from boarding the *Marcia*, 'The young boys related how they had been picked up by the South Korean vessel in Senegal and were forced to work on board for three months at a time.' The illegal fishing in African waters in these and other ways is repeated in Asian waters, the Indian Ocean, the Pacific and the Southern Ocean. Several of these sea areas are massively overexploited, local people are being robbed, and fishers on the vessels are terribly abused (see also Chapter 10).[8]

The Indian Ocean

On the coasts of India there are widely dispersed settlements providing homes for about 6 million fisher folk and extending over nearly 5,000 nm. Overfishing, high discards and illegal fishing are prevalent. Some measure of the

extent of these may be seen from Figure 6.2, which shows the average numbers of arrests on an annual basis of vessels in the nationally claimed waters of India, Bangladesh, Pakistan and Sri Lanka for mutual 'illegal' fishing as reported by India. Also shown are the average numbers of other foreign vessels arrested in India for illegal fishing each year. This is merely an indicator of uncontrolled and difficult to assess situations in the Indian Ocean EEZ fisheries. The figure is also relevant to the discussion in Chapter 8 on boundary disputes between Pakistan, India and Sri Lanka. There are in addition many vessels from elsewhere in Asia and Europe engaged in illegal fishing in EEZs in the wider Indian Ocean. They particularly target the small island regions, including the reef fish of the Andaman and Nicobar Islands, and follow the shark fin mass slaughter fisheries in many areas.[9]

The serious situations of several small communities have been observed from fieldwork. There are many fisheries along the coasts of East Africa, adjacent to the Western Indian Ocean, where there are a number of coastal and island states with adjacent EEZs. Fleets of small vessels and coastal populations with high dependence on fish as a principal source of protein are typical. Offshore, there are migrations of straddling stocks through EEZs northwards from South African waters, through the seas off Mozambique, Madagascar, Tanzania, Kenya, Somalia and the Comoros, then eastwards towards the Maldives, returning westwards towards the Seychelles and southwards to the Straits of Madagascar (Figure 6.3). It is in these areas that over decades thousands of foreign vessels from France, Spain and several East Asian states have engaged in both legal and illegal fishing. Some unload at canneries in Port Victoria in the Seychelles, while others freeze catches on board for local markets.

After the start of the civil war in Somalia in 1991 there were some 700 foreign vessels operating in the rich fishing grounds offshore, taking advantage of effectively open access fishing for lobster, shark and tuna. Further south on the Madagascar Ridge, starting in 1998 the deep-water orange roughy stock was illegally plundered to near-extinction within two years by concentrations of up to 40 foreign trawlers at a time.[10]

In addition to the foreign fleets there are, in aggregate, some 400,000 fishers in the East African Western Indian Ocean sector, mainly resident in coastal villages. The pressure is such that they too are involved in illegal fishing. Among the SSFs dynamiting has become a common method of catching fish, with explosives supplied to fishers by resident criminal gangs. An EU-assisted project in the region is aimed at eliminating the practice through technical assistance and training, but the culture is deeply embedded, with the endemic use of explosives by fishers manipulated by other vested interests. A striking example of the obstacles encountered is based on a personal account by an officer of the Tanzania Fisheries Division working in conjunction with the EU project. He reported in 2012 that there can be '60–100 blasts per day' in his area:

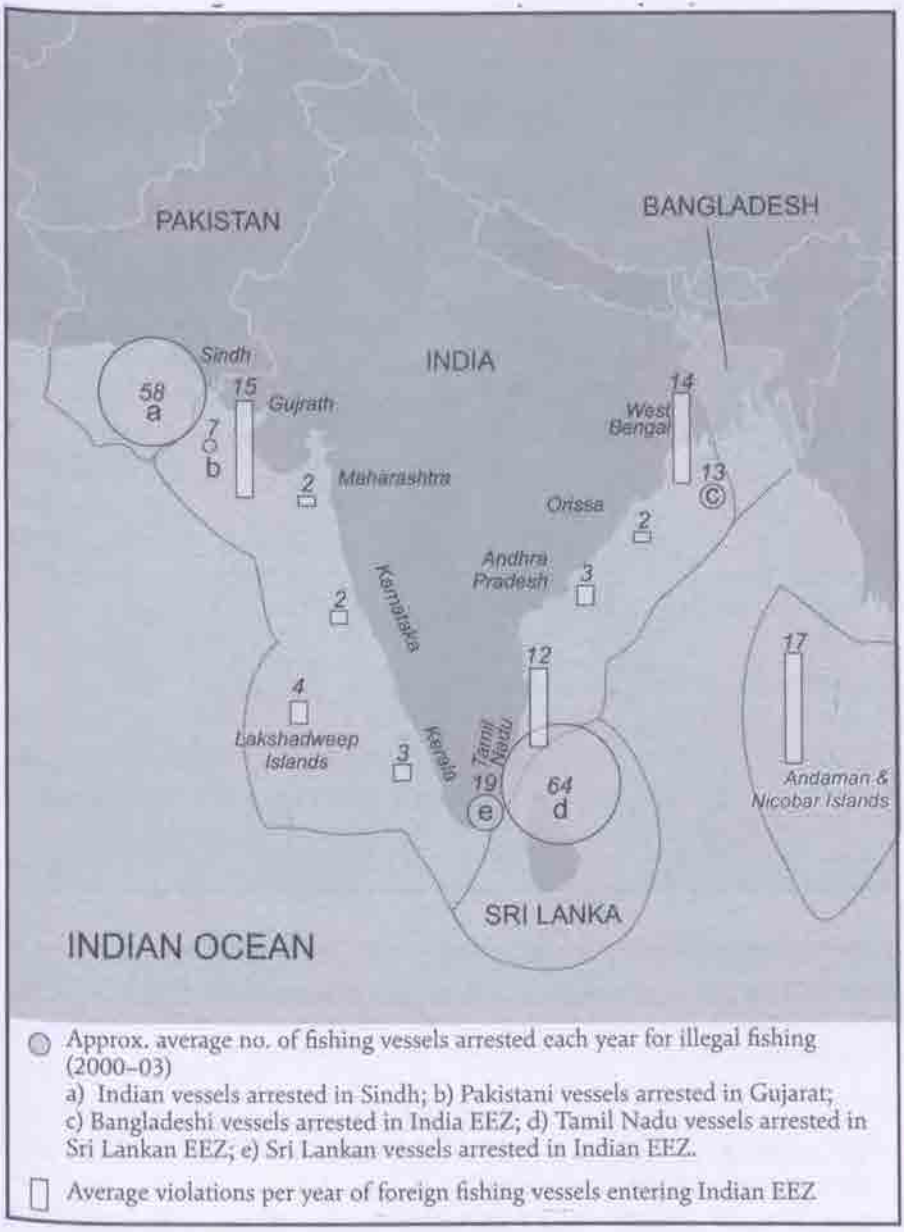


Figure 6.2 Arrests of fishing vessels around India, 2000–03

Source: G. Pramod, 'Illegal, unreported and unregulated marine fish catches in the Indian Exclusive Economic Zone: field report, policy and ecosystem restoration in fisheries', Vancouver, BC: Fisheries Centre, University of British Columbia, 2010, pp. 2–6.

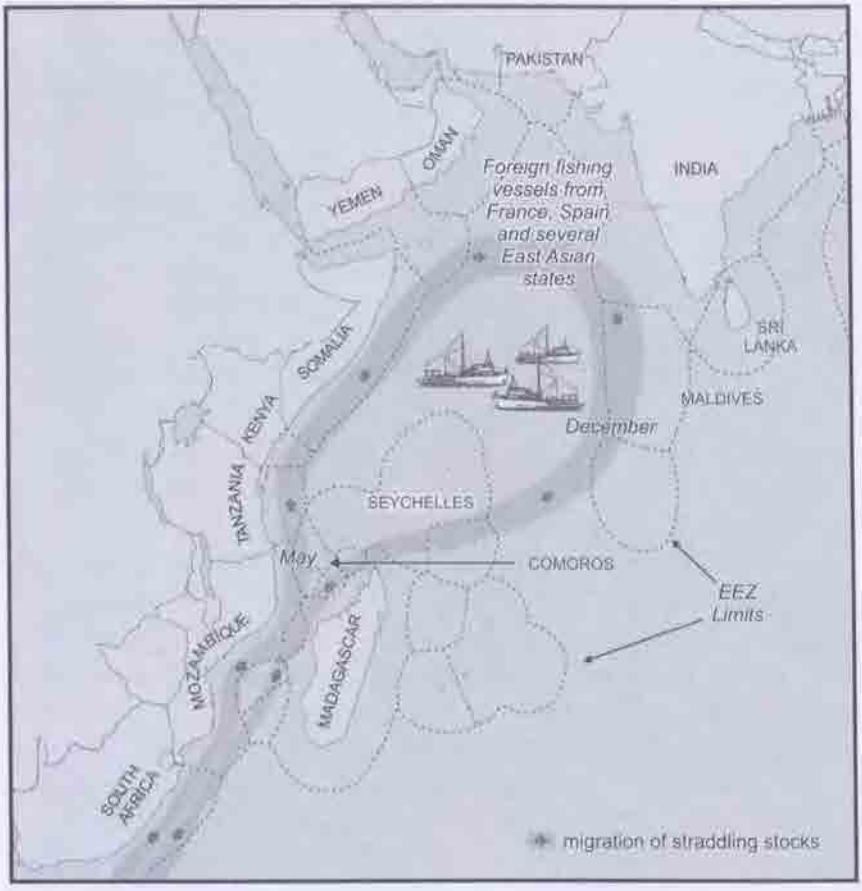


Figure 6.3 Migration of straddling fish stocks in the Indian Ocean

Source: G. Pramod, 'Illegal, unreported and unregulated marine fish catches in the Indian Exclusive Economic Zone: field report, policy and ecosystem restoration in fisheries', Vancouver, BC: Fisheries Centre, University of British Columbia, 2010, pp. 2–6.

> The fishers prefer to go to the coral reefs. One of them will don scuba gear and go underneath the water looking for schools of fish. Then he will come back to the boat, prepare, light and throw dynamite right into the school of fish. He will wait five or six minutes, go back down and collect what is there. But the estimated amount he can collect is only about 20 percent of the fish killed.

There is an obvious consequential decline in fish stocks accompanied by destruction of the coral reefs. The officer said that the 'fishermen are just poor people'; only those providing the dynamite make a profit. He also pointed out that 'Tanzania has good Laws, Acts and Regulations'. However, very few prosecutions for dynamiting take place. Only he has been punished for his conservation attempts: acid was thrown in his face. He lost an eye, and his ear is damaged,

as are his mouth and chest. He said that he had 'suffered four operations at Mahimbile National Hospital. I didn't expect such a thing to happen.' There have been no arrests. The EU consultant who had been working on the project wrote, 'Once our expedition officially ended, the dynamiting once more started, almost immediately, and continued as before.' The injured fishery officer added, 'If we are serious we must educate the village leaders, as the leaders of wards, districts and regions. And the courts have to uphold the law.' Clearly, foreign fishing vessels are not the only problem for the fishing communities. There is either an inability to enforce the regulations or collusion to prevent enforcement, and it is also clear that corruption lies at the bottom of problems related to dynamiting by groups of locals who go unpunished.

In September 2014 the BBC correspondent Gladys Njoroge reported that although there were now arrests for blast fishing, a legitimate fisher said, 'When they are arrested they bribe and come back, and if they find out you reported them they mark you and threaten to hurl explosives on your boat, so sometimes we are scared to report them.' A former dynamite fisher who now campaigns against the practice showed the reporter how he lost both hands in an accident with dynamite.[11]

This case has caused outrage and has been the subject of an online campaign by Avaaz (in 2013)[12] against the use of dynamite and the impoverishment of environment and people in Tanzania. Several of the observations of the above events were given prominence by Avaaz.

The Pacific Ocean Regions

In the Pacific Islands region fishing is carried on both under licence and illegally in the vast EEZs of the islands (Kiribati, for example has an EEZ of 3.3 million sq km compared with a land area of 811 sq km) as well as on the high seas beyond, by large vessels belonging to fleets owned in the People's Republic of China (PRC), Taiwan, Japan, South Korea, the United States, and EU member states such as Spain. Local fishing is by smaller craft. In the Eastern Pacific, which is managed in part by IATTC, particular concern has been expressed regarding the EEZ of Easter Island (Rapa Nui), where there is substantial illegal fishing by vessels from the PRC, Japan and Spain, supported in this remote location by supply ships, tankers and reefers.[13]

There are great difficulties in checking the legality of foreign catches in the vast area of the Pacific. Catches are not reported accurately, if at all. Even some legal catches under licence fall into an illegal category because of bribery and corruption in obtaining the licences. Hanich and Tsamenyi note that:

> corruption in the fisheries sector in the Pacific island region is widely believed

> to be widespread, especially in licensing access agreements and monitoring and inspection, and within these areas corruption practices occur at both official and ministerial levels of government and involve both domestic and foreign operators.[14]

IUU fishing for endangered species is particularly widespread in the open Pacific Ocean. In the Eastern Pacific, for example, illegal catching of dolphins is a major concern. This is a protected species in Peru but at least 20,000 are harpooned every year for meat, and as bait for the shark-finning trade. Dolphin are also caught as bycatch in purse seine tuna fishing, for example off the Mexican coast. The United States has embargoed tuna imports unless they can be certified as 'dolphin safe'.[15]

Another important single-species fishery is for sharks, which are extensively caught for the shark-finning trade of the East Asian market, as well as providing bycatch in other fisheries. There is worldwide concern regarding the ecological status of a number of major shark species. A good example concerns the shark stocks in the extreme east of the Indian Ocean, in the Timor Sea. The fishing grounds extend over a sea region from India to Australia, East Timor and Papua New Guinea (PNG). Once the sharks are caught, the fins are cut off and the remainder of the carcase is dumped. The frozen fins are then sent to markets in PRC, Taiwan, Japan, South Korea and Singapore.

The shark fishery is operated by both criminal syndicates and Indonesian fishers spurred by poverty and willing to take the risk, as it is a highly profitable business. Australian authorities reported that from May 2004 to May 2005, there were between 750 and 950 foreign boats with a complement of 3,900 fishers in northern Australian waters,[16] although not all would have been engaged in shark fishing. On 12 August 2006 some 1,600 Indonesian illegal fishers were deported. According to a report the Australian ambassador to Indonesia said they were provided with clothing and flown home.[17] Farther east, in the waters around Palau in the Western Pacific, in December 2011 the Greenpeace ship *Esperanza* and the Palauan patrol boat *President H.I* managed to catch the Taiwanese long-line boat *Sheng Chi Hui No 7* shark fishing in the Palauan shark sanctuary. In such cases it is invariably the fishers that suffer, and they are often abandoned when the vessel owners or syndicates cannot be traced[18] (see Chapter 7).

The Southern Ocean

From the point of view of fisheries resources, the Southern Ocean is unique in that its ecosystem is fundamentally different from the rest of the world's oceans. Despite its remoteness from the industrial heartlands of the Northern Hemisphere and its vast size, its ecosystem was fundamentally altered by human

activity in the shape of the large-scale removal of its whale population between the first and sixth decades of the 20th century. As already noted, this undoubtedly led to a greater abundance of krill, a species of zooplankton which is now targeted to a limited extent in fisheries.

Of immediate importance for IUU fishing are the relatively small fish populations which congregate around the group of oceanic islands in the region, as well as the southern extremities of the Patagonian continental shelf. This includes the Patagonian toothfish, a fish with a life span of 50 years and a slow reproduction rate, spawning from the age of 16 years, and which is a high-priced delicacy in Japanese, American and European markets, where it is marketed as Chilean sea bass. It has thus been a target for long-line vessels from many countries. As long ago as 1996–97, for example, some 2,000 tonnes were being caught, with an estimated 300,000 seabirds dying as a result of entanglement in the long lines. Fisheries management in the Southern Ocean is primarily coordinated by the Commission for the Conservation of Antarctic Living Marine Resources (CCAMLR), established in 1982 as a component of the Antarctic Treaty System and based in Hobart, Tasmania. CCAMLR operates a system of TACs which, it has been alleged, have been exceeded by up to six times over many years.[19]

Most of the IUU fishing in the Southern Ocean is financed by two or three international syndicates whose chartered vessels fish throughout the season and tranship the catches to reefers for processing and onward transport to markets. The ships are mainly under FOC, and their crews are migrant fishers with skippers from South Korea, Russia, America and Europe. Conditions of living, safety and wages are minimal in a hard and dangerous fishery. When the catcher *Amur* was lost in October 2000, 17 of the crew were drowned. They included Koreans, Peruvians, Indonesians, Chileans, Spaniards and Danes. In 2011 the *Insang No 1* sank with the loss of 22 fishers from Viet Nam, Indonesia and the Philippines. Only one of the Vietnamese fishers was compensated for by a Hanoi-based employment company. It emerged from an inquiry in New Zealand that there were no proper contracts and each of those who were lost had earned in three months only between US$200 and US$1,030.[20] Most recently, in October 2013 the South African Maritime Authority detained seven vessels for illegal fishing in the northern margins of the Southern Ocean. Their catches included prohibited dolphin, sharks and swordfish, which were confiscated, and the captains were arrested in Cape Town. (This case is discussed in Chapter 9.)

Surveillance has improved over recent years, and there have been a number of arrests. This is naturally dependent on the role of Australia which, together with New Zealand, is the most developed country in the region with the best enforcement apparatus. By 2005, for example, nine vessels had their catches and gear confiscated, and eight of the nine skippers were fined – the ninth, a Russian captain, had died while awaiting trial after mistakenly drinking cleaning fluid. The most spectacular case, however, occurred between

mid-August and early October 2003, in the hot pursuit by the Australian patrol vessel *Southern Supporter* of the Uruguayan-registered *Viarsa 1*, sighted originally in the vicinity of Heard Island and the McDonald Islands and said to be bound for Montevideo. This vessel was chased for a record 3,900 nm before being brought into Fremantle. Eight weeks passed between the first sighting and the arrest of the ship and crew on 3 October.[21]

The Mediterranean

In this semi-enclosed sea the principal commercial target is the Eastern Atlantic bluefin tuna, which can command over US$100,000 per mature fish in the Japanese sushi market. The tuna migrate from the Atlantic through the Strait of Gibraltar to spawn in the warmer salty waters of the Mediterranean. They have been the mainstay of coastal fishing communities since ancient times, caught using lines and nets, and especially in bays with a traditional La Tannora trap system used in Sicily, Sardinia, and elsewhere.

There are now vast fleets of Mediterranean, EU, Turkish and distant-water vessels, including the flags of China (Fu Yuan fleet), Korea and many FOC ships of unknown owners. Some fleets are guided by spotter planes linked to the ships through GPS. These vessels have sonar and massive sophisticated seine nets each capable of containing up to 3,000 fish. There are still many small local boats, several of which use illegal drift nets to ensure adequate catches from a declining stock.

Fishing is carried out within mainly nationally claimed areas by both local and foreign ships. Many vessels also fish along the North African coast illegally, or after making access payments to governments including those of Algeria, Libya, Egypt and Tunisia. Overfishing is rife and has been made more profitable since about 1998 with the introduction of ranching. This involves fleets catching juvenile and baby bluefin tuna, then concentrating them in vast cage nets capable of holding 150 tons of fish. These are towed to ranching pens in different countries for fattening over two years before being killed by shots to the heads, frozen, and airlifted to major markets. There are over 60 such pens in the Mediterranean with a combined capacity at any one time of over 60,000 fish.[22]

Tuna cannot breed in the holding pens, and the figures show that greater quantities are sold from the pens than were officially declared by vessels contributing to these stocks. This indicates that considerably fewer tuna are being declared than are actually caught. It is also observable in the Tokyo market that over time smaller-sized tuna have become prevalent. The bluefin tuna stock is undoubtedly diminishing and could ultimately collapse. The tuna industry also impacts on other fisheries such as the hake caught by local people for food and

onward sale. The overall deterioration of stock is partly because of the catching of small pelagic fish for tuna bait and to feed the farmed tuna, which require about 10 kg of fish food to increase their weight by 1 kg. EU companies deny that there is a lack of controlled tuna management, but other observers in the industry say it is 'riddled with fraud, negligence and criminal misconduct'. At the same time there are experiments being conducted in hatching from eggs in crates to restock, but these are at an early stage.

North-East Atlantic

The remote northern sector of this region is one of the few areas of the world where illegal fishing has been removed in recent years. Illegal catches ran at between 100,000 and 200,000 tonnes per annum until 2010, when the Norwegian and Russian authorities acquired the ability to control the threat effectively. They did so through satellite tracking and interception. In comparison with the Atlantic North-West, where in the Canadian sector the cod has virtually disappeared, the North-East Barents Sea has one of the few international healthy stocks from good management.[23]

There is a negative contrast also with the highly populated North Sea sector of the region, where cheating in pelagic fishing in particular has been prevalent for decades. An example drawn from the Scottish fishery shows infringements of quotas ranging from minor to major scales. In the case of smaller demersal boats, skipper owners land excessive catches during the night at harbours where the fishing inspector is off duty; there are always buyers who will come and purchase a few boxes. In a somewhat bigger landing place a buyer described how he arranged for a telescope to observe the fishing officer's home in the early morning while the boats unloaded the illegal catches. Another buyer of illegal fish recalled that the fishing officers were well aware of cheating 'but they were never effective as we were always ahead of the game'.[24] These practices were often regarded in the fishing communities of North-East Scotland as 'harmless crimes' which were probably factored in when determining sustainable maximum allowable catches. It is a different matter when cheating takes place on a massive scale. In Scotland it has proved possible for home-based pelagic fishing vessels to land illegally large quantities of fish caught in national or adjacent EEZs. The most graphic recent examples relate to the Scottish herring and mackerel fisheries up to 2005, and draw on cases heard in the High Court in Glasgow.

The illegal landings were based on a conspiracy between skipper-owned companies, buyers and processors engaged in the herring and mackerel fisheries, which are concentrated in Lerwick, Peterhead and Fraserburgh. Landings made in the processing plants located in these ports involved the elaborate

separation of legal and illegal fish through separate conveyor belts coupled with parallel computing systems logging both accurate and false data, and false documentation by buyers at pre-market sales. The landings system was exposed by the Scottish Fisheries Protection Agency through its 'Operation Trawler' in association with the police, who raided the plants concerned, and several skippers were arrested and charged. Seventeen skippers pleaded guilty to catching and landing black fish to the value of £62.8 million over four years – a substantial percentage of the total Scottish herring and mackerel catch over that period. The company was referred to in the press in 2014 as an example of a highly profitable industrial sector involved in an earlier scam, cited in Chapter 5.

In mitigation for illegal fishing it was claimed by the defendants that 'they had inadvertently exceeded the quota of a species as bycatch', that this had been going on for over 20 years, that 'everyone was doing it' and that 'landing was better than throwing back over quota dead fish to the sea'. They said the practice 'brought food ashore and created employment', and in any case it was permitted as 'the authorities knew it was going on, and it was a well-known practice in the industry in most parts of the EU'. However, the judge, Lord Turnbull told the skippers and others that they were 'involved in a cynical and sophisticated scheme which was a deliberate and calculated attempt to evade the quota system'. Furthermore there were processors that did not handle the black fish landings and suffered financially since those that did used their illegally gained profits to bid higher on legal landings. The significance of these cases is not only that the illegal fishing took place on a large scale in a developed country jurisdiction, just as in many of the developing country cases discussed, but that it exposed the shortcomings of a complex fisheries management system – the CFP – where fleet overcapacity had not been sufficiently countered in the long term, and where it had not been possible to properly enforce the TAC regulations. In addition, it is clear that action was not taken until a crisis point was reached.[25]

Earlier in this account the destruction of fish stocks from explosives used in Tanzania was deplored. Equally disastrous methods can be found in the British fisheries. These are technologically more sophisticated, but equally arbitrary in killing all stocks. Katie Gibbons of *The Times* reported from western Scotland, 'Divers working for organised crime groups are using the banned method of electrofishing – where sea creatures are electrically stunned – to bring in hauls worth up to £65,000 a day.' According to the police:

> 600 kilograms of illegally sourced razor clams are shipped each day from Glasgow via Singapore to supply the lucrative Asian shellfish market. It is also a highly dangerous practice .... many divers are of eastern European origin and issues of human trafficking are being investigated.[26]

Conclusions, Actions and Deterrence

This chapter has shown several additional examples of the practices behind the quantification of illegal fishing made by Agnew and his team. These take many forms and are widespread. The major human impacts from illegal practices of foreign vessels fall on the communities of West Africa. In East Africa poverty contributes to the drive to illegal fishing by local communities. Pramod in his work in India pointed to the stress of deteriorating incomes. In 2010 he said that 'Fishermen in all coastal states, as fishers earn half the amount of money that they used to earn 10 years back.'[27] Stealing fish and ignoring rules related to long-term conservation is very significant in these respects and in the impact on the marine biomass.

In the Scottish example the attitude had been that fishing beyond quotas is a 'no harm crime'. This was tolerated until it turned into a massive conspiracy tantamount to the stealing of fish, as in the examples given for the less developed economies. In developed Scotland, however, there was less justification. Over-quota landings still occur periodically.[28] There is also the continued destruction of marine habitats by dynamite and cyanide fishing in inshore tropical waters by desperate people in Africa and Asia, while there is excessive ranching of bluefin tuna for profit, leading to further stock decline. It has been noted by FAO that 'a proposal in 2010 to ban international trade in Atlantic bluefin tuna under the Convention on the International Trade in Endangered Species (CITES) ... was rejected'.[29]

On the other hand, there are successes, such as Russian and Norwegian cooperation to eliminate illegal fishing in the Barents Sea, where despite its geographical remoteness highly efficient satellite technology is used, an option not currently available in many developing regions such as West Africa. However there have been some successes even in that region. In the period from 2010 to 2012 there were 18 South Korean firms caught in 22 cases of illegal fishing in West Africa, although 'Some South Korean fishing vessels left without paying the fines imposed on them by the government of Sierra Leone'.[30] EJF also reported on the consolidated actions of 23 poor fishing communities in Sierra Leone that managed to drive away pirate trawlers from the protected waters close to the shore.

It was reported by Marine Link that the Russian trawler *Oleg Naydenov* was arrested and escorted to the Port of Dakar by Senegal navy vessels during 2014. The same large fishing trawler was observed by the Greenpeace ship in 2010 and again in 2012 when it tried to cover its name and number to evade prosecution. There has been an appeal by African coastal nations for an opinion from the International Tribunal for the Law of the Sea on these cases.[31]

By far the most rigorous actions, with messages of deterrence, have taken

place in Indonesian waters. This country considers it has been losing some US$24.3 billion per annum to illegal fishing. In 2014 there were 5,400 foreign fishing vessels fishing illegally. The bigger ships over 300 GT were detected by the satellite automatic identification system (AIS), but most evaded arrest. When vessels were arrested and came to trial and found guilty they were taken and sunk. Between 2007 and 2012 there were 32 such sinkings of Vietnamese ships. In December 2014 the Maritime Affairs and Fisheries Ministry 'Instructed the Navy to seize 13 illegal fishing vessels from China and Taiwan detected in Indonesian waters', under a policy of deterrence.[32]

Chapter 5 described how local small-scale fishers in Asia by their own volition sank intruding craft, and there were killings of foreign fishers. A method introduced by EJF in West Africa empowers local fishers to a greater degree by supplying them with cameras and giving training on photographing ships plundering their stocks. This irrefutable evidence can be brought to national courts and to the flag states of the offending ships.[33]

CHAPTER 7

Laundering and Marketing Stolen Fish

Introduction

The vast quantities of fish stolen from the poorer countries together with the spoils from exceeding quotas have to be sold in the markets of richer states. To circumvent the law the fish catches have to be laundered. This is done at various stages of the supply chain, which extends from the fish stocks in the sea via the technology of catching (Chapter 2), then transporting to the marketing ports, or processing, and on to wholesaling and retailing on a global scale. While international, regional and national attempts to eliminate illegal fishing have been partly successful through sea patrols and port state inspectorates, these do not (as was shown in Chapter 6) have by any means universal geographical coverage of fishing operations.

There are persistent and effective ways to circumvent both surveillance at sea and port inspections. By far the most successful are the methods of laundering catches taken illegally from both exclusive economic zones (EEZs) and the high seas areas administered by regional fisheries management organisations (RFMOs). The sophisticated techniques employed include 'invisible fleets' at sea and disguising fish species, 'ports of convenience' for diverting over-quota fish to avoid inspection, false documentation, avoidance of flag state jurisdiction by using flags of convenience (FOC), recycling and laundering methods in marketing, and bribery and corruption. This chapter examines the hypocrisy and criminality involved in the supply chains, and the consequences for fish stocks, communities and fishers.

Invisible Fleets and Disguised Species

There are many hundreds of fishing vessels belonging to numerous owners and under different flags which are maintained almost permanently catching fish in the Pacific, Indian and Atlantic Oceans. Catchers of between 300 and 1,000 gross registered tonnage (GRT) are refuelled at sea by fleets of oil tankers, 65 of

which are available at Hawaii, Korea, Singapore and West Africa ports, sailing under a number of flags including those of Singapore, Panama, Russia, Greece and FOC. The catchers discharge their fish at sea on to large reefers of over 3,000 GRT. There are 77 of these available, which carry high-grade tuna to Japan. Of these, 48 are owned by Japanese companies, while others are owned in South Korea (13), Taiwan (11), the People's Republic of China (PRC) (4) and Greece (1). Some 64 are under FOC. A further 123 reefers can collect fish of less specialised grades. All of the reefers can deliver food and fresh water as well as provide services to the tuna catchers, which are also supplied periodically by other ships.[1]

The advantages of this system include the maximising of fishing time for catchers by avoiding unproductive passages to and from distant ports, savings on fuel, and keeping crews on board for as long as possible. Reefers not only load from the catchers which come alongside, the fish are frozen and sometimes processed on board. Both legally and illegally caught fish can be mixed in ways that make them indistinguishable. Nor can the locations of fish be easily identified from documentation. Overall it is a well-organised system shared by groups of independent transnational companies and syndicates.

The scale of operations is graphically illustrated by the five-month itinerary of the 3,000 GRT reefer *Hatsukari* out of its home port of Shimuzu in Japan between 3 March and 8 August 2000 (see Figure 7.1). At that time the ship was owned by a Japanese firm and registered under the Panamanian flag. The master and officers were Japanese and the crew from the Philippines. As shown on the map the ship called at Korea, Taiwan and Singapore to load stores for tuna catchers belonging to or managed by several companies in these states. It made rendezvous with catchers in the Indian Ocean and South Atlantic. The names of nine of these vessels in the South Atlantic were noted by a Greenpeace ship. The *Hatsukari* returned to Shimuzu with high-grade tuna frozen to minus 40 °C for processing and marketing.[2]

The logistics of this sea-based transhipment system are elaborate. Several catchers with full loads link with the mother ship by radio and arrange a series of estimated times of arrival (ETA) for rendezvous at specific positions using a global positioning system (GPS). Radio contact in some places is kept to a minimum if a patrol vessel has been sighted by any ship of the fleet. The rendezvous programmes involve two catchers at a time coming alongside the mother ship, to both port and starboard, for unloading and stowage of the catch aboard the mother ship. Periodically some members of the catchers' crews are relieved. The dire conditions of the crews aboard many of these distant water catchers are considered especially in Chapter 10.

There have been some attempts by port authorities in Japan to separate legal from illegal transhipped consignments of fish. The reefer *Lung Yuin* owned by a company in Taiwan and sailing under the Panamanian flag was inspected on

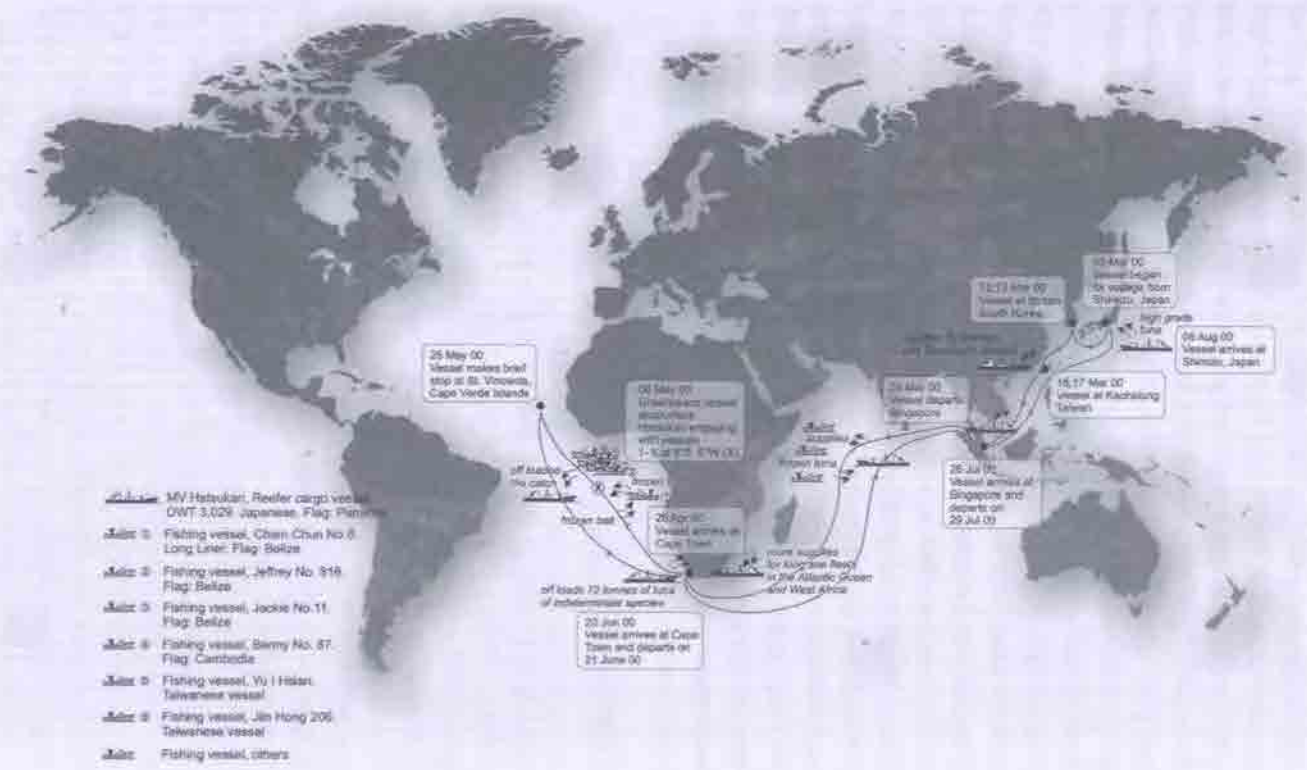


Figure 7.1 Tuna transhipment activities of *MV Hatsukari* in 2000

Source: Matthew Gianni and Walt Simpson, *The Changing Nature of High Seas Fishing: How flags of convenience provide cover for illegal, unreported and unregulated fishing*, Canberra: Australian Department of Agriculture, Fisheries and Forestry, International Transport Workers Federation, and WWF international, 2005, p. 44.

arrival at Shimuzu. The ship was recognised as one with a record of illegal fishing and changes of name. The authorities established that the *Lung Yuin* had loaded tuna in mid-ocean from 28 catchers, but not where it was loaded or where these vessels claimed to have been fishing. The inspectors found two sets of logs, one false and the other true. Similarly the reefer *Suruga No. 1* owned in Japan and also under the Panamanian flag was challenged at Shimuzu. An analysis of the ship's log showed that endangered bluefin tuna from the South Atlantic was logged as having been caught in the Pacific, and that the ship had also loaded in the Mediterranean, possibly picking up a cargo of banned ranched bluefin tuna. All the catches had been mixed and disguised as legally caught.[3]

Apart from invisible fleets, there are opportunities in the supply chain to disguise illegal catches which have entered legitimate trading. High-value and endangered species may be given the name of a low-valued fish until the point of sale, when they are renamed, as are over-quota species. The widespread and continually increasing use of quality control of logistics chains through eco-labelling such as that operated by the Marine Stewardship Council (MSC) and individual countries such as Iceland is able to detect specific fish species being passed off as other species. However, these systems are far from universal, and the sheer scale of the international fish trade militates against ready identification of rogue consignments.

Ports of Convenience

Ports that are likely to inspect the catches and logbooks of vessels can sometimes be avoided. Increasingly a number of ports in Europe, America and Australia in particular are exercising controls over landing illegal catches. These ports may receive 'blacklists' of offending ships from RFMOs, other ports, NGOs and trade unions. However, a port state control network for fisheries of the kind established by the Paris, Tokyo and Vina del Mar Memoranda of Understanding to monitor and hold noncompliant conventional merchant ships has yet to be established.

As an example from one of the world's largest markets, some 6 million containers of frozen fish products pass through US ports each year, but fewer than 3 per cent can be subjected to careful scrutiny. Under such circumstances the Lacey Act, updated in 2008 with severe deterrents for wrongdoing concerning imported fish products, has inevitably to operate largely through fear of the severity of the penalties incurred by breaching it rather than by accurate tracing.

In the European Union the principle of 'cooperative partnerships' adopted in 2002 is aimed at controlling illegal catches through monitoring them in third-country waters. These measures have been accompanied by requirements from the EU Food and Veterinary Office of the Director-General for Health

and Consumers (DG Sanco) that imports of fish to the European Union meet specific hygiene standards. Given the generally substandard conditions of many illegal catchers, the DG Sanco measures should, if applied, help to curtail illegal fish imports into the European Union. One of the several loopholes is to have one ship certified as meeting the standards and use its name for several other vessels that are below these standards.[4]

Compelling examples of circumvention of port regulations related to fish landings come from West African waters. The European Union is the main importer of fish from this region, and there are numerous vessels registered in EU member states fishing there, many of which are sailing under FOC, while other vessels are from Korea, Japan and the PRC. The latter ships appear to be even more involved in illegal fishing than those from the European Union, and some of their catches are destined for EU member states. As noted in Chapter 6, investigations by the Environmental Justice Foundation (EJF) published in 2012 confirmed that 37 per cent of catches from West Africa were illegal, leading to the loss of US$1 billion per annum, all plundered by foreign-owned vessels. The poorest state – Guinea Bissau – suffered the highest loss at US$110 million, with Sierra Leone losing US$29 million and Liberia US$10 million each year in recent decades. These states have little capacity to control vessels fishing close inshore, which increases the pressure on indigenous fishers who are already plagued by civil war and destruction of boats, and exacerbates shortages of food.[5]

The foreign catchers engaged in illegal fishing in West Africa frequently tranship their catches to large reefers at sea. These in turn unload the combined catches at Las Palmas de Gran Canaria under Spanish jurisdiction. There the frozen fish is repackaged, and if they are bound for the European Union, the boxes are labelled with a DG Sanco number to suggest they were legally caught and comply with the hygiene standards for consumption in the EU market. This is far from the case in most instances.

For example the *Apsari-3*, a bottom trawler, was arrested in 2008 after an EJF survey reported the ship to the Sierra Leone fisheries authority as fishing less than 2 nm from the coast with bottom trawling liable to damage both the seabed and the nets and lines of local fishers. The vessel was already well known for illegal fishing, having previously carried the names of *Sung Kyung No. 52* and *Don Won No. 521*. It belonged to a South Korean company which had between 25 and 50 other craft. The officers were Korean and the other 30 or so crew were from Viet Nam, the PRC and Indonesia, together with around eight from Sierra Leone itself. The latter had no contracts, were paid only in packets of 'trash fish' to sell ashore, and slept sharing wooden and cardboard bunks in part of the fish hold. Yet the vessel carried a DG Sanco number attested by the flag state, although it was totally insanitary. The *Apsari-3* was escorted to Freetown by a Sierra Leone naval patrol. There the catch was confiscated and the vessel fined

US$30,000. It had been intended that the cargo of fish would be unloaded at Las Palmas and partly exported to the European Union.[6]

Las Palmas has for decades been the transhipment port of convenience for illegal catchers in West African waters. The port handles some 400,000 tonnes of fish per annum, caught primarily in the EEZs of West Africa (see Chapter 5, Figure 5.3). There are very few inspectors at the port. The free trade status of the port and its open facilities are highly valued by both vessels and the local economy. The determination to retain this facility can be demonstrated by the example of four Korean-flagged catchers reported by the EJF as fishing illegally from January to March 2011 in the inshore zone of Sierra Leone. Their catch was transhipped to the reefer *Seta No. 73*. The EJF alerted the European Commission and forced the Spanish authorities in Las Palmas to hold the *Seta No. 73* for investigation on arrival at the port.

There was both GPS and photographic evidence of the *Seta No. 73*'s activities, as well as official complaints from three West African states that had experienced the activities of *Seta No 73*. The illegal fish were therefore impounded. However, a response on behalf of the foreign fleets between April and May warned local authorities that the Las Palmas-based Korean, Chinese and Japanese fleets would locate to other ports unless assurances were given that seizures of fisheries products would not occur again. Spain ultimately authorised the release of these consignments on 12 July, then on 29 September devolved future authority governing the landing of fish to the Las Palmas Port Authority. This enabled a statement to the effect that 'Spain is not in a position to deny the import of fisheries products where the alleged illegal fishing pertains to breach of national fisheries law', despite Spain having a National Plan of Action against IUU fishing in line with the 2002 EU measure regarding cooperative partnerships noted above.[7]

Laundering Illegal Landings at Legitimate Ports

Port state control authorities have concentrated on safety standards of merchant ships. Port state officers may at major fishing hubs extend this to large fishing vessels. However, as seen in Las Palmas some authorities encourage dubious landings in the interest of port revenue. Even legitimate ports may turn a blind eye to suspect transactions between ship and shore. This was exemplified by the Scottish 'pelagic scam' (see Chapter 6). However, considering the scale of the offences over many years, several people at these legitimate ports were probably complicit in the out-of-quota landings.

It is even more difficult for port authorities that prohibit illegal fish to determine where imports of processed, frozen or canned fish products have their catch origins at sea. The illegal fish might have been loaded onto a mother ship and

combined with legal catches. The vessels might then unload at an intermediate port where the fish is processed before being shipped to a final destination, with the intermediate port shown as the place of origin, and boxes marked 'Caught in the Pacific Ocean' or some such general designation. Pramod and colleagues described how excessive catches of crabs in the Russian Sea Okhotsk Zone are in this way exported to the United States.[8] They showed the catch rate in Russian waters from 2000 through 2010 for every crab caught legally in Russia, 2.6 crabs were caught illegally. The fish were carried from Russian territory to South Korea for processing and from there to China to be repackaged and exported as legitimate crab meat to the United States, avoiding the Lacey restrictions. The authors also described how Russian-caught pollock are caught in excess from the Barents Sea, frozen and unloaded in China for processing, then refrozen and exported as fish from China to the European Union. All of the transactions are accompanied by fake documentation. These fraudulent measures are probably widely used in many regions to 'process out' illegally caught fish. Pramod and colleagues suggested that Russian organised crime gangs were involved.

Flags of Convenience

We have already described how FOC are well established in facilitating illegal fishing. There are approximately 1,200 large fishing vessels under FOC at any one time, and a further 1,600 of unknown registration, which adds up to

Box 7.1 Laundering by reprocessing in China

Chinese reprocessing of seafood products is staggering in its scale, highly complex in its patterns of sourcing, and characterised by lack of transparency and traceability. An absence of species-specific commodity codes for exported products and a growing trade in unspecified frozen fish imports (about 400,000 tonnes in 2006) create problems in identifying and tracking fish products imported into China and processed for re-export.[9] In 2009, around 97 per cent of PRC's total imports of whitefish, salmon and tuna were sourced from ten countries, with 57 per cent of it coming from Russia. Between 70 and 85 per cent of tuna processed in China is of foreign origin. About 90 per cent of seafood exported by the United States to China is reprocessed and exported by China to other countries or re-exported to the United States.[10] Third-country intermediaries (for example, when Chinese products are exported to Canada and then exported from Canada to the United States) also generate problems in the traceability of seafood products from China.

between 15 and 20 per cent of distant water vessels over 24 m in length. There is regular reflagging and renaming of these ships, and the owners are not readily identifiable. The largest known ownership and management of FOC vessels is in the European Union, of which Spanish vessels accounts for over 50 per cent. This is followed by Taiwan, Honduras and Panama. The owners in Honduras and Panama are mainly 'brass plate' companies rather than the genuine owners. The advantage of FOC for hidden owners is that they can avoid all the legal consequences of illegal fishing.[11]

Conclusions

There is nothing wrong logistically with some transhipments at sea. However, from the point of view of the health, safety and well-being of the crews of distant water vessels under current circumstances, the transhipment situation is highly abusive, an issue discussed in detail in Chapter 10. It is the invisibility of the system, including the duality of vessel names, and the disguising of fish species at different stages of marketing, that facilitate illegal catching and lead to the depletion of precarious fish stocks. The ports of convenience practice is also designed to deceive, and launder fish stolen from the coastal waters of poorer countries.

Landing black fish from home state waters in developed countries also shows greed on the part of vessel owners, but it reflects too the irrationality of a system which involves throwing back into the sea vast quantities of dead fish in order to land legally stipulated quotas. Not surprisingly this requirement offends fishers, although it is also used as an excuse for deliberate overfishing. Finally there are also the more understandable acts of deprived communities where people use explosives and poisons to take as much fish as possible as quickly as possible, so they will have adequate supplies of food and income.

The systems of laundering and marketing described above clearly depend on willing international cooperation along the supply chains. It is difficult to trace where fish were caught because the records are often fraudulent, while identification of the companies responsible is generally made difficult by the use of FOC. The complicity of 'ports of convenience' and the bribing of officials at other ports to endorse suspect records also play a part. This all points to international systemic criminality in marketing illegal fish in the interest of high profits, regardless of the effects on fish stocks, legitimate fishers and poorer communities.

An instance of these types of arrangement was highlighted by the International Consortium of Investigative Journalists (ICIJ). It focused on the trade in Mediterranean tuna. The ICIJ observed questionable practices which extend across the whole industry, 'from fishing fleets and farms, through ministry offices to distributors in Japan, led by the French, Spanish and Italians, joined by Turks and others'.[12]

When it comes to the fishers on these vessels, their roles and perceptions are varied. The skippers are clearly complicit in unlicensed fishing of coastal waters, and in areas of the high seas where rules apply. They also falsify records of areas fished and the quantities and species caught. Many of the crew are probably barely aware that they are cogs in the mechanism of international commerce. The system is difficult to comprehend, as it includes vessel owners, brokers, traders, port officials and processors. They will be well aware of the consequences of asking or answering difficult questions, which could lead to their being abandoned in foreign ports, or worse. It is also common for a ship to be held in port under arrest with the whole crew on board, when (as is explained further in Chapter 10) they are treated as criminals. This too dissuades crew from causing difficulties. The example cited from the excellent work of Pramod and his colleagues on the US crab scam should also be seen in the context of the terrible conditions of exploitation of fishers on these illegal crabbing vessels, which are described in Chapter 10.

As far as the marketing of fish illegally caught or caught with destructive gear is concerned, the emergence of a voluntary MSC has resulted in some compliance with sustainable fishing through certified vessels and processors, although this occurs primarily only in the more advanced industrial Western fishing countries.[13]

Part II

The Plight of the Fishers

CHAPTER 8

Arrests of Fishers

Introduction

Fishers have been arrested unfairly and treated badly when a vessel has been caught fishing or landing fish illegally, but their lives have not been endangered very often, nor have many suffered years of detention after it was shown that the owners and skippers were the erroneous or guilty parties. Often they have been able to pay informally and be released. It is a different matter when the vessels have been fishing in areas where there are disputes among states over territorial possessions. In these circumstances, as Bruno Ciceri points out on several occasions, countries 'use fishers as proxies in their ongoing disputes with other countries'.[1]

As well as the disputes over boundaries between coastal states, there are many small islands and drying reefs (that is, reefs that are exposed at low tide) for which ownership is contested by several states. Successful acquisition of these features can endow a state with sovereignty over the living resources of substantial areas of the sea and the minerals of the sea bed, as will be appreciated from Chapter 4, Figure 4.2.

The claims for land areas are outside the purview of UNCLOS 82, but the rules of the Convention apply to the seas around these features. Some such waters have been the traditional high seas fishing grounds of multinational vessels, and the lagoons are natural havens in bad weather. In more recent times there have been a plethora of national claims for these outliers. These claims for territories have been supported by evidence of long usage, ancient manuscripts, maps, accounts of periodic settlements, and even the inheritances from colonial periods. The claims have been reinforced by the presence of patrol vessels or armed shore parties. The claimant states have also ensured that their fishers harvest the stocks in order to substantiate their rights to territory. Each state has in turn tried to prevent others from doing so, as failure to do this could be taken to indicate the abandonment of a claim. Consequently there have been violent confrontations, sinkings of boats, and arrests and killings of fishers. The regions of South-East and East Asia in particular have many ongoing disputes over islands, reefs and shoals, as have areas in the Indian Ocean and Bay of Bengal. The examples that follow are discussed within the broad spatial designations of the FAO, as shown in Chapter 6, Figure 6.1.

Pacific North-West and Pacific Western Central

Several of the disputes in this region have long antecedents. Marwyn Samuels[2] details the perception of the 'Chinese Lake' comprising the whole South China Sea – a key sea route to China – with its internal islands and now bordered by the independent littoral states of Thailand, Indonesia, Singapore, Malaysia, Brunei, Philippines, Viet Nam and Taiwan (Taiwan is not recognised by the People's Republic of China (PRC)). Some of the states currently in dispute over areas in the South China Sea are shown in Table 8.1, and the related overlapping boundary claims are shown in Figure 8.1.

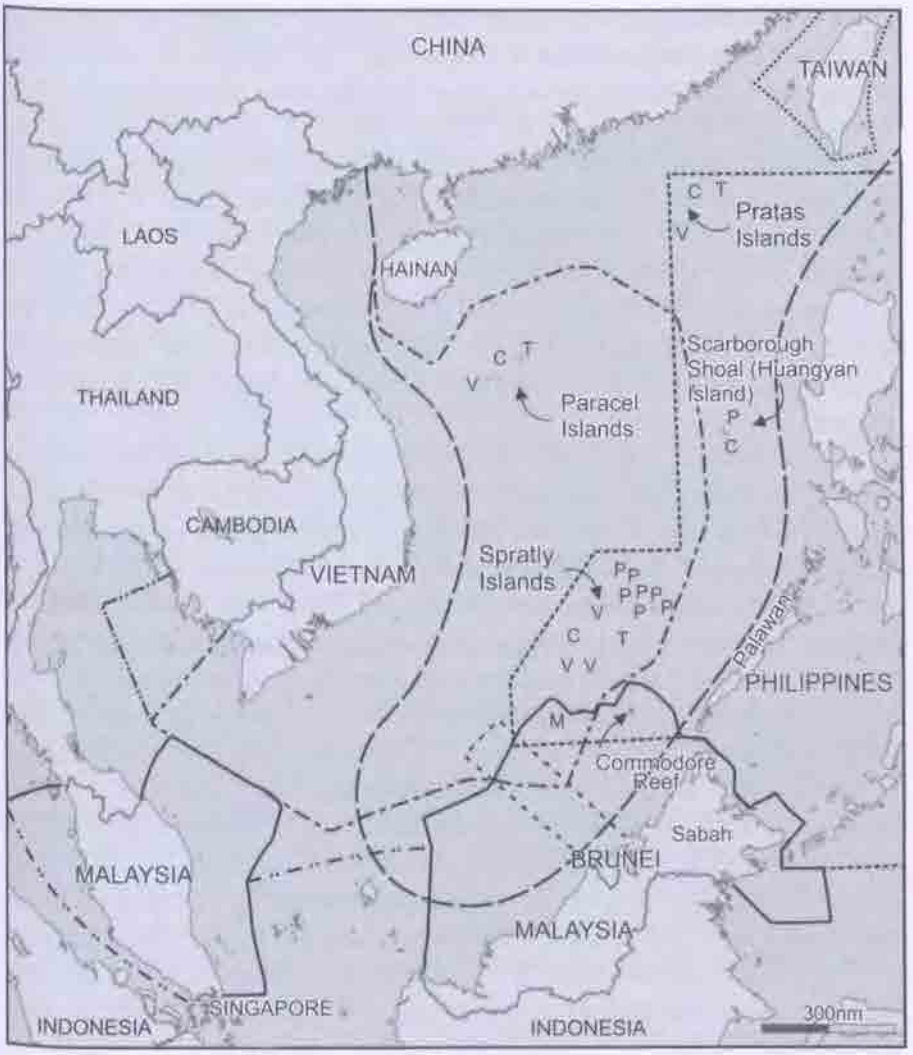
A particularly volatile area has been the archipelago of the Spratly Islands. Even now the charts are not entirely accurate, and are marked 'dangerous area' for the purposes of navigation, although the word 'danger' in this case has other connotations. There are 33 islands, rocks and reefs in an area extending 315 nm north–south and 240 nm east–west. The Philippines claims at least seven islands, Viet Nam four, Taiwan one, and the PRC the whole group, together with most other adjacent islands, based on historic, political, cartographic and legal arguments. The Philippines claims date from 1956, when the fishing company of Thomas Coma occupied the islands with his fleet as 'Kalayaan' (Freedom Land), and in 1978 the islands were officially claimed by President Marcos of the Philippines, although the claim has not been recognised by other states in the region.[3] The battle in the Spratlys over Fiery Cross Reef in 1988 resulted in PRC naval forces sinking three Vietnamese naval ships with the loss of 70 men.[4] This marked the beginning of military action, which has never been far from resurfacing throughout the region.

Also in 1988 tensions increased between the Philippines and Malaysia after the death of one of 48 Filipino fishers arrested on 5 April in a dispute over Commodore Reef, an issue that has caused enduring bitterness as the reef had controversially been claimed by Malaysia in 1963 as an adjunct of Sabah province, and was also disputed by the Philippines at the time. The Filipino fishers were held for four months before a trial, which found them not guilty of illegal fishing, but during this time one fisherman died and the families of all were deprived of income.[5]

Table 8.1 Some conflicting maritime claims in East and South-East Asia

Russia on Japan	China on Philippines
Japan on Taiwan	South Korea on Japan
China on South Korea	Indonesia on Philippines
North Korea on South Korea	Philippines on Malaysia
North Korea on China	Philippines on Palau

Source: lists and media reports of conflicts (see text).



APPROXIMATE TERRITORIAL AND BOUNDARY CLAIMS SINCE 1982

CHINA (C) TAIWAN (T) BRUNEI (B) MALAYSIA (M) PHILIPPINES (P) VIETNAM (V)

INDONESIA (I) CAMBODIA (Ca)

Figure 8.1 Maritime claims in the South China Sea

Source: adapted from NBC, 'Much at stake for US as tensions rise in troubled China Seas', 2012, http://worldnews.nbcnews.com/_news/2012/08/24/13432841-much-at-stake-for-us-as-tensions-rise-in-troubled-china-seas?lite (accessed 12 January 2014), referencing the original sources as US Energy Information Administration, US Department of State, Middlebury College, National Geographic.

At the Scarborough shoal farther north and 180 nm from the Philippines, there have been similar arrests of Filipinos by PRC coastguards, and the rich fishing shoals and the lagoon as a place of refuge were roped off by the PRC forces in April 2012 from all but Chinese fishers. To the north-west of this the mid-sea Paracel Islands have likewise been the scene of several conflicts, including a battle in 1974 between China and Viet Nam. In May 2014 Chinese fishers were arrested by Philippines coastguards near Palawan.[6] As elsewhere strategic as well as hydrocarbon interests were involved. Also in May 2014 a Vietnamese fishing boat was sunk by a Chinese vessel as a Chinese exploration rig was being brought into position.[7] On the other hand, the Pratas Islands closer to the PRC mainland seems now to be acknowledged as Chinese by all parties.

Farther north in the Pacific western-central area there are the seriously disputed Senkaku (Japanese name) and Diaoyu (Chinese name) Islands. Japan and China after ongoing tensions periodically come to partial agreements over fishing in the area, but Taiwanese vessels are excluded from what the Taiwanese regard as traditional fishing grounds. During September 2014 a flotilla of some 40 Taiwanese fishing vessels entered the zone to assert their right to fish. Japanese coastguard vessels used powerful water cannons to drive them away, and a Taiwanese patrol boat replied in this water sea battle in a similar way. Meanwhile, China deployed three patrol vessels in the area disputed by Japan.[8]

In the wider transition zone of the South and East China Seas, between Taiwan and the Philippines, an incident in May 2013 illustrates the violence that can arise in a stretch of water claimed by both countries. The Taiwanese tuna vessel *Kuangta-Hsing No. 28* was engaged in fishing for tuna when the boat was riddled with bullets from a Philippine Coastguard cutter and a 65-year-old fisher was shot dead. Over 50 bullet holes were identified where the crew had taken cover. The incident caused outrage in Taiwan, and there were popular demands for retaliation. No doubt this recalled a similar incident in the same area in 2006 when a Taiwanese captain was killed. There were demonstrations and the Taiwan media expressed outrage, as did many citizens:

> The Philippines see the Taiwanese fishers as easy prey for robbery, ransom and killing and the Taiwanese Government has been living with this shame, like a little country for so many years. There are still Taiwanese fishing boats in the Philippines waiting for the payment of ransom for their release.[9]

A sister of the dead fisher in his home fishing community in Taiwan was more conciliatory, knowing full well that for the ordinary fisher this was another risk that had to be lived with in this region. She said that she would accept an apology because 'the Hong family has felt the sincerity of the Philippine Government', but added that the Hong family wanted a representative

Box 8.1 Detention of fishers

Filipino hand-line fishers are frequently detained by Indonesian authorities for fishing illegally in Indonesian waters. Detention can last from two to six months. Workers interviewed who have been detained there in the past reported that the conditions in detention cells are poor, especially the food. While detained, they have no means of communicating with their family, and they are also unable to support their families financially.

Hand-liners who had been released stated that this happened after they sought the help of the consul in Indonesia. At present, hundreds of Filipinos are still detained in Indonesian jails for illegal fishing.

Several fishers reported that they were not aware that their boat was fishing illegally in Indonesia waters until they were detained. Some reported that the boat owner assured them that the voyage would be legal (either through avoiding Indonesian waters or by registering legally) only to find out that they had been deceived.

A case study: Alex, detained in Indonesia three times

Alex is 37 years old and married with five children. He has been detained three times in Indonesia. He has been a fisher since 1994. In 2000 he was apprehended and detained in Indonesia while working on a fishing boat owned by a General Santos tuna magnate. All 14 workers on his boat were detained for one week. He managed to escape from prison after hearing that he was going to be transferred to a provincial jail and held for three years.

He was detained again in 2002 while working for a vessel owned by a different financier. For the two weeks he was in detention he was barely fed. He was able to escape again.

The final time he was detained was in 2008. Alex had believed this boat to be registered to fish legally in Indonesia. The financier paid fines and the crew was released.

Alex is afraid of being detained again, but feels that he has no other livelihood option.[10]

of a 'certain level' to carry a document of apology to their family home. The Permanent Representative of the Philippines subsequently visited the family and conveyed the apology – which was not accepted by Taiwan, whose fishers argue that they have the right to fish.[11] The political problem for the Philippines in coming to agreements over fishing with neighbouring Taiwan is that the Philippines since 1975 has recognised only one Chinese state, and the PRC would regard any such agreements as de facto recognition of Taiwan. Since the

Philippines has other issues over fishing, hydrocarbons and security with China, it has been reluctant to do this.

As well as violent incidents, there are numerous routine arrests of fishers whose vessels are operating in contested zones (see Table 8.2 and Box 8.1), although the full frequency and numbers of arrests are difficult to officially establish. When arrests occur there can be long periods of investigation, and if fishers are found guilty this can lead to imprisonment of the skipper and possibly the crew of an offending vessel. This action is in violation of UNCLOS 82 Article 73 (see Box 8.2). This occurs frequently in Indonesian waters which contain rich fish stocks. There are 17,508 islands, the waters of which are difficult to monitor, hence the reliance on imprisonment as a deterrent.

Taiwanese skippers also claim they have been intercepted en route to the Indian Ocean by the Indonesian Navy. They carry US dollars with them to pay a release ransom when stopped. Alternatively, the skipper is given an account number and they are held while US$2,000–4,000 is transferred from the owners. It is in effect a random toll in the Indonesian sector of the straits.[12] There are regional negotiations to try to ameliorate these situations, partly through bilateral agreements between states with adjacent territorial waters, and fishermen's wives are noted for campaigning for the release of fishers. However, it is difficult for offshore fishers following the variable migration pattern of tuna to be sure

Box 8.2 Article 73 of UNCLOS 82, confirming that it is not legal to imprison fishers for EEZ violations

1. The coastal State may, in the exercise of its sovereign rights to explore, exploit, conserve and manage the living resources in the Exclusive Economic Zone, take such measures, including boarding, inspection, arrest and judicial proceedings, as may be necessary to ensure compliance with the laws and regulations adopted by it in conformity with this Convention.
2. Arrested vessels and their crews shall be promptly released upon the posting of reasonable bond or other security.
3. Coastal State penalties for violations of fisheries laws and regulations in the Exclusive Economic Zone may not include imprisonment, in the absence of agreements to the contrary by the States concerned, or any other form of corporal punishment.
4. In cases of arrest or detention of foreign vessels the coastal State shall promptly notify the flag State, through appropriate channels, of the action taken and of any penalties subsequently imposed.[13]

Table 8.2 Examples of arrests and related incidents reported in South-East Asia, 2011–14

Date of report	Incident
30 May 2011	Philippines patrol arrests seven vessels with 122 Vietnamese fishers in Palawan Marine Reserve.[1]
1 July 2011	Malaysia seized six Indonesian fishing boats and their catches in the previous seven months and 'physically abused most of the crew members'.[2]
18 August 2011	Viet Nam ambassador paid consular visit to 122 Vietnamese in Philippine prisons.[3]
26 August 2011	Thai Navy sailors board a Vietnamese boat and arrest ten fishers charged with illegal fishing. They are blindfolded and handcuffed and taken to Sattahip Naval Base.[4]
2 September 2011	Indonesia arrests 19 vessels, mainly from the Philippines.[5]
5 January 2012	Indonesia arrests a Taiwanese fishing vessel with a licence to fish issued by Palau in an area claimed by both Indonesia and Palau.[6]
1 April 2012	Chinese poachers intercepted off Bayo de Masinloc harvesting corals, giant clams and live baby sharks.[7]
1 May 2012	29 fishermen from Sarangani Province (South Philippines) in custody in Palau.[8]
16 September 2012	Taiwanese warships supported by helicopters arrest ten vessels in Upper Gulf with 108 Vietnamese. Ten other vessels escape.[9]
2 November 2012	In October South Korea's Coastguard detained 23 fishers in the Yellow Sea after a violent clash that left a Chinese crew member dead.[10]
24 October 2012	Jakarta frees 50 Filipino fishers.[11]
5 December 2012	Indonesia holding a Taiwanese skipper.[6]
12 April 2013	Palawan Marine Reserve – 12 Chinese arrested for poaching turtles and trying to corrupt officials.[12]
23 May 2013	Chinese patrol chase Filipino fishers away from Scarborough Shoal.[13]
2 June 2013	25 Filipino fishers released by Indonesia (three had been in prison since 2011).[14]
May 2014	China sinks a Vietnamese fishing boat in disputed waters.[15]

Sources: 1, Agence France-Presse, 'Philippines arrests 122 Vietnamese fishermen', *Global Nation Inquirer*, 2011, http://globalnation.inquirer.net/2684/philippines-arrests-122-vietnamese-fishermen 10 June 2014); 2, Apriadi Gunawan, 'Malaysia arrests 4 Indonesian fishermen', *Jakarta Post*, 7 October 2011, www.thejakartapost.

continued overleaf

Table 8.2 sources (continued)

com/news/2011/10/07/malaysia-arrests-4-indonesian-fishermen.html (accessed 10 June 2014); 3, *Vietnam News*, 'Manila envoy meets 122 jailed fishermen', http://vietnamnews.vn/politics-laws/law-justice/214482/manila-envoy-meets-122-jailed-fishermen.html (accessed 11 June 2014); 4, Sattahip Navy team, 'Vietnamese boat caught fishing illegally in Thailand ', Pattaya News, 2011, www.pattayaone.net/pattaya-news/38180/vietnamese-boat-caught-fishing-illegally-in-thailand-by-sattahip-navy-team/ (accessed 10 June 2014); 5, Jimmy Hitipeuw, 'Illegal fishing boats arrested in Indonesia', 2011, http://english.kompas.com/read/2011/06/26/06060653/Illegal.Fishing.Boats.Arrested.in.Indonesia (accessed 13 July 2014); 6, Joseph Yeh, 'Indonesia holding fishing boat skipper: gov't', *China Post*, 2012, www.chinapost.com.tw/taiwan/national/national-news/2012/01/05/328004/Indonesia- (accessed 24 August 2013); 7, Lucio Blanco Pitlo III, 'Poaching: more fun in the Philippines?' 2013, www.rappler.com/move-ph/30579-poaching-fun-philippines (accessed 12 June 2014); 8, *Island Times*, 'Filipino fishermen arrested', www.surangelwhippsjr.com/archives/772; 9, *The Nation*, '108 Vietnamese fishermen arrested', 2012, www.nationmultimedia.com/national/108-Vietnamese-fishermen-arrested-30190478.html (accessed 7 March 2014); 10, Agence France-Presse, 'Philippines arrests 122 Vietnamese fishermen', 2011, http://globalnation.inquirer.net/2684/philippines-arrests-122-vietnamese-fishermen (accessed 10 June 2014); 11, A. G. Macabalang, 'Jakarta frees 50 Filipino fishermen', 2011, www.mb.com.ph/articles/346644/jakarta-frees-50-filipino- fishermen (accessed 24 January 2012); 12, Jaime Laude, '12 Chinese fishermen transferred to Palawan jail', *Philippine Star*, 12 April 2013, www.philstar.com/headlines/2013/04/12/929697/12-chinese-fishermen-transferred-palawan-jail (accessed 11 June 2014); 13, *South China Morning Post*, 'Filipino fishermen pay price as China ropes off disputed Scarborough Shoal', 2013, www.scmp.com/news/asia/article/1243692/filipino-fishermen-pay-price-china-ropes-disputed-scarborough-shoal (accessed 1 June 2014); 14, Philippines News Agency, '25 Filipino fishermen jailed in Indonesia arrive.', 2013, www.interaksyon.com/article/63105/25-filipino-fishermen-jailed-in-indonesia-arrive (accessed 10 June 2014); 15, AFP, 'China sinks Vietnamese fishing boat in disputed waters', 27 May 2014, www.tibetsun.com/news/2014/05/27/china-sinks-vietnamese-fishing-boat-in-dispute-waters (accessed 22 June 2014).

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they are not breaking laws when they cross unseen and possibly contested political boundaries. They accordingly view maritime boundaries as potential traps. Some fishers are also encouraged through subsidies from their governments to fish in contested areas in order to validate historic claims. At the same time some vessels do engage knowingly in illegal fishing, using the well-tried methods of unloading of excess catches above their quota allocations, use of fraudulent records, and bribery of enforcement officials, as discussed in Chapter 7.

There are also occasions when artisanal fishers persist in visiting their traditional fishing grounds even when they need to cross invisible sea boundaries to do so, and this is sometimes tolerated. For example, a Memorandum of Understanding (MOU) between Australia and Indonesia allows some small traditional boats from Indonesia to enter the coastal waters of northern Australia to harvest tripang and *beche de mer*, as has been customary for many centuries.

A particularly difficult issue for Australia is the intensive transboundary shark catches by the poorest traditional Indonesian fishers,[14] as distinct from the highly organised slaughters by rich syndicates which it wishes to stop. Indonesia and Malaysia have also agreed not to arrest traditional small craft that have strayed, or have been driven by bad weather, across their maritime boundaries. However, the problems of using engines and defining 'traditional boats' mean that the MOUs do not always function. Skippers who are ordered to stop fishing are faced with being escorted into port, with the likelihood of going to jail. In Indonesian waters they are known (as in the Taiwan claims of transit) to negotiate the payment of 'informal fines' with patrol craft for the release of their vessel while it is still at sea. Such arrests and incidents of illegal fishing remain unrecorded in official reports.

In the wider area of the Pacific Island States there is illegal fishing, but this is not related to arrests for boundary violations. However the South-East Pacific was one of the starting points for the introduction of 200 nm limits in the 1950s, as the coastal states tried to counter the activities of American tuna clippers. The only current maritime boundary conflicts are minor – between Tonga and Fiji over the ownership of the Minerva Reef, and between France and Vanuatu over the Matthew and Hunter Islands.

West and East Indian Ocean

Maritime boundary issues in India take place against a backdrop of deteriorating fish stocks, and are both internal and external to the country as a whole. There is a general scarcity of fish in coastal zones as a result of overfishing by both local and foreign fleets. There are also 'dead' zones adjacent to river outflows and cities, which arise from discharges of sewage, chemicals and other waste,[15] and local skippers report that the contents of every net haul off Mumbai include 30–40 per cent plastics. Consequently small vessels now fish farther from their coastal bases and for longer. This involves greater fuel costs, more time, often extra crewing and sometimes conflicts. Furthermore they have insufficient space in holds and on deck to store bycatch of trash fish which normally would have been unloaded from short trips. These are therefore thrown away at sea. The combination of these circumstances reduces the value of catch per person on board. The view in 2000 was that fishers were 'earning half the amount of money they used to earn 10 years back'.[16]

Individually the coastal states of India have big fleets based in many hundreds of fishing villages and ports. Each state has its own delimited fishing zone, and fishers are arrested for intrusions across the internal boundaries with neighbouring provinces. These arrests receive limited media coverage unless they are on a large scale, and especially when sanctuaries and other marine protected

areas (MPAs) have been raided. Designating an MPA might be considered as the only way to protect vulnerable species or revive overfished stocks, but it can threaten people on the margins of existence in these areas, and conflicts occur. This also includes strife between neighbouring provinces.

To make matters worse for SSFs, in 1991 the Government of India adopted a new policy towards foreign vessels by licensing them to fish in the EEZ. This included factory ships and stern trawlers with processing on board, and involved joint ventures with Indian businesses. The impact was felt not only by the SSF but also in lost processing and sales activities, which are extensively staffed by women. This resulted in common cause being made between SSF and trawler owners, and national strikes by fishers opposed to transnational corporations and the government policy. The issue was also reflected in the spread of the International Collective for the Support of Fish Workers, as well as activities by other national and international bodies including several NGOs and the fishing section of the International Transport Workers Federation.

Subir Sinha described how in Kerala in particular political awareness emerged in the fishing communities for dealing with these many types of conflict, and how several of the fishers' demands to the government were ultimately met through legislative means. He showed that this was mainly the result of activities by the Catholic 'liberation theologians' and the Communist Party of India. Despite their differing philosophies, both identified with the desperately poor of the fishing communities of Kerala. These actions were successful in obtaining reserved inshore zones for small vessels, together with securing many basic rights for fishers in India as a whole, as well as some protection from foreign vessels.[17]

At an international level boundary problems for fishers in this region of the Indian Ocean and Bay of Bengal remain persistently fraught with violence, arrests and long periods of imprisonment of fishers. Some of these issues go back to disagreements immediately after Partition in 1947, especially around the Indus delta (now in Pakistan) and in the Gulf of Sindh. Table 8.3 gives examples of several such issues.

The Political Dimensions

In all these disputes politics of the past and present intermix, and are well beyond the comprehension of the average fishers who prior to UNCLOS 82 often tolerated each others' presence. When, for example, a Chinese fishing vessel was arrested at Half Moon Shoal near Palawan the contending governments exchanged their diverse views. The senior Filipino military official expressed doubts over the intention of the Chinese. He said that judging by their looks, 'The 12 were not typical Chinese fishermen', and went on, 'China

Table 8.3 Examples of maritime boundary-related incidents in the Indian Ocean, 2010–14

14 February 2010	There are 548 Indian fishers held in Pakistan and 134 Pakistani fishers and their boats held in India.[1]
6 January 2012	Mechanized boat fishermen began an indefinite strike in Tamil Nadu) in 2012,, demanding immediate release of 13 fishers arrested by Sri Lankan naval personnel since November 28 2011.[2]
7 January 2012	180 Indian fishers are released by Pakistan.[3]
23 January 2012	Pakistan seizes 14 Indian boats in the Pakistan EEZ.[4]
25 August 2013	Sri Lanka releases two Indian trawlers and 13 fishers.[5]
2014	Bangladesh Navy arrests Indian trawler with 15 Indian fishers.[6]
2014	Pakistan kills fishers and abducts 30 others off the Gujarat coast.[7]
2014	India arrests 13 Pakistani fishers and boat seized.[8]
2014	Indian Coastguard seizes five Sri Lankan boats and charges them with trespass.[9]

Sources: 1, *The News*, '31 Indian fishermen nabbed', 2012, www.thenews.com.pk/TodaysPrintDetail.aspx?ID=89015&Cat=4&dt=1/23/2012 (accessed 24 August 2013); 2, ndtv, 2012, 'Fishermen begin indefinite strike', www.ndtv.com/tamil-nadu-news/fishermen-begin-indefinite-strike-567790 (accessed 30 March 2014); 3,*The Nation*, '180 Indian fishermen released', 2012, http://nation.com.pk/karachi/08-Jan-2012/180-indian-fishermen-released (accessed23 June 2013); 4, Xinhuanet, 'Pakistan arrests 31 Indian fishermen', 23 January 2012, http://news.xinhuanet.com/english/photo/2012-01/23/c_131373705.htm (accessed 22 June 2014); 5, R. K. Radhakrishnan, 'Sri Lanka releases detained fishermen', *The Hindu*, 14 January 2012, www.thehindu.com/todays-paper/tp-national/tp-tamilnadu/article2800306.ece (accessed 25 August 2013); 6, BSS, '15 Indian fishermen arrested', 28 March 2014, www.bssnews.net/newsDetails.php?cat=0&id=399044&date=2014-03-28 (accessed 6 June2014); 7, *Indian Express*, 'Pakistan kills Indian fisherman; abducts 30 others off Gujarat coast', 2014, http://indianexpress.com/article/india/india-others/pakistan-kills-indian-fisherman-abducts-30-others-off-gujarat-coast/ (accessed 4 June 2014); 8, PTI, 'Seven Pakistani fishermen arrested by Coast Guard off Gujarat coast', 2014, http://indianexpress.com/article/india/india-others/seven-pakistani-fishermen-arrested-by-coast-guard-off-gujarat-coast/ (accessed 1 June 2014); 9, J. Sam Daniel Stalin, '25 Lankan fishermen arrested for trespassing into Indian waters', 2014, www.ndtv.com/article/india/25-lankan-fishermen-arrested-for-trespassing-into-indian-waters-481405 (accessed 10 June 2014).

has been deploying paramilitary personnel disguised as fishermen in the West Philippine Sea as part of its continuing effort to expand its territorial waters.' The Chinese Embassy spokesman Zhang Hua in Manila responded to the arrests, 'This provocative action is premeditated in an attempt to create tensions, and severely violates China's sovereignty and maritime rights.'[18]

There are wider resource issue claims in the geopolitics affecting the fishers. The sinking of a Vietnamese fishing vessel in May 2014 outraged Viet Nam,

but the Beijing news agency Xinghua put the blame on the Vietnamese boat which 'had capsized after harassing and colliding with the Chinese fishing boat "during the movement of a Chinese oil rig"'.[19]

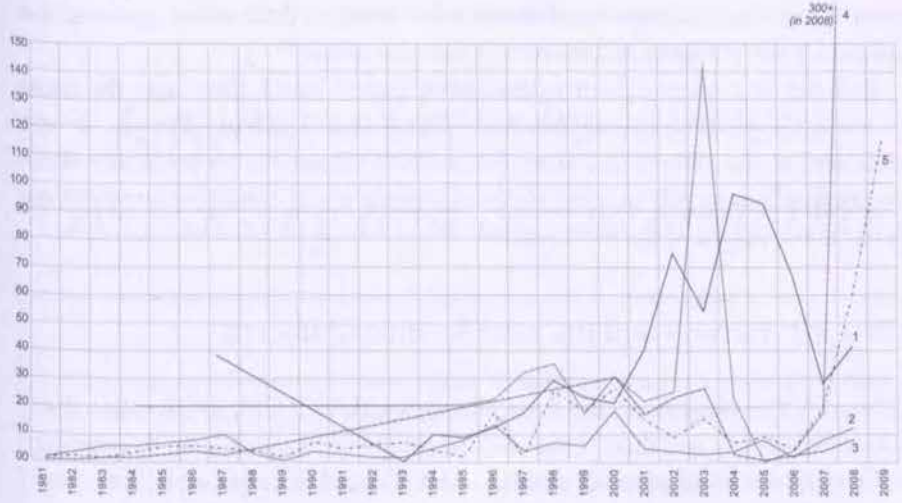
There has been a further range of occupational ventures in the Spratlys with the arrival in mid-2014 of a massive Chinese dredger for reclamation of land between islands from sedimentary material extracted from the sea bed. The UK *Times* newspaper quoted a defence analyst saying that this was 'stunning in their ambition and their potential for provocation in an area that was long associated with animosity'.[20] As well as the geopolitics involved there are serious concerns for loss of rich fish stocks, and about the spread of pollution in the marine environment generally. It goes entirely against the proposal to keep the area pristine as an International Marine Park, which has been mooted periodically by NGOs.[21]

The politics of the Indian Ocean and Bay of Bengal show political events that bring sudden periods with increased arrests of fishers. The most pronounced are in the correlations and political and civil war situations indicated in Figure 8.2. The graph shows that the number of Sri Lankan vessels arrested by India increased from three boats in 2006 to 110 in 2007, and Indian vessels (Tamil Nadu) arrested by Sri Lanka rose from one boat in 2006 to 300 in 2007.[22] This is related also to periods of civil war and peace in Sri Lanka which had an impact on fishers in Southern India and Sri Lanka throughout the period from 1981 to 2009 covered by Figure 8.2. It has been the practice for the return of vessels by both sides unless there were widespread hostilities. The boats are generally owned by commercial companies, but as usual it is the fishers and their families who suffer.

The legal isolation of fishers and the mutual suspicion of neighbouring states when conflicting territorial demands are made means harassment and abuse are common to all such incidents worldwide. For example, there have been protests by the poorest and hardest-hit Palestinian fishers who depend on seafood against Israeli forces as a result of their security actions, including searching and confiscation of fishing boats in the near coastal waters of Gaza.[23]

Conclusions

There is no doubt that governments of many countries use fishers as pawns in disputed areas. They encourage them and even subsidise their boats to fish in zones of overlap and contention. Not to do so might be taken as conceding that the country no longer had a claim to the area. The opposing governments for their part must intercept these ships, since not to do so would imply that they recognise the rights of such vessels to fish. It is the fishers and families who pay the price for yet another dangerous occupational hazard. Unaware of the



1 No. of Indian fishing boats arrested in Sindh (Pakistan) for illegal fishing (1987, 1993–2008)
2 No. of Pakistani fishing boats arrested in Gujarat (India) for illegal fishing (1981–2008)
3 No. of Bangladeshi fishing vessels arrested in Indian EEZ (1981–87, 2000–08)
4 No. of Tamil Nadu (India) fishing vessels arrested in Sri Lankan EEZ (1984–2008)
5 No. of Sri Lankan fishing vessels arrested in Indian EEZ (1981–2009)

Figure 8.2 Arrests of Indian, Pakistani, Bangladeshi and Sri Lankan fishing vessels, 1981–2009

Source: G. Pramod, *Illegal, Unreported and Unregulated Marine Fish Catches in the Indian Exclusive Economic Zone: Field Report, Policy and Ecosystem Restoration in Fisheries*, 2010, Vancouver, BC: Fisheries Centre, University of British Columbia.

contending claims Le Khuan, aged 52, a fisher from Ly Son Island in Viet Nam, whose population of 3,000 is entirely dependent on the sea, said, 'Our government encourages us to fish in the Paracels and Spratlys as there are a lot of fish there and it has been our fishing field for many years.' [24] In turn the ordinary fishers of Taiwan and the Philippines are exposed to arrests due to the political divisions between contending states arising from the 'one China factor.'

There have been attempts at countervailing political movements amongst fishers exerting their influence on governments to try to prevent these arrests driven by politics. In India the International Collective in Support of Fish Workers led by Sebastian Matthews and the views of Subir Sinha have given voice to these movements at grassroots and trade union levels, as has the International Transport Workers' Federation globally. In Pakistan Tahira Ali, senior vice-chairperson of the Pakistan Fisherfolk Forum (PFF), described its activities among silent and complicit people: 'Earlier, the fishing families used to keep

quiet when their relatives were arrested. We went to these areas, gathered the people on one platform and motivated them to speak.'[25]

Box 8.3 is a section from a 'discussion paper' which illustrates the sense of mutual sympathy among common fisherfolk for sharing the sea. It was presented at the Fisherfolk Forum (circa 2010). These can be politically sensitive expressions to give in a forum, consequently it was considered prudent not to name the source of the informant.

Box 8.3 Fairness and the need for mutual interest

The UN Convention on the Law of the Sea (UNCLOS), 1983 states that 'Arrested vessels and their crews shall be promptly released upon the posting of reasonable bond or other security. And, Coastal State penalties for violations of fisheries laws and regulations in the exclusive economic zone may not include imprisonment, in absence of agreements to the contrary by the States concerned, or any other form of corporal punishment.'

Pakistan and India blatantly flout this protocol. India's arrests are often made under its local Maritime Zones India (MZ) Act, 1981, which states that 'where such contraventions take place in any area within the territorial water of India, [they shall] be punishable with imprisonment'.

According to a study titled 'State violations of livelihood rights: imprisonment of Indian and Pakistani Fishermen', even the MZI Act 1981 which counters the UN protocol, incorporates some leniency towards fishers who mistakenly enter India's maritime border. Yet straying Pakistani fishermen rarely benefit from this leniency. This is also the case with Indian fishers found in Pakistani waters.

The cross-border arrest of fishers continues unabated. The arrested men often spend years in prison awaiting trial, or remain in prison for years after having completed their sentences. Many allege that these arrests are a thriving business, with the border forces of both countries sharing proceeds.

Fishers on both sides belong to families that have earned their livelihood from the sea for generations. They don't known any other business. They are poor, and usually illiterate. In Pakistan, they earn at most Rs 300–400 a day and often have to take loans to get by. After years in prison their incomes have not increased.

Source: name deleted.

CHAPTER 9

Getting a Crew by Dubious Contracting and Slave Trafficking

> When a man is desperate for work, finds himself in a factory or on a fishing boat or in a field, working and toiling, for little or no pay, and beaten if he tries to escape – that is slavery.
>
> Barack Obama, 25 September 2012)[1]

Introduction

In his quote above President Obama was considering present-day slavery. He went on to say, 'It's the migrant worker unable to pay off the debt of his trafficker. The man lured here with the promise of a job, his documents then taken.' He was referring to poor migrants in general but his allusion to those on fishing boats is accurate. The poor from rural areas in developing countries and the destitute in cities are frequently lured to sea with deceptive promises and fraudulent contracts of employment. This results in blatant slavery. They do not know what awaits them on many fishing vessels.

The main purposes of this chapter are to discuss the current position in the recruitment of fishers, the conditions of service offered to them in verbal and written terms, and the implications of these for crews of various types of fishing vessels and their communities.

A fundamental requirement in the fair treatment of seafarers is that they be given a statement when being recruited of their rights and obligations before they agree to undertake a voyage on any craft. In the traditional maritime countries it has long been the practice for seafarers to read (or have read out to them) the Articles of Agreement made with shipowners (or their representatives) which they need to sign before going to sea. In the early 18th century this was made a legal requirement in the United Kingdom for merchant ships. It became almost totally international with the ILO Convention of 1926.

Agreements were required to include details of the ship, voyage, the capacity of the seafarer, wages, leave and other items such as scales of provisions. These agreements were ultimately expected to correspond to the standards set in international conventions, and generally be in line with basic human rights.

They protected merchant seafarers and formed the basis for seeking remedies through courts of law. When it comes to equivalent written agreements for crews of fishing vessels, they exist only for large craft and only under a limited number of flags. The ILO introduced the Convention on Fishermen's Articles of Agreement in 1959, and the IMO the Requirements of Training for Fishers (SCTW-F) in 1995. These and other instruments, along with voluntary codes, have played their part in protecting the welfare and safety of fishers, but only under a few national jurisdictions.

With deregulation and globalisation of capital came more opportunities to bypass labour regulations as well as human rights requirements. Unlike merchant shipping there was no international equivalent in the fishing sector of tripartite meetings of representatives of governments, employers and workers to recommend minimum wages. The wages of fishers have therefore been open to the so-called market forces of supply and demand. The introduction of ILO Convention 188 (2007) which covers these issues is discussed in Chapter 14.

Chapter 5 has already referred to the migrant worker sector serving at sea. This has become increasingly dominant over recent decades in many parts of the world. The methods of recruitment range from false verbal offers of wages and conditions under which processes of trafficking lead to subsequent slavery on board, to at best written contracts which often, however, contain deceptive statements leading to cruel and inhuman treatment at sea.

The impetus behind trafficking in particular lies in the conditions of abject poverty and unemployment in many developing countries. Recruiting agents and brokers can therefore profitably arrange the transfer of people, legally and illegally, across boundaries and borders to places where work may be available. The motivations of fishing enterprises in taking advantage of this cheap surplus labour are, in addition to greed, the situation in fishing of a vast overcapacity of vessels and a serious depletion in the stocks of fish (Chapter 2).

The pursuit of the most profitable fish means longer passages to successfully exploit the resources, resulting in increases in fuel and labour costs. At the same time owners argue that they have to meet high inescapable items of expenditure, including interest payments on capital where loans are involved, insurance, fuel, maintenance and management. These are virtually fixed irrespective of the catch. Although maintenance can be deferred, albeit with increased risk to the crew, the only immediately reducible cost is labour. Crews can be cut in numbers to a bare minimum, and their working time increased to a maximum; victualling can be rationed to basic survival levels and subsequently health and safety conditions constrained, and most of all slave labour is attained by rigorous enforcement of conditions and deprivation of wages. There are various levels of success in these respects which are shown by case examples in this chapter and in Table 9.1.

The differential in wages alone between countries and categories of worker is

significant. For example, a fisher on a foreign vessel chartered in New Zealand is paid US$6,700–11,600 per annum; under the NZ flag they would get US$60,000–80,000.[2] In the United Kingdom a deckhand on a trawler could expect to earn at least £25,000–35,000 per annum from working eight hours per day, seven days a week for 250 days at sea, whereas under some Asian and FOC flags a fisher would receive between US$5,000 and US$10,000 per annum for longer periods of work. In the UK instance there are also overtime payments, leave pay and possibly catch bonuses, as well as social security advantages. In the second example there are normally no add-ons, only deductions covering job fees, travel and sometimes even items of victualling, and the contracts might not hold good in practice. The agreements made in relation to conditions on board and work fall into the two categories of verbal and written, but many are combinations of the two where it suits the employers.[3]

Verbal Agreements

Verbal agreements are most common where manning agents are recruiting young men in poorer rural regions for work on foreign vessels. Such agreements are frequently merely promises of good wages, food, opportunities to save, and guarantees of repatriation at the end of a stipulated period. The family are expected to provide some funding in support of the applicant. For town-based applications the first step in securing work is often an 'informal' payment by the applicant to get on the list of an agency. This is usually required in cash, and no receipts are given. When the job agreement is fixed the agency in both rural and urban cases might provide a cash 'advance' for the employee to buy working gear, and possibly give them some money, or a bag of rice, to tide their family over. The agents meet the upfront costs of travel and any documentation required. These items have to be signed for in a 'promissory note', and the cost is deducted from earnings. In this way the future fishers from both town or rural backgrounds might be bound by forms of collateral against their not meeting all the employment terms and conditions.

Co-author of this book Bruno Ciceri, who has long experience of conditions in Asia, says of these applicants:

> They come from poor underdeveloped areas of the country, and [are] young with very little education or none at all. The prospect of having a job – it doesn't matter how dangerous and difficult it will be – is always better than not having a job at all.

This is a system bordering on trafficking. Philip Robertson, who wrote a major report on *Trafficking of Fishermen in Thailand*, said 'he was unable to identify

a single fisher who had ever received a written contract'. The lack of information and the deceptions used by agencies on new recruits render them very vulnerable to slavery on fishing vessels (see Chapter 10).[4]

But verbal agreements are not all bad; sometimes these are the only way. In the small-scale fishing fleets operating in home waters, for example, most crew agreements are in practice verbal. Everyone in the community is aware of what to expect in the divisions of labour, shares in catch proceeds and wages. Many of the crew are related, although for family safety reasons arrangements may be made to avoid boats being entirely family-based. Skippers in particular may take on each other's sons. These customary arrangements were and remain well understood, and community pressures ensure compliance. A veteran salmon fisher in British Columbia recalled:

> I never quit a vessel or was fired, although there were plenty of reasons for both. The way it worked back then was that you more or less signed up for the season. No contract or complicated agreement, just a mutual understanding between you and the skipper.[5]

Written Agreements

Some of the written agreements for crews are as dubious in their veracity as most of the verbal agreements. Sometimes recruits are required to sign blank pages of so-called contracts to be filled in later with the conditions. Others sign very detailed contracts, but this can be a double-edged sword: there can be very unfair clauses in them, not fully explained or appreciated by seafarers who in their ignorance will sign whatever they are asked to sign. Examples of unfair clauses and conditions that change when the fisher has signed up are given in Table 9.1. The terms and conditions of the contracts may change as the fishers pass through different stages on the way to a vessel. After signing the agreement with home state agents (A), prospective fishers will proceed across a border to agents (B), who take the fishers to a vessel in country (C), which is owned in country (D), and flies the flag of country (E). Amendments to the contract can be made at any or every stage until the final Articles are signed on board. At this stage the fisher may be sold to the boat, a transaction agreed in the contract known as *ka hua* in Thailand. This is a cost also retrieved from the earnings of the fisher.[6]

Whether verbal or written, the contracts for migrant fishers have a common purpose in the race to the bottom to achieve lowest labour costs. Case examples may be the best way of illustrating this – and these days these can be drawn from developed as well as developing countries. In introducing cases from South-East Asia it is necessary to provide a background to the routes of migrants through Thailand, which is the major trafficking centre for the region.

Regional Patterns

There are clear regional patterns in the recruitment and trafficking of fishers, with a continuing movement of men and boys mainly from rural regions in developing countries to the vessels of the major fishing states. Especially notable is South-East Asia, where Thailand is a central focus for recruitment of fishers from Cambodia, Myanmar, Laos, Indonesia and the Philippines. A second major supplier of labour is the Ukraine, whose fishers move to work on ships of Russia, Turkey, South Korea and Japan. In the most developed world the United Kingdom has been selected as an example of one of several Northern and Western European countries which attract lower-cost migrant labour to their fishing industry, while New Zealand similarly is a focus in the Southern Hemisphere.

Thailand

With a population of 65 million Thailand ranked 14th in world fish production in 2012 (see Chapter 2, Table 2.2), with an industry worth US$7 billion per annum. In the 1980s there were some 13,000 registered fishing vessels from 2,500 locations in the country, although vessel numbers and numbers of fishers of Thai nationality have been reduced since the typhoon of 1989, notably by the attractions of alternative employment. As a result thousands of migrant fishers are employed on Thai vessels, which fish in adjacent sea areas for feedstock required by the vast aquaculture industry, geared to the production of shrimp, which account for approximately half of the 4 million tonnes of marine products exported annually from Thailand. The boats catch squid, crabs and small pelagics. In addition, bycatches from the tuna fleet fishing in the region are processed into fishmeal for the fish farms. Thai vessels with migrant crews also fish legally and illegally in both East and South-East Asian waters and in the Indian Ocean.[7]

In all there are some 200,000 migrant fishers engaged in local and foreign-flag fishing vessels who have been trafficked through Thailand. Many are channelled through the ports shown in Figure 9.1. According to confidential Thai sources syndicate brokers have regular arrangements with fishing companies to deliver recruits on board at the payment rate of US$800 per person. Other freelance speculative agents recruit and sell people directly to skippers (who are authorised by owners to pay for them) at a rate of about US$375 per person. Usually these recruits have made an initial payment or incurred a debt of around US$300–400 to the agent before being taken on the journey to a vessel. The skipper then pays their part of the deal to the agents on delivery. The various transactions can be complicated but ultimately all costs are recovered from the earnings of the fishers.[8]

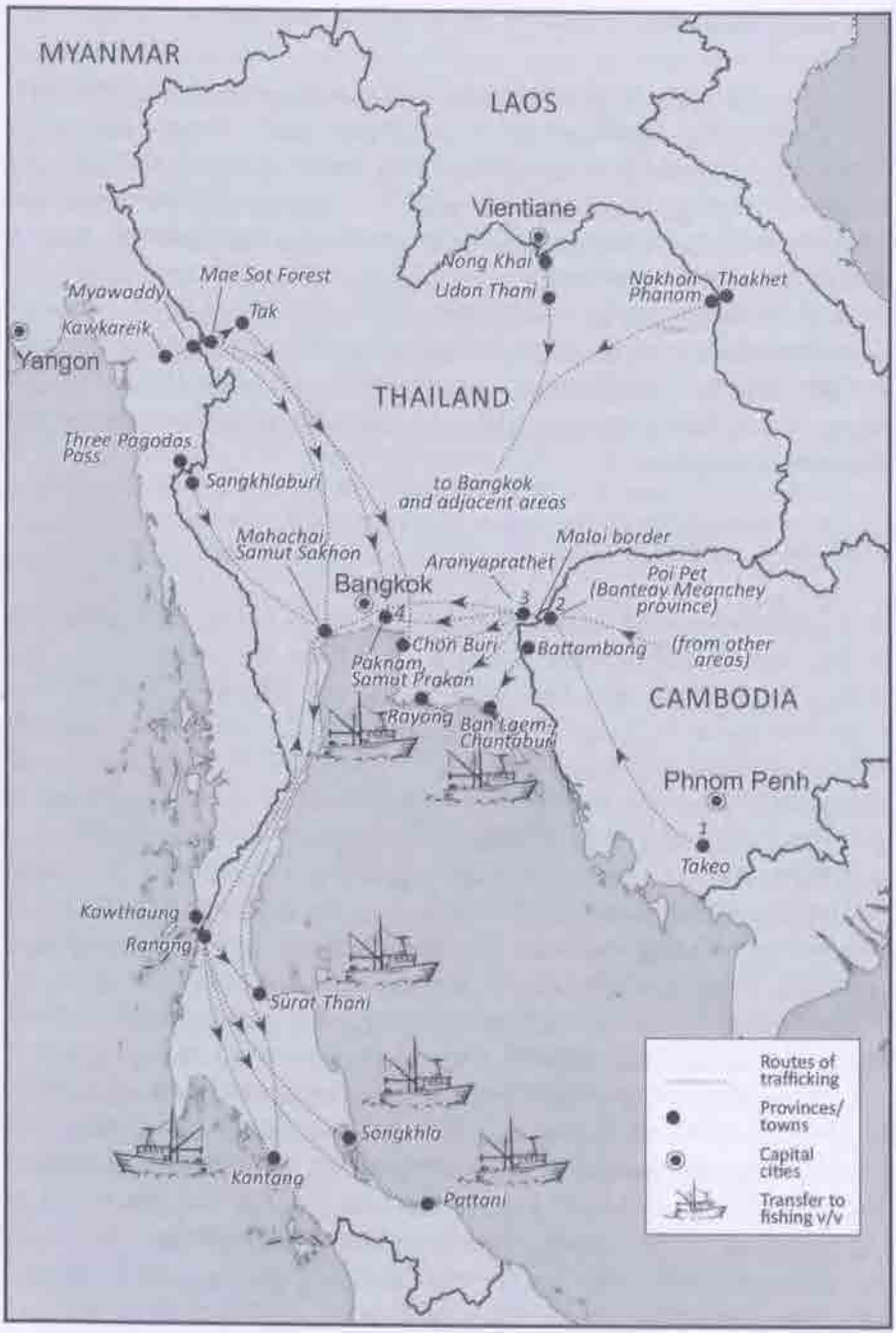


Figure 9.1 Principal routes of human trafficking through Thailand from adjacent countries

(for sources see opposite)

In most cases the initial delivery is to a holding house at the port before the individual is brought to a vessel. In some ports this may be associated with karaoke and other establishments frequented by sailors, and is somewhere they can lodge. Managers encourage customers to get into debt to pay for drink, drugs and girls. The girls too are likely to have been trafficked. In the port of Songkhla there are 120 known brothels with girls as young as 13 to 15 brought from Myanmar and other places by traffickers. Fishing agents pay off the debts against promissory notes. They also pay fines to release potential fishers from custody, and pay police in port areas for assistance.[9]

Figure 9.1 shows several of the principal routes of trafficking through Thailand from adjacent countries. From Myanmar there is a crossing at the southern end of the country from Kawthaung to Ranong, then to fishing boats at Songkhla or other ports in the south of Thailand. The other popular crossing is from Three Pagodas Pass in the north on to the port of Samut Sakhon. These all require false papers and clearances by the brokers with officials on both sides of the borders. 'Most of the migrants do not know where they are or what is happening until they arrive and are delivered to the trafficking gangs in a port area', Robertson describes the stage of holding trafficked recruits at karaoke establishments where they get food, drink and sexual services.[10] They will undoubtedly be exposed to sexually transmitted diseases (STD) and especially HIV/AIDS. A high proportion of the sex workers in bars are infected. Fishers can carry these diseases back to families in remote areas [11].

Cambodia

The Cambodian League for the Promotion and Defense of Human Rights (LICADHO) has provided an account of the operations of one of the trafficking rings from the experience of four men who ultimately manage to escape. In summary (see the numbers on Figure 9.1) on 26 October 2007 four young farmers from near Takeo (1) were recruited by an agency. They were unaware that the intention was to sell them to a fishing vessel. They made a long journey from Takeo by foot and truck to Banteay Meanchey (2) where they were escorted across the border (3). From there an agent took them to the port of Samut Prakan (4). At the port they were locked up for five days. They were told that they would be given US$250 on board to send home. They never did

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Sources for Figure 9.1: Peter Jenssen, 'Thailand's human trafficking draws UN attention', www.ki-media.blogspot.co.uk/2011/08'thailands-human-trafficking-draws-un.html (accessed 22 September 2014); LICADHO, 'Five Cambodian men rescued from trafficking ring', 2008, www.licadho-cambodia.org/articles/20080805/80/index.html (accessed 26 May 2014).

receive this, nor were the promised allotments of U5$120–150 per month made to their families during the subsequent fishing period.[12]

On 21 March 2008 the four managed to jump ship at Sarawak in Malaysia and hide in the forest. There they met another Cambodian deserter and managed to use a mobile phone. The United Nations and LICADHO were able to rescue them and they returned to Cambodia on 19 April 2008. The police were unsuccessful in apprehending the traffickers.[13] However, from investigations between 2011 and 2013, and a series of complaints from trafficked Cambodians, they did detain a 53-year-old woman, Lin Yu Shin, who was allegedly one of the managers of a company that had trafficked 700 Cambodians to vessels in several countries.[14]

The Philippines

The Philippines is a major supplier of seafarers to international shipping and to some of the fishing fleets. Contracts are controlled to a considerable extent by the government-run Overseas Employment Administration (POEA). This provides a standard employment contract for agencies recruiting seafarers. It lays down the terms and conditions to be observed. However, as the Philippines is faced with ever-increasing competition in the global labour market for the supply of all types of seafarer, it has been making more concessions on aspects such as health and safety to help its citizens secure work. POEA also prohibits payments to agencies for the placement of fishers, but this is successfully avoided by most of the agencies.

There are active trade unions in the Philippines. The country has in fact a long history of trade unions going back to the founder Jose Rizal in 1902. Of the six current maritime unions two are affiliated to the ITF (the Association of Marine Officers and Seafarers Union, and the Philippine Seamen's Union). Through the ITF international inspectorate these can have a reach in monitoring onboard conditions. However, this applies mainly to merchant seafarers, as fishing vessel crews are not unionised to any great extent.[15]

As well as the regulated agencies in the Philippines there are private groups that smuggle people to other destinations. A precarious route is by small vessel from Aparri Cagayan in the northern Philippines to the south coast of Taiwan. Once in Taiwan if the fisher can avoid arrest a broker finds them a place alongside the other 3,000 or so Filipinos working on Taiwan-owned vessels. Father Orioli of the Apostleship of the Sea (AOS) said that the Filipinos who are 'working on Taiwanese fishing vessels have no legal papers.' This makes joining a vessel in Taiwan easy, but makes it difficult to leave the vessel in a different country.[16]

Even when contracts modelled on POEA are drawn up by the private agencies these are not immune to fraud. Sallie Yea provided an example of this in the

Plate1 Hazardous sea conditions: the French fishing vessel *Alf* in storm conditions in the Irish Sea. As waves are tending to become higher, so are the dangers of foundering and capsizing during manoeuvres with fishing gear in bad weather.

Photo © Royal Navy/MOD.

Plate 2 Treacherous surf, Pacific islands. Small Pacific islands communities depend on fishing at and beyond barrier reefs. Bad weather and pounding surfs can prevent this. On these occasions food is obtained by women gleaning on intertidal reef flats.

Photo © Alastair Couper

Plate 3 Meagre catch, Indian coast: the commercial fishers on this small vessel on the coast of Southern India have fished for two days to land ten baskets of shrimps and a variety of 'trash fish'.

Photo © Alastair Couper.

Plate 4 Peeling shrimps on quays, South India. Landed shrimps from boats in Southern India are peeled by groups along the quays. It is low-level, poorly paid work. The children in all the groups may be related to the adults.

Photo © Alastair Couper.

Plate 5 A small-scale fishery typical of the Red Sea, Gulf of Aden and Somalia. Skiffs driven by powerful outboard motors land catches on the beach. The photo shows a local fisher, dwellings and pick-up trucks to collect fish for markets.

Photo © Alastair Couper.

Plate 6 Landing from a large-scale fishing vessel, Peterhead, Scotland. The skipper and crew, including a Filipino fisher, unload gutted, sorted and iced demersal fish from their boat alongside the market. Maintaining the cold chain from catching to auction is vital.

Photo © Alastair Couper.

Plate 7 Early morning auction in the cold conditions of the Peterhead market, Scotland. Buyers proceed along the rows as fish is unloaded, and throw in their name tags in response to prices called out. The boxes are then carried by refrigerated vehicles to processing plants.

Photo © Alastair Couper.

Plate 8 A very large pelagic vessel with advanced fish-finding and catching equipment capable of netting several hundred tonnes at every haul. The nets are pulled alongside and the fish pumped on board to cold tanks.

Photo © Alastair Couper.

Plate 9 Scourging the sea bed by stern trawler. Massive stern trawlers can fish at different depths, including over the sea bed. They are very destructive of the sea-bottom marine life and environment. Regulations curtailing this type of fishing have not been adopted, other than by New Zealand for specific areas.

Photo © Virginia Lee Hunter/ Greenpeace.

Plate 10 Destructive fishing with the use of dynamite in coral reef areas on East African coast. This technique is in regular use here and in Asia along with the use of poisons to stupefy fish for ease of collection.

Photo © African Conservation Foundation.

Plate 11 Illegal fishing in 2007 by transhipment from the catcher *Sinbad* (no flag) to Russian flag reefer *Mumrinskiy* in the Barents Sea. This practice was finally stopped by Greenpeace chaining *Mumrinskiy* to the quay at the Dutch port of Eemshaven, and subsequent agreements between Russia and Norway in 2010 which saved the last healthy cod stocks in the North Atlantic.

Photo © Norwegian Coast Guard.

Plate 12 Illegal fishing in a 'no-fishing' zone in the Gulf of Thailand. This ship was tracked 3 km from the shore by Greenpeace observers.

Photo © Athit Perawongmetha/Greenpeace.

Plate 13 Best practice: healthy fishing for skipjack tuna by pole and line in the Maldives. This is by far the most selective and sustainable method of tuna catching, with no bycatch or environmental damage.

Photo © Paul Hilton/Greenpeace.

Plate 14 'Living hell' on a mutiny vessel. The fishing boat *Supaporn* sailed from Thailand in May 2011 with a Burmese crew of seven and a Thai skipper and chief engineer. It caught and transhipped fish at sea for five months. The crew mutinied because of what they described as a 'living hell'.

Photo © Phuketwan.com

Plate 15 Crew charged with murder, Thailand. On 16 October 2011 the mutineers on the *Supaporn* killed and threw overboard the bodies of the captain and the chief engineer. The boat broke down off Phuket and was boarded by the coastguard. The young Burmese fishers (aged 20 to 30 years) are shown being questioned by the Phuket police commander.

Photo © Phuketwan.com.

Table 9.1 Mismatch between work conditions given pre-departure (Manila) and upon arrival (Singapore)

Pre-departure (the Philippines)	Upon arrival (Singapore)
Salary of US$250–400 per month	Salary of US$200 or less per month
No salary deductions for amenities and food	Deductions (usually US$50 per month) for food and amenities
No deductions for equipment and medical	Deductions (variable) for equipment and medical
Salary to be paid monthly after a period of salary deduction for placements fee (normally four months)	Salary not paid even after deduction period ended (kept supposedly in an account in the employee's name to be given at conclusion of contract)
Rest during sickness or injury	No rest during sickness or injury
No penalty for early release from contract	Penalty of up to US$2,000 for requesting early release
Regulated working hours (8 to 10 hours per day)	Excessive working hours with no additional remuneration for overtime
Passports, travel and other documents held by owners of these documents	Passports and other documents forfeited to the owner of the boat or Singapore-based agency

Source: Sallie Yea with Shelley Thio, *Troubled Waters: Trafficking of Filipino men into the long haul fishing industry through Singapore*, Transient Workers Count Too (TCW2), 2012, www.twc2.org.sg/ (accessed 22 September 2014).

transfer of Filipino fishers to brokers in Singapore and on to ships elsewhere as crews. All the recruits paid to obtain the work and were given a vetted contract before leaving the Philippines. However as Table 9.1 shows, the contract conditions agreed in the Philippines were very different from the conditions with adjustments made when they reached Singapore. Yea pointed out that it is only when migrant fishers eventually arrive at their destination that they realise how the contract has mutated en route and how difficult it will be for them to obtain redress or withdraw.

A fisher described starting to complain and refuse the changed contract. The captain simply said, 'If you want you can sign it. If you don't want to just buy a ticket and fly back.' The fisher found himself trapped possibly for a long time at a low wage rate, working on distant-water fishing vessels owned in Singapore or Taiwan. Yea summarised an interview with a returned fisher:

> Agreed salary dropped from an initial promised US$400 per month at the time of recruitment to US$160 per month in the final agreement presented [to] him in Singapore, and, second even with 13 months' payments at the new salary rate (a total of US$2,080) this man owed US$83 after having to pay US$2,163-worth of unforeseen deductions.[17]

Ukraine

The unfairness and duplicity in contracting are not confined to Asia. A major supplier of labour for fishing is the Ukraine. There are 140 crewing agencies in Odessa alone for the supply of fishers and merchant seafarers to foreign countries including Russia, Turkey, South Korea and Japan. The Ukrainian fishers who sign agreements with what they regard as reliable companies may find these invalid under different jurisdictions.[18]

A detailed study by the International Organization for Migration (IOM) followed 46 Ukrainian migrant fishers and showed how they were deceived in the allocation of berths. Of the 38 who were sent to a Russian ship only 18 had agreed to this; 15 others had been promised Japanese vessels, three South Korean, and one each Turkish and Ukrainian. To make matters worse they found the Russian boat was illegally fishing in extreme conditions of ice and snow:

> We did not see the name of the boat that we were boarding and someone noticed that the name was scraped off. We changed clothes and started work immediately. It was only the next day that we found out what the boat was and what it was doing. It was not the boat that was in the contract. The boat was fishing for crabs illegally.[19]

United Kingdom

The main part of the UK fleet fishes out of medium-sized ports in North-East Scotland and from smaller Scottish places around the east and west coasts and the islands. In 2008 about 60 per cent of Scottish boat owners employed some foreign fishers. Most of these boats were under 15 m, some were owner operated, and a few of the larger ones were owned in Spain, and sailing under the British flag with migrant fishers. The exceptions were and remain the fleet of large pelagic vessels, the crews of which are local (see Chapter 5).

About 1,000 fishers from the Philippines alone were employed from 2008 onwards under 10 to 12-month contracts. Owners employ foreign fishers because, they say, of the difficulties in recruiting reliable young men into fishing (but see Chapter 10). It is perceived these days in the demersal sector as a cold, hard, wet, bloody and dangerous occupation. In an industry where the share system prevails, there is also the problem of uncertain incomes, which are depressed by shortages of catches from overfishing and periods of bad weather. In addition the decommissioning of many parts of the fleet in recent years signifies locally that when there are alternatives this may not be a reliable long-term occupation.

At one time in the Scottish fishing towns and villages many men went to sea,

the wives and daughters of fishermen worked in processing and packing, and older people made nets at home. There were many other ancillary occupations. Most of this has now disappeared as a way of life. The Scottish boat owners have in recent years contracted for labour with Filipino crewing agencies in particular. They have found that there are no problems with language, the fishers are reliable, work well, tolerate long hours and hard conditions in the North Sea and Atlantic, and are, most importantly, obtained at much lower cost. Owners consider this as necessary with trips becoming longer, fish more scarce and fuel costs rising. They dismiss the differentials between wages of locals and migrants with the view that they pay whatever the fishers have agreed to in their contracts, which are made freely with manning agencies in their own countries that are recognised by those countries' governments and seafarer organisations. In most cases Filipino fishers' income is two or three times above what they would get in the Philippines, but about half of what the average deckhand fisher from the United Kingdom is paid.

One of the problems involved in the pay regime relates to legality. Most migrant fishers come to the United Kingdom on transit visas which allow them to join a named boat to fish beyond the UK territorial sea. In practice most of the boats fish part of the time within the territorial sea. This means the fishers are employed in the United Kingdom, and they ought to be paid at least the minimum wage of UK workers. This would raise their wages by at least 50 per cent, and would also require work permits to be issued. The hours of work by migrant fishers also exceed those laid down in UK legislation. These issues have resulted in the ITF and the UK trade unions demanding better rights and contracts for these fishers.[20]

In addition to the wages issue there are several accounts of owners in the United Kingdom violating the contract terms of migrant fishers. One example is an interview conducted with a returned fisher in Manila in November 2013. He said he was processed through a POEA-accredited agency to join a named boat in Scotland. His contract salary was US$1,200 per month. This was a very good rate compared with home wages, although he had to raise a loan and pay for the job. When he arrived to take up the job, his wages were cut to US$1,000 per month, and from this US$350 went back to the agency every month. He was still prepared to work for that amount on the boat, but with 18 or so hours of work per day, unsuitable food and poor living conditions he decided he wanted out of the contract. He was also upset since a Polish fisher doing the same work was, he said, earning £2,000 per month. He fell out with the skipper/owner and left. A charity saved him from destitution and he was eventually repatriated.[21]

There are also examples of duplicity in contracting. A Sri Lankan said he paid his local agent US$2,500 for a job. He was then flown from Colombo to Scotland with four others on 22 January 2012. His contract was for employment as an engineer at US$1,500 per month. The work he obtained was that of

a fisher at a very much lower rate. He complained to the police and was repatriated on 12 February 2012 without receiving any pay or compensation.[22] Unlike the fishers in Asia who are frequently trapped for years after such violations of contracts, those in the United Kingdom and elsewhere in Western Europe can at least obtain assistance and end their contracts.

Another problem can arise when individuals are given contracts to join named boats, in order to facilitate their obtaining transit visas. This can lead to the crew being abandoned if there is a difficulty with the boat. The Apostleship of the Sea related this story on 4 July 2013:

> Two Filipino and two Indonesian fishermen were recently stranded in the UK when the fishing boat they were working on hit financial difficulties. Working on a fishing vessel in the North Sea is a hazardous career, with dangerous seas and unforgiving weather conditions. However, their treatment deteriorated once the boat was impounded due to the owners' financial troubles.
>
> Since March the crew had not been paid. This means that they were not able to send money back home to their families in Indonesia and the Philippines, with one crew member relating how his children were going hungry.
>
> As the crew were only contracted to work on this particular vessel they weren't able to transfer to another for alternative work. Also as they were working on transit visas the UK Border Agency had them arrested in mid-June and taken to a detention centre. The men were separated from their luggage which contained their seamen's books and were frightened that they would have criminal records affecting their future employment.[23]

Skippers whose boats are crewed by fishers from the Philippines point out that as far as Scotland is concerned most fishers are quite happy with conditions on their boats, and renew their contracts regularly. This was confirmed by personal interviews with Filipino fishers on Scottish boats in the ports of Scrabster and Peterhead during 2014. One lead fisherman said he was on the third of four ten-month periods of employment on the boat. He was pleased with the work, his wages were now US$1,500 per month, and he no longer paid an agency out of this. He also got some help from the skipper/owner with fares, and a bonus when there was a good catch. As will be seen from Chapter 10, however, the seagoing conditions for migrants are not always that favourable, even in parts of the Scottish industry.

New Zealand

New Zealand exhibits a different permutation in the various components involved in the employment of migrant fishers. The fishing companies in New Zealand have used much of their quota allowances to charter vessels owned in South Korea and Taiwan to fish the NZ EEZ. These ships are crewed by migrant

fishers hired by South Korean and Taiwanese owners mainly from crewing agencies in Indonesia. The chartered foreign companies obtain a share of the catch proceeds, and the crews are paid by them according to their contracts agreed with the Indonesian agencies. Consequently neither the NZ companies nor the NZ government can exercise controls over the wages or conditions on board these chartered vessels; only the flag state has the authority to do this. The conditions and treatment of these fishers are atrocious, and the problems and solutions concerning these arrangements in NZ waters are discussed in Chapters 10 and 11.

Conclusions

Recruiting, trafficking and contracting by external agencies is spreading on a global basis. This enables boat owners to remove themselves from responsibility for crew conditions. Even the agencies that have carried out the initial contracting can escape responsibility by claiming that they merely act as go-betweens in securing employment, and are not accountable for subsequent changes in agreements as fishers move between the jurisdictions of various flag states. In any case very often there are no written agreements to which the fishers can refer. Furthermore, owners with vessels under FOC cannot always be identified and flag states are seldom interested in contract violations.

Model contracts do exist such as that of the POEA, but while these prohibit charges for placements it would be impossible for a fisher to get on the list without paying. Similarly the ITF has a 'Collective bargaining agreement for fishing vessel crews' which affiliated unions can press owners to follow, but not many fishers are unionised. The labour supply contracts that exist are clearly determined by the aims of the global employment sector to reduce wages and terms of service. The agency recruiters and providers of contracts compete to achieve the crewing agreements that best meet these objectives. At the same time they try to maximise their own profits in so doing. Fishers and their families see themselves as victims of unfair agreements, trapped between agencies and fishing companies in a global market beyond the influence of both them as individuals and appeals to law. The full social and economic effects of the abysmal situations in recruitment and the lack of legitimate contracts are considered at greater length in Chapter 10 on abuses at sea.

Appendix: Evidence of Duplicity and Unfair Contracts

Contracts

In one contract the period of employment is 13–15 months, subject to an extension or reduction at the discretion of the fishing master, with the amount of the monthly bonus payable also subject to the fishing master's discretion.[24]

There are cases where Filipino fishers had to pay approximately US$450 each to be hired on three-year contracts, with no right to any leave, for US$200 per month, and were expected to work 18 to 22 hours per day.[25]

In 2011 another case involving 28 Filipino men trafficked onto fishing boats operating out of Sarawak, Malaysia came to light, suggesting that trafficking and exploitation in this sector involves both Singapore and Malaysia as destination countries, and Philippine nationals as victims.[26]

One of the most significant recurrent circumstances of men who migrate to Singapore for this work is borrowing significant amounts of money to finance their migration, as described above. It is very common to 'pawn' (*pagsangla*, in Tagalog) family assets.[27]

Thailand's recruitment for workers in the fishing sector remains largely based on informal processes which often lead to abuse and foster human trafficking. Many fishers are sold to fishing boat owners at a certain price per head, the *ka hua*. A trafficked fisher must thereafter work to pay off the *ka hua* before being paid any wages. Depending on the amount of the *ka hua*, a trafficked fisher could be working from one month to as long as six to eight months before earning any wages to retain. In some cases, depending on the predilection of the boat captain and/or owner, trafficked fishers are kept working on boats for years without pay.[28]

Contracts and Agreements

Seven Ukrainian seafarers/fishers trafficked to Russia signed, before departure, what they understood were legally binding agreements with reliable crewing companies and employers. Another seven men trafficked to Turkey signed their work contract on arrival in Turkey, directly with the ship owner. The contract was not in Ukrainian and they did not understand the contract terms.[29]

'Violence towards crew is so institutional in Indonesia that some seafarers agree to accept beatings. … Perhaps the most telling and damning clause in a "contract" some Indonesian seafarers are signing is the one that says: "I agree to follow the orders of the captain and my superiors, even if they lose their temper and beat me" …. we estimate that around 80% of contracts covering foreign fishing vessels are illegal.'[30]

A contract signed by an illiterate Nepalese national, who almost certainly had

never seen the sea or a fishing boat before, highlights the exploitation of crews by some fishing companies and recruiting agencies. The contract is for three years, at a rate of US$200 per month. Of this, US$150 per month is retained by the agency in Singapore (plus the first six months of wages), and US$50 per month retained by the captain (to be given 'in port'); remittances can only be sent to Nepal every six months 'because it is very costly'. Crews are expected to work at least 18 hours a day, with no overtime. Seawater is to be used for bathing and washing clothes. At the end of the contract, the crew member must make his own way to Singapore to collect his wages; if the contract is not completed, the crew member is abandoned at the nearest port and is responsible for making his own way home.[31]

The following clauses were found in a contract for two years which paid US$250 per month, with no guaranteed leave or rest periods, no additional overtime pay and a no-strike clause: 'I understand fully that due to limited water supply, drinking water is supplied by ration. Therefore, sea water is to be used in bathing, washing clothes and tooth brushing.' 'Breakfast, lunch and dinner is provided for free. However, things for personal use are not given free. Snack foods such as bread, biscuit, coffee, milk, sugar, soft drinks, beer, liquor, cigarettes, soap etc. should be shouldered by the fisherman.' 'I also understand that the amount of US$50 will be deducted by my captain [from] my salary every month. This will serve as my air ticket deposit in case I was not able to finish my contract but this amount should be refunded the moment I finish my contract.'[32]

A fisher was paid US$255 basic salary per month with no additional payments for any overtime performed, no additional leave pay, and no share of the catch. The contract stated that the fisher was employed on board for 24 months with no entitlement to shore leave, no guaranteed rest periods per day, and was obliged to perform whatever work was specified and whenever it was so decided by the Master. In addition the employer had the right to terminate the contract at any moment, for whatever reason, with no compensation payment. The fisher was, however, entitled to free repatriation at the end of the contract or if declared unfit for work because of injury and/or illness by a doctor.[33]

Payments

One researcher reported, 'In the Far East of Russia there are hundreds of crewing agencies and most of them accept bribes (or commission) in exchange for a job. A lot of seafarers, except highly qualified people and high officers, have to pay. The price ranges from US$200 to US$500. One third officer named Dmitriy, paid one month's wages for placement on an FOC tanker, with a good salary, after he graduated from the Far Eastern State Marine Academy. An electrical engineer, Alexey, paid US$400 to be placed on a fishing vessel.'[34]

There are many documented instances of fishers having to pay a fee for the

job, being responsible for the costs of joining the vessels and the costs of repatriation, and having the contract of employment changed when joining the vessel. The employment may be for up to two or three years, with few opportunities to leave the vessel, and with the fishers being required to transfer to another vessel while at sea. The employment of many of these fishers is a form of bonded labour. In other cases the fishers may be migrant workers or political refugees, whose status prevents them from being able to exercise what rights they may otherwise have had.[35]

One of Brennan's interviewees had left his home in Burma, hoping to find work across the border in Thailand. At the Burma-Thai border he met an agent, a Burmese man, who said there were factory jobs in Mahachai. Once in Mahachai, the story changed:

> The agent said everyone should work on this boat. Interviewee 12 had never been to sea before, but he had heard that the work on boats was hard. He was nervous about it, but felt trapped. 'I had no choice; I had to go on the boat. I owed the agent.' The agent told another man from Burma that he could have him arrested for being an undocumented migrant if he didn't go on the boat. Interviewee 12 had also heard from others that the agent had gangster connections. 'The agent was friends with gangsters. I thought they might hurt me,' he explained.[36]

The captain on the ship of another of Brennan's interviewees beat members of the crew with a metal pipe, and more than one man was beaten to death. This captain targeted 15 crew members who he claimed owed an 'agent fee'. This interviewee had found the job on his own, without the help of an agent, and was always spared. All crew members were fearful of the captain, who had a gun. The interviewee recalled that some of the 15 who were regularly beaten talked about committing suicide.[37]

One of Yea and Thio's interviewees said:

> I experienced all hardships in that eleven months on the boat. When my ship docked in Singapore again I asked to leave and they [the captain] agreed. When I asked the agency, they also agreed provided I pay my debts and the plane ticket home. I never got a single cent in salary from them because, they said, it all goes to pay my debt for breaking my contract. Only the master [captain] of the boat gave me SGD550. It's fine if I don't get a single cent from my agency and I'll answer for my ticket home. I just want to be able to go home without a hitch; it's enough to be able to go home.[38]

Contrary to Terms

Another interviewee said:

> In my contract it says 8 hours of work but it became 18–20 hours [a day]. They

> [the Philippine agency] said I would be working on a cargo tanker [a seafarer's position]. They promised me USD350 per month as salary, but I only got USD200 and deductions from that. We have colleagues back there [on the boat] that want to leave but they can't because the agency in Singapore didn't fix their immigration status. They are here as tourists.[39]

And another ('Wayne') had this story:

> They [the Philippines agent] said we are going to get USD200 per month plus a USD50 allowance for food. But no allowance was given and then they subtracted USD50 from the salary. The agent [name deleted] said the boat will dock for three months [meaning every three months] but I was at sea for two years without it docking. The captain won't give us our passports back, even if we want to leave. The agent never explained how hard the work is. We have to pull the big fish out of the ocean manually and we only get 2–3 hours sleep a night.[40]

No Contracts

On 10 October 2000, the São Tomé and Príncipe-flagged long-liner *Amur* sank in sub-Antarctic waters off Kerguelen. The vessel was known to be unseaworthy and most crew members had neither proper contracts nor insurance cover. The life-saving equipment did not function and 14 of the crew of 40 drowned, unable to escape from cabins located in dangerous parts of the ship.[41]

Indonesians working for foreign fisheries companies are also known to suffer from a lack of legal protection because of inadequate employment agreements. In a case being investigated by the Indonesian affiliate of the ITF (KPI), 28 fishers were recruited by the PT Baruna Siwa agency in Bali to work on the *Ianthe*, operated by the Micronesia Longline Fishing Company. During their three-year period of employment they received no wages. They had no collective bargaining agreements or individual contracts.[42]

David Browne reported of migrants that 'Once on board a Thai fishing boat they are issued with false Thai documents, and work back-breaking 14–20 hour shifts for US$50 a month. The lucky ones can get paid a US$9,000 end-of-contract bonus; but only after a three to five year voyage.'[43]

Robertson's research on fishers working in Thailand suggested that written contracts are not used by Thai fishing boat owners and all employment is on the basis of verbal agreements between boat owners or boat captains and the fishers. In the absence of a written contract, the fishers are effectively excluded from social welfare provisions, such as the social security scheme.[44]

It also found that the vast majority of migrant fishermen on Thai fishing boats are undocumented, having entered Thailand in violation of immigration laws and never registered under the Ministry of Labour's periodic migrant registration schemes.[45]

CHAPTER 10

Abuses and Slavery at Sea

Introduction

The fraudulent and deceptive contracts described in Chapter 9 mark the beginning of conditions of slavery for many migrant fishers. This chapter traces the ongoing processes. Abuses do not occur on every fishing vessel. There are responsible owners and good skippers everywhere. Many differences do occur between flags and regions, but because of the wide distribution and sheer numbers and types of abuses involved they can be appreciated only by giving selected examples. We include several case studies, and there is list of examples, under alphabetically ordered headings, in the Appendix at the end of this chapter. They include references to abandonment, abduction, bad food, beatings, coercion, child exploitation, deaths, debt bondage, being driven to desertion, identity theft, murder, unsafe equipment and the withholding of wages. All of this violates ILO and human rights conventions (see Chapter 14). The main motivations for these violations lie in reducing operational costs and increasing profits, as well as gratuitous cruelty and even sexual abuse.

Many of the accounts of abuses are anecdotal, related by the individuals involved. Their identities have been anonymised because of likely retaliations, including harm to families, dismissal, and inclusion in blacklists. Such lists provide personal details and photographs which are circulated between manning agencies. Even the POEA keeps a 'watchlist' naming sailors who, presumably, it is thought an eye should be kept on in the future. Because of this it is even more difficult to procure witnesses to testify in courts. Even many injuries and illnesses go unreported at sea, and sometimes a sailor no longer on board on arrival in port is simply noted as 'disappeared'. There are no crew lists kept which can be consulted for names and addresses. Nevertheless there is sufficient consistency between the instances sourced from reports and statements to confirm the veracity of accounts of the terrible abuses on many fishing vessels, even if quantifiable data is limited.

After describing the joining experience the narrative expands on two of the abusive practices which are of most concern internationally. These are the abandonment of seafarers in foreign ports and the exploitation of children at sea. Although most of the abuses referred to and listed are related to places in the developing world, this is not entirely the case. There are also some such events in developed countries, especially where migrant fishers are used. Cases

drawn from New Zealand and a few from the United Kingdom are cited. Also to provide a balance there are accounts of the experiences of fishers on vessels where, for all the hardships involved in working at sea, there was no abuse of the crews. These are drawn from locally owned vessels, manned by local fishers, and fishing mainly in local EEZ waters.

Joining the Ship

On 25 March 2011 Yusril (not his real name) became a slave hired by an Indonesian agency to work on a South Korea flagged fishing vessel. He had put his name on a waiting list nine months earlier and paid an agent a fee of US$225 which he borrowed from his brother-in-law. In addition to the agent's commission Yusril was to surrender 30 per cent of his salary to the companies. He would be paid nothing for the first three months, and if the job was not finished to the fishing company's satisfaction Yusril would be sent home and charged $1,000 for the airfare. The meaning of 'satisfactory' was left vague. His family would owe 'nearly $3,500 if he were to run away from the ship'. He had 'already submitted title to his land as collateral for the bond'. Additionally he had provided the company with 'names and addresses of his family members'. He was 28, his wife was pregnant and he was 'locked in'. Yusril had no option but to join the ship under these conditions as he desperately needed the work.[1]

Recruits are taken to a staging place then brought to a boat. Co-author Bruno Ciceri describes a typical fishing craft:

> Old and rusty, inside cargo hold and freezers take up most of the space, cabins for the crew are small without ventilation and space to move around, mess room for eating and recreation room non-existent, kitchen and pantries very dirty, water tank rusted, safety equipment such as radio, fire extinguishers, lifeboat or lifejackets are old and sometimes unusable.

When fishers finally get on board they will not know if the ship is to be away for months or years, and they will usually have to surrender their identity documents to the captain before sailing. The main purpose of this is to deter them from jumping ship when in a foreign port. They are told without proper papers they would be arrested as illegal entrants and go to jail, or they might be beaten by the police and returned to the ship for further punishment. Reporting sick to obtain medical attention ashore would not succeed either. Even those with genuine illnesses or injuries are concealed from the scrutiny of port health authorities before arrival. Rebecca Surtees describes the conditions of Ukrainians on Russian illegal crabbing vessels. Their slavery commonly started from the first day of arrival on board, and there was no chance of escape.[2]

The Experience of Abandonment

A most worrying aspect of the job for fishers is the prospect of being abandoned in a foreign country. This can occur when vessels are arrested for illegal fishing (see Chapter 6) or when a company has declared itself bankrupt, or even after a marine accident to the ship; and it also happens periodically when the fisher is considered inadequate, ill or 'difficult'. The welfare of the crew could be totally disregarded by agents, owners and flag states, neglected by consular officers, and the skipper may be immediately prosecuted by port state authorities for abandoning the vessel. Crews can be left in port without food, water or wages, and with few prospects of returning home. Skippers may be taken into custody and fishers not allowed to go ashore in the absence of official identity papers.

In the course of time, possibly months but on occasion for years, an arrested vessel may be sold by court order. Many creditors can appear, but depending on the legal system some crew wages may also be recovered. If in the interim the crew has been deported there will be little chance of receiving remuneration. At the stage of the sale of the vessel the original owner may reappear in the guise of another company and buy the ship at reduced cost and debt free. An example of abandonment is drawn from South Africa, where ten fishing vessels were under arrest during 2013–14.

In October 2013 the South African patrol vessel *Victoria Mxenge* brought into Cape Town seven ships that had been arrested for illegal fishing. In addition to tuna they had swordfish, dolphin and sharks on board. The skippers were held for a time in custody and the 75 Indonesian fishers confined on board. The conditions on the boats were already atrocious, and over the next three months they deteriorated further. The crews were left without money, food, electricity, fresh water or sanitary and washing facilities. Had they been criminals they would at least have been fed in prison.

During this period the ITF, Apostleship of the Sea and the Islamic charity Nakhlistan, along with local people, kept the crew alive. Meanwhile the acting ITF lawyer Alan Goldberg sought a court order for the ship to be sold and the crews paid and repatriated. The owners were unknown but believed to be a syndicate in Taiwan. This situation lasted for three months until at 3.00 am on 30 November immigration officers raided the boats and removed the fishers to an inland detention centre to await deportation as illegal immigrants.

By this time three other fishing vessels belonging to the same owners had been brought in under arrest. Again the conditions were intolerable, with some fishers having served up to five years without being paid. The coastguards described the ships as 'a living hell'. The crews said two other vessels of the company had sunk, and reported that two members of their crews had died from unknown causes. The boats carried 160 tons of frozen tuna. The cargo

could not be sold because of the law against marketing illegal catches. This situation was resolved by donating it to charities, but as with the other ships, the crew had no prospect of ever being paid. This was made even more unlikely when they also were removed from the vessels to a deportation centre. However before that two of the ships arranged an escape from Cape Town. The authorities requested Interpol to issue a 'purple notice' for their recapture, although it was more than likely the owners would have altered the names and registration of the ships and they would never be located.[3]

This account from South Africa is typical of abandonment by owners who belong to venture capital syndicates interested only in the bottom line, and who regard seafarers as merely factors of production to be disposed of at will. These abandoned seafarers can feel desperate, as they cannot survive on a deserted vessel, yet if they leave it they risk being deported and losing hope of payment. As one of the Cape Town crew said, 'I have a wife and three children at home, after all this time how can I return without even one cent to my name?' Fortunately in many ports local people, missions and trade unions can provide help in their attempts to live and seek justice. Even more unfortunate are crew members who are abandoned in remote locations such as Tual Island, as in a case which is discussed in Chapter 11, but also recorded in the lists at the end of this chapter.

Child Abuse in Fishing

An even more helpless group in the world of abuses at sea are children. They can be misused even in their own poor coastal communities. Even worse they are abducted into slavery on foreign distant-water fishing vessels. It is difficult to get details but there are a few publications that refer to some of this activity.

In small scale fishing (SSF) young children under 12 years old are often engaged in diving on reefs to collect shellfish, and some also make deeper dives to herd small fish into purse seines.[4] These activities are regarded as customary and they contribute to needed family incomes, but they can result in ear and eye damage, shark attacks and drowning. Older children aged between 14 and 16 are taken as members of crews on distant-water vessels. The Environmental Justice Foundation (EJF) study from Senegal reported that in:

> *pêche au ramassage* – kind of a mother ship – operations, distant water fishing vessels, often freezer trawlers from Korea, took on board pirogues along with young fishers from Saint Louis to undertake line fishing for a period of three months in the maritime zones of Guinea, Sierra Leone, Gabon, Ivory Coast and Angola before returning to Saint Louis after disposing of the catch in the Canary Islands. These fishers also included children below 15 years who changed their date of birth in their identity cards to make them eligible for work. After fishing

> up to midnight, fishers spent the nights on board the mother vessel in crammed sleeping facilities. They had poor quality food, inadequate drinking water, unhealthy living conditions on board, and were denied treatment ashore at times when urgent medical attention was needed.[5]

There are also accounts of abductions and sexual abuse of children at sea and in ports. Kiribati in 2003 banned all Korean fishing boats entering ports (island lagoons) after reports in the *Korean Herald* that from 30 to 50 girls, mostly underage, were servicing the Korean fishers. The UN Office on Drugs and Crime (UNODC) also reported on owners hiring children aged 9 to 14 for US$7 to US$21 per month for deep-sea fishing voyages of two to three weeks on Pakistani boats, where they were used for sexual purposes [6] (see also Chapter 5).

Abuse of Migrant Fishers in New Zealand

It is not often that a full account of slavery on an organised large scale is documented. New Zealand provides a case in point. New Zealand has the sixth largest EEZ in the world. In line with UNCLOS the government permits some foreign vessels to fish in the EEZ. This has taken the form of NZ companies time-chartering foreign vessels with foreign crews to fish for their quotas and share the profits. Sometimes there are from 35 to 50 such craft, with total crewing of 2,500, doing this. The vessels are owned by companies from South Korea and other foreign countries including Russia. The crews are recruited for these foreign companies by agencies in Indonesia, the Philippines, China and the Ukraine. In addition in the EEZ there are NZ-owned ships with NZ crews. There are vast differences in the pay regimes between these vessels, and even more so in the conditions on board.

From the late 1990s complaints of serious abuses began to percolate shorewards from these ships. By mid-2000 these were extensive, with accounts of starvation, physical and mental abuse, sexual harassment, working days of 18 hours or so, illnesses, cheating on deductions from pay, debt bondage, and failure to make payments to families.

The New Zealand government has legal authority over the resources of the EEZ, but had not in the past seen the necessity or the legality of exercising control over exploitation and abuse conditions or wages on board foreign vessels in the EEZ, which for such purposes is regarded as the same as the high seas. These onboard aspects fall under the authority of the flag states only. As in other cases, the skippers of the Korean vessels told the crew that they were under Korean law and had no legal basis for making any complaints to New Zealand authorities, only to them. As far as NZ chartering companies were

concerned, the crews were employed by agencies in the countries from which they were recruited by the owners of these vessels.

Very detailed reports started to come ashore of fatigue, accidents, beatings and sexual assaults on the chartered vessels. The crews were mainly from the Tegal region of Central Java, one of the poorest areas of Indonesia. They were coerced into silence and their families threatened. However investigations were conducted by campaigners such as Daren Coulston, a former fishing skipper, and barrister Graig Tuck, who set up the organisation Slave Free Seas in New Zealand, as well as by trade unionists and the academics led by Christine Stringer of Auckland University Business School.[7] The success in getting recourse in law for the enslaved fishers on NZ-chartered ships is covered in more detail in Chapter 11.

Migrant Workers on Scottish Fishing Vessels

As noted in Chapter 9, the most important sectors of UK fishing are in Scotland. Pelagic fishing for mackerel and herring is carried out largely from North-East Scotland and Shetland, mainly from 24 large technically advanced vessels, all over 60 m in length. Demersal fishing for cod, haddock and whiting is carried on by 300 or so medium-sized vessels, which are the remainder of a fleet reduced by over 60 per cent in the period 2001–03. There is a wider spread geographically on the east and west coasts of 1,500 or so smaller craft engaged in near-water fishing for nephrops (langoustine), lobsters, crabs, razor clams and scallops. The reductions in fleet sizes, although not necessarily in power of vessels, have been underpinned by regulations reducing days at sea per vessel. This has caused owners to seek more economic operational methods.

The Scottish fishing industry has in fact been praised in recent reports for its organisational efficiency, and by the Marine Stewardship Council for responsible fish sourcing (2013).[8] These observations presumed that the 'black fish' incidents of 2005 (see Chapter 6) had been brought to a close. The reports also overlooked conflicts in the near-shore small-scale sector between fishers using different types of gear, and also serious abuses of fishers offshore by a minority of owners in the demersal sector of Western Scotland and England which were bringing the industry into disrepute.

In the small-scale sector on the coast of Scotland and England there were local migrant fishers using pots and creels for lobsters and crabs, and larger boats trawling across this gear for prawns, and even more so in the dredging of scallops. This also reflects the debate between dredging and diving in taking scallops. There are claims that one or the other method depletes the stock faster, and in the case of dredging that it destroys the sea bed and related ecosystems. As already noted in Chapter 6, there is also the involvement of criminal gangs

in electrofishing for razor clams. All of this has resulted in conflicts, legal claims and social consequences. When it comes to the welfare of offshore fishers there are wider sociopolitical issues which have a close resemblance to the situation in New Zealand.

The globalisation of labour has resulted in about 60 per cent of Scottish vessel owners employing non-EC fishers drawn primarily from the Philippines, and also some from Indonesia, India, Sri Lanka and Ghana. There are also those from EU states in Eastern Europe, including a few skippers from Poland. The need for recruitment from outside the United Kingdom is attributed by owners to seeking economies and difficulties in obtaining labour in the United Kingdom for fishing. There is for example a reduced supply of labour from parts of the country that were once sources of reliable young men and boys from traditional fishing families. Today's British young appear reluctant to become fishers, for reasons that include the unattractive images of work and life on fishing vessels, media accounts of physical abuses at sea, awareness of information such as average losses of 25 boats per year in British waters, the incidents of fatal accidents being much greater than in other manual occupations, the uncertainty whether fishing is viable as a long-term occupation, fluctuating wages under the share system, and the availability of alternative work in the North-East of Scotland in particular.

The organisations for recruiting and training young people for fishing provide a wider view:

> there is always a number of boys that are interested in going to the fishing. The primary obstacle, increasingly, is a lack of boats (or skippers) that are able to take on trainees. The primary reason for this appears to be financial. Given the increasing burden of regulation, and in particular the limits on the amount of time boats can spend fishing, some skippers don't feel that they can afford to pay a trainee. Others are reluctant to take on a trainee when they don't feel they can offer them a place once their training is complete. The availability of cheap foreign labour is also a factor. Our impression is that the situation is similar – or perhaps even worse – elsewhere.[9]

In the place of locals there are the ubiquitous Filipinos. More than 1,000 have worked on Scottish boats from 2008 onwards. They want the work, are reliable and many are experienced fishers. They adapt to the hard labour in the conditions of the North Sea and Atlantic and are much cheaper to employ than British fishers. As far as wages are concerned they are generally satisfied with what they receive provided the pay reflects what they had agreed with the agencies that recruited them. Many of the migrant fishers have established real friendships with Scottish crews and skippers. They see the Scots as mainly decent people with traditions and respect for fish and fishers. On the other hand there is also greed and exploitation in at least part of the industry, similar to that elsewhere

in the world. This was referred to in the contract section outlined in Chapter 9. Some more examples related to the worst offenders, who are earning particular notoriety and damaging a good deal of the industry reputation at home and abroad are given below. In these cases names of companies and people have been anonymised. The information has been derived from welfare, ITF and local interviews.

In the UK examples, unlike the situation in New Zealand, there were no regular acts of violence or sexual abuses reported. The complaints cited related to overwork, fatigue and unpaid wages. For example, several Ghanaian fishers were fired from vessels (whose names were deleted in the reports we have seen). They were dumped at Newcastle Airport on 21 February 2011 without money. Similarly, a Sri Lankan fisher who had paid highly to obtain his job (again, on a boat whose name was deleted) was dumped at the airport on 25 April 2012. He made his way to London and contacted the ITF, which helped him to recover his wages due along with his fare home. Similarly, four Filipinos were rescued by the Mission after having been fired from their ship and repatriated by the UK Border Agency on 4–5 May 2012.[10]

Investigators observe that the same few fishing companies involved in the abuse of fishers have also breached UK health and safety legislation, and have been guilty of putting the life of local and migrant crews at risk, as well as having previously being fined for illegal fishing.

Unfortunately for them, migrant fishers who wish to continue working on Scottish vessels after losing a position might no longer be able to do so since, as detailed in Chapter 9, they typically hold only temporary visas which do not permit them to work within the territorial sea limits. They are not given work permits that do allow this unless it is shown that it is absolutely not possible to obtain UK/EU labour, and even then exceptions are only made if they come into the 'shortage occupation' list of skilled workers.

Home Region Fishers in the Philippines and Indonesia

In contrast to the migrant fishers working on distant-water craft, local fishers, while they are paid much less, register few complaints about serious abuses. The following account of EEZ fishing by local vessels in the Philippines during 2013 is drawn from interviews and observations made for this study by Dr Nelson Turgo, who also provided the translations from Tagalog. The vessels he studied are in the 'commercial' category of 80–120 tonnes. These fish mainly in the EEZ out of local ports but on occasions go into Indonesian waters, and they also fish illegally in the parts of home waters reserved for small boats. This commercial sector involves around 17,000 fishers and catches some 1 million tonnes per annum. It is very different from the million and more fishers on small boats

(below 3 m in length) in numerous communities which come into the category of 'municipal' fishing, and catch about 1.3 million tonnes in coastal zones. These are amongst the poorest people in the country (see Chapter 5).

This commentary regarding the commercial sector focuses primarily on the accounts of two fishers, each about 65 years of age, who have spent most of their working years on these boats. These elderly fishers describe a life that is hard and often dangerous, and in which they have witnessed several fatal accidents. They show there were sometimes written contracts given, but otherwise there are generally informal agreements with the many small companies. These agreements are nevertheless quite binding. During a year there was no stipulated or paid leave, but they could come and go by arrangement. In the working year there would be time off of about three days to rest each month during the light of the full moon (when fish will not rise). There were no health subscriptions or pension schemes provided by the companies that they knew of, although they could have paid for these themselves. However, as one said, 'I did not know how to enrol.' Wages were relatively quite good and regularly paid, sometimes with a catch bonus or a gift of rice. In 2013 they earned P15,000 (US$400 per month), compared with the average wage for a manual worker of US$167 per month equivalent.

Relationships with companies were usually good, there were no manning agencies and men would stay with the same firm for a long time. The companies were often family owned. On-board life was tough but they never experienced any abuse. One said:

> We were all Filipinos on board, they were usually from Cebu. I did not have any problem with my captains. They were all good, you just have to follow them and never disobey them. The captain is the highest authority on board and he must be respected. Danger is always present wherever we go and we have to look after ourselves.

The other in a different interview said:

> In my past and present ships, all masters were very nice. The management saw to it that the masters were following rules, not abusing people. The owner was a disciplinarian. We were not allowed to drink liquor on board when we were in the middle of the sea.

These men, and others, agreed this was a better life than going foreign, even if the wages were much less.

Somewhat similar views were expressed by Indonesian fishers when comparing conditions as migrant workers on foreign vessels with those on local craft. Edison Hutasoit of the Indonesian Seamen's Union recorded the comments by Tjunadi, a Javanese seafarer who worked only ten months of

his two-year contract on a Taiwanese trawler. 'The work is hard', he said. 'You have to work fast, up to 24 hours a day, or they get angry. You don't sleep. You are standing the whole time. Sometimes the master is really cruel. No one dares stand up to the captain. He can send you home without your wages or confiscate your passport.'

Tjunadi had been a seafarer since 2001 and after leaving this job was content to work for low-pay piece rates on traditional vessels, which only venture out to sea for a day and a night. He explained, 'My wages were $300 a month [on the Taiwanese vessel] but while the money I get now isn't much [$20–50/month depending on the catch], I prefer to work here.'[11]

Conclusion

Whatever the causes, and allowing for the limited data, the contents of this chapter indicate a distinct trend in the increased employment of low-cost labour on distant-water fishing vessels. This is accompanied by multiple abuses ranging from loss of identity to loss of life in vessels under many flags and ownerships. Often, but not always, fishers on these craft are threatened into silence, as will become further apparent in Chapters 11 and 14.

What can be seen from the present chapter and in the list in the Appendix giving more examples of abuses and slavery at sea, is in effect the third stage in the processes of abuse and degradation of migrant fishers, which follows through from deception and trafficking, to holding in confinement at a port, then slavery on board. The worst situation in this third stage is for those held in isolation on the vessels engaged in transhipments of catches at sea. They are outside the law and at the mercy of skippers who act as enforcers of forced labour. The most vulnerable of all these are those on vessels engaged in illegal fishing, since if the boats are arrested they will be abandoned, and eventually deported without wages and with a criminal record. It is little wonder that crewing is difficult in many places, and fishers prefer the low wages and relative security under national flags in home EEZs to employment as migrant fishers, unless they can work in places where there is scrutiny and there are fair-minded skippers.

Appendix: Evidence of Abuse and Slavery

Abandonment

Tual, Indonesia, has been home to around 1,000 Burmese fishers for over two years. Discharged from their Thai-flagged vessels, most did not have their travel

documents, which were kept by the vessel owners or by representatives of Thai fisheries companies in Tual. As a result they found themselves frequent victims of extortion by local security and immigration officers.[12]

Not only is FOC fishing causing damage to ocean life, there is a deadly human cost also. A report by M. Gianni and W. Simpson highlights these abuses using examples associated with IUU fisheries in the Southern Ocean, including the abandonment of crew members in foreign ports, forced labour and safety issues. In one case, a fishing vessel, the *Amur*, sank in the sub-Antarctic waters off Kerguelen Island. The lifesaving equipment did not function and as a result, many of the crew died.[13]

In Tuborg, Denmark, a fishing vessel was abandoned on 10 November 2008. All the Russian crew were repatriated at their own cost. It sailed under the flag of Sierra Leone, and the owner had become bankrupt. Seven months' pay was outstanding, and no provisions had been supplied. The vessel was previously named *Viktor* and registered in Cambodia.[14]

The *Taelim Jasmine*, under the South Korean flag, was abandoned on 20 November 2007. It had a crew of eight: one Indonesian, four from South Korea and three from the Philippines. Some of the Filipino crew had not been paid since that April. Some of the crew's employment contracts had expired, and others had been taken off by the management company in Korea. The crew had been required to work in excess of 14 hours a day, and the owners had refused to give them shore passes so they were unable to make complaints about their treatment. In effect these crew had been abandoned into slavery.[15]

The *Egalabur*, sailing under a Spanish flag, was abandoned on 28 September 2004 at Villagarcia. Spain. It had a crew of four Senegalese.[16]

The *Leda,* an Ukrainian vessel, was abandoned on 3 September 2004 at Conakry, Guinea. Its crew of ten were all Ukrainian.[17]

The *Maurits Tuna*, sailing under the flag of Mauritius, was abandoned on 21 September 2009 at Port Louise, Mauritius. Its 18 crew were all Indonesian, and claimed the vessel had been left at Port Louise by the ship owner since August of the previous year. The owners had stopped provisioning the vessel, which had a serious shortage of fresh water and ship stores. Some crew members stated their desire to go home by paying their own transport but they could not do so until the ship owner paid their outstanding wages. At the time of the report food was being provided by the local Stella Maris (seafarers' aid association).[18]

At best, abandoned seafarers are subject to cruel, inhuman and degrading treatment; at worst, they find themselves in life-threatening working conditions with no means of subsistence. In most cases of abandonment, crew members have not received wages for months, sometimes years, and are effectively subject to forced labour. They suffer the indignity of relying on the charity of local people and welfare organisations. Without a wage being remitted, some

resort to money-lenders and find themselves doubly under pressure from spiralling debts. In some cases, the crew are manipulated by a combination of vicious threats and empty promises.[19]

Abduction

According to Mirror Foundation investigations, the problems of meeting the demand for labour have fishing syndicates resorting to abduction: press-ganging men at gunpoint, spiking their drinks in karaoke dives or, in one case, subduing two teenage brothers with chloroform rags in the urinals at Bangkok's bustling Mor Chit bus station. But the preferred method relies on foreign coyotes (recruiter/traffickers).[20]

In South-East Asia government officials confirmed that the recruiters use aggressive coercion methods such as abductions and the use of drugs. In some instances the victims are promised work in a factory but are subsequently 're-sold' to another broker who sells the victims to a ship operator.[21]

Abuse, General

In September 2005, ten Indonesian fishers scaled the port company's security fence in Port Nelson, New Zealand, seeking protection from the abuse and inhumane conditions on board the *Sky 75*, a Korean-registered fishing vessel over 30 years old. The crew complained of constant verbal and physical abuse, and excessively long working hours. They had been fed bad food, with rotten meat and vegetables. They slept twelve to a cabin, had no blankets, and for washing were told to stand on deck and 'shower' in the waves. There was no medical provision on board, or protective clothing, and the crew gave the example of one of their number who crushed his arm in some machinery and was told to carry on working, without treatment. In addition to the indignity and discomfort of their working and living conditions, the crew had not been paid since joining the vessel in July 2005. Each had paid over US$600 to a Jakarta manning agent to secure their jobs.[22]

EJF investigations on board IUU vessels in Sierra Leone and Las Palmas found examples of poor or nonexistent safety equipment, inadequate hygiene standards, and extremely poor food and accommodation standards.[23]

Some victims are picked up by police or immigration officials instead of brokers, which sometimes leads to arrest, fines, caning and deportation.[24]

Another fisher trafficked onto a boat was told by the captain, 'I killed the guy that you are replacing, if you try to flee I will take care of you too .... your broker took your advance, so you are not allowed to go anywhere and will be here for many years.' He only was able to escape when the

boat was seized by the Malaysian Marine Police for illegal fishing, and the authorities held him for five months before sending him back to Thailand.[25]

Surtees quotes an informant who said, 'It was slavery-like conditions, people could not stand it any longer and tried to escape to the shore. But these criminals had it all covered there because the local police caught the seafarers [who escaped] and brought them back to the ship.'[26]

Beatings

Miscommunication is the norm between Thai captains and their captives from Myanmar or Cambodia. Failure to understand a command can provoke beating, maiming or worse.[27]

On 26 September 2005, six Chinese fishers jumped ship from the *Tunago No. 61* in American Samoa. They gave eyewitness accounts of daily physical abuse and death threats on board the fishing vessel, including 'receiving beatings sporadically and systematically every day at the whim of the skipper and his brother, the chief engineer'. They sought assistance from their company's agent but no advice was forthcoming. They were turned away from the police station and eventually took refuge in the Pago Pago Seafarers' Centre, which alerted the ITF to their plight. The men were also subjected to death threats by the skipper.[28]

In 2009 the UN Inter-Agency Project on Human Trafficking (UNIAP) interviewed 49 Cambodian trafficked workers about the working conditions on board 'slave ships'. Eighteen per cent of those interviewed were under the age of 18 and had been children when they were first recruited. They reported daily beatings and a culture of bullying and intimidation amongst the Captain and senior crew members. Fifty-nine percent of the victims claimed to have witnessed a boat captain murder a crew member. One 19-year-old victim witnessed two separate incidents in which a Thai captain decapitated a member of his crew.[29]

Yea and Thio reported that Filipino and Indonesian crew were routinely punished if they were found resting during work time or if their work was not carried out quickly enough. The punishments were usually in the form of beatings (kicks, punches, slaps) by either the captain or the officers. The captain drank heavily and would further abuse the men when he was drunk. It was difficult for the men to keep up with the pace of work required of them since the six hours rest they agreed to when they were recruited was not followed. In addition to physical abuse, fatigue from lack of sleep and food served to them that was rotten or expired were the main complaints of the men.[30]

Yea and Thio also told of RL, a migrant worker from Cambodia, who was seeking to go to Songkhla to join his relatives but was cheated by a Cambodian broker named Ra who arranged to sell him to a fishing boat in

Mahachai. However, he was able to escape. While trying to find his way to Songkhla, he was tricked onto another fishing boat in Bapanang district in Nakorn Sri Thammarat, which then went to Indonesia. He worked 21 hours a day, with only three hours to eat and sleep, and was severely beaten four times over the course of two months by the Myanmar crew chief for making mistakes, not working hard enough and urinating while working. RL was never paid for his work and was only able to escape because a 'relative' working on a *reua* tour boat recognised him and arranged to pay the captain of the boat 13,000 baht for his release.[31]

De Coning quoted a Filipino fisher:

> We were taken by force to work even we were sick. We were denied access to medication and treatment .... We were given very little food and water. Most often we drink dirty water, so that some of us constantly suffer from severe stomach ache and diarrhea. We work 20 to 22 hours daily but were only allowed some two-hour night sleep .... We were hit like animals every time we commit errors in our work.[32]

According to a 2010 US Department of Justice *Trafficking of Persons* report (cited by de Coning), the following account was made from Timor-Leste:

> Male victims are forced to labour on fishing boats with little space, no medical care, and poor food .... Victims report traffickers subjected them to threats, beatings, chronic sleep deprivation, insufficient food and fresh water, and total restrictions on freedom of movement – victims on fishing vessels rarely or never went ashore during their time on board.

(Neither the victims nor the fishing vessels were from Timor-Leste.)[33]

EJF evidence shows a close relationship between human trafficking and IUU fishing, with migrants reporting their boats were regularly operating illegally and fleeing patrol boats in foreign waters. This is a symptom of a wider lack of regulation and transparency in the Thai fishing industry, with ineffective enforcement by Navy patrols and little information on the activities and locations of fishing vessels. One informant said, 'They said I could not do my job very well and I was beaten. We dare not talk back or make any complaints. When our boat went back to shore, I was sold to another boat and I was beaten on that next boat as well.' Another comment was, 'After three nights we were told that one of us would be executed. We had to draw straws to decide who would be killed. If the police had come one hour later we would have been killed already.'[34]

Bondage

Interviews in the fishing town of Mahachai in Samut Sakhon found that the most common problems that fishers faced in the workplace were not getting

paid their full salaries, not getting paid their salaries on time, receiving threats of violence from their boat captains, and being stuck in situations of high debt that made them feel trapped in their current situation, also known as debt bondage. Other problems reported by migrant fishers were threats of violence by their employers and boat owners, actual violent or physical abuse from someone in authority over them, not receiving compensation for sicknesses or injuries sustained at work, being forced to work even when sick or injured, and not being allowed to leave their places of employment.[35]

Children

Mathew reported that:

> The children work as fish sorters, porters, factory workers, as crew on fishing vessels away at sea for several months at a time (e.g. Thailand); and are employed in handling and repairing nets, diving, draining boats and cooking (e.g., Indonesia; India, Ghana). Girls and women are engaged in fish processing including salting and drying, and fish marketing. There are reported cases of employment of children below 15 years in fish processing factories in Thailand in activities such as peeling shrimp, drying, boiling and shelling various types of seafood (Solidarity Center, 2007).[36]

In Bangladesh, there are reported cases of indentured children below the age of 15 years being employed to unload fish from vessels operating fixed bag-nets in the Sundarbans, and in sorting, loading and drying them.[37] In India, young persons until recently were employed in canoe-based purse-seine fishing on the inshore waters of Kerala. In Cambodia, children are employed full-time in night fishing as well as in multi-day deep-sea fishing. In Ghana, cases were reported of children being traded as commodities for monetary benefits through intermediaries to faraway destinations unknown to both parents and the children to work as fishers.[38] In Senegal, children below 15 – the legal minimum age for fishing – comprise one-third of the labour force in capture fisheries, in boat-building and repair services, outboard repairing workshops, fish processing and in the fish trade, according to a 2002 study.[39]

In Egypt, in the Governorates of Port Said, in Fayyoum on Lake Qaroun, Beheira and Kafr el-Sheikh, children were reportedly employed in inland and marine fisheries, including multi-day fishing operations. They worked as full-time hand-crane operators in fishing quays, and as workers in boat-building yards. They worked on board fishing vessels as well as in the maintenance and upkeep of these vessels. There were reported cases of drowning and sexual abuse of children on board fishing vessels. Fishers reportedly liked to employ children because they accepted lower wages. There were also reported cases of trafficking of children employed in fishing who ended up with criminal gangs in Italy and Greece.[40]

De Coning gave examples of tasks performed by children in the Cambodian fishing industry:

> Children and young people engaged in fishing did several different activities. Those who fished on a small boat stayed out at sea for about 10–11 hours, mostly during the night. Others joined larger vessels with refrigeration facilities and worked for longer periods at a time, which can range from two to three days a week or sometimes even more than one or two months. Many more children repaired fishing nets or peeled raw shrimps/crabs on the wharfs. Some peeled shrimps or crabs at home. Children worked at the ports to carry frozen sea products from the boats to trucks to be transported to a factory.[41]

De Coning also reported on sexual exploitation of children in the deep-sea fishing industry in Pakistan:

> SEHER, a Quetta based NGO, with support from Save the Children UK and Save the Children Sweden sent a fact-finding mission to Gwadar district to study the situation of children employed in deep-sea fishing. The team visited the high concentration fishing communities at Kumadi, Mullah Bund, Koh Ban and Sur Bandar areas. Over the years, the subsistence fishing in Gwadar has been replaced with the commercial fishing, using launches and trawlers. The commercial fishing approach turned the conventional way of fishing from small simple nets to large wired nets, increasing the time span on the sea and from small family business to larger commercial enterprises. The fishing launches have usually 15–20 members crew (having distinct responsibilities), including boys as young as 7–9 years. Children are usually employed as Walaeds .... Interviews with some former Walaed revealed that in the camouflage of helping the cook, the children (Walaed) are sexually exploited by the adults on board. On some occasions, 5–8 adults may have sex with a single child during the fishing trips, exposing them to the risks of genital trauma and sexually transmitted infections, including HIV/AIDS.[42]

Many IUU vessels are quite literally out of control. EJF has documented their fishing inside exclusion zones, destroying artisanal fishing nets, attacking local fishers, using child labour, covering their identification markings, using banned fishing equipment, transhipping fish illegally at sea, and fleeing to neighbouring countries to avoid fines and sanctions.[43]

In a report entitled *Sold to the Sea*, the EJF exposed severe human rights abuses associated with human trafficking in Thailand's fishing industry and documented the testimonies of Burmese workers, as young as 16, who were forced onto fishing vessels for many months and subjected to arduous, often violent, working conditions without pay.[44]

Higginbottom reported that the problem is on a colossal scale, but largely unreported. Pirate fishing, or more precisely IUU fishing, accounts for lost revenue to the legitimate fishing industry of up to US$23.5 billion per year. In Africa, the losses are around US$1 billion, which is a huge sum to poor communities reliant

on the fishing revenues and source of protein. EJF staff found Senegalese staff as young as 14 aboard the *Marcia 707,* a South Korean-flagged canoe-support vessel, in Sierra Leone waters. When EJF officers boarded the ship they found a makeshift structure used to house up to 200 people, including the child fishers, in cramped and unsanitary conditions. The young boys told the officers about how they had been picked up by the South Korean vessel in Senegal and were forced to work on the boat for three months at a time.[45]

Conditions, living

Despite the fact that the fishing industry in Thailand is an increasingly sophisticated and multi-billion dollar industry, the working conditions for many fishers continue to be extremely gruelling and even life threatening. Many fishers have reported working 24-hour shifts with as little as two or three hours of rest in between such shifts.[46] Fishers are only provided with very small living quarters, they face constant shortages of fresh drinking water, and they are often forced to work even when they are fatigued or ill.[47]

The EJF reported that on the Korean-flagged *Apsari 3*, for sleeping quarters eight men shared a small area of the hold which had four bunks made up of planks and cardboard. Four would sleep in the windowless space that led directly into the fish hold while the other four worked their long shift.[48]

EJF reported that the poor treatment of crew on board IUU fishing vessels operating in West Africa is not limited to *Marcia 707* and *Apsari 3* (described elsewhere in this list). EJF investigations on board IUU vessels in Sierra Leone and Las Palmas demonstrated further examples of poor or non-existent safety equipment, inadequate hygiene standards, and extremely poor food and accommodation standards.[49]

See also Higginbottom's comments cited under 'Children' above.

Conditions, working

See Schultz's report under 'conditions, living' above.

Schultz also commented that migrant fishers are also vulnerable because of the very nature of their work. The boat captains have absolute power over their crew while they are out at sea, and there are many recorded instances where the captain inflicted severe abuse upon members of his crew.[50] This is especially true for long-haul fishing boats because they do not return to Thai shores for many weeks or months at a time, and it is not possible for fishers to escape or to receive assistance if their working conditions become unacceptable (as pointed out by UNIAP Thailand, 2011).[51]

Yea and Thio reported that working conditions on fishing boats are extremely

arduous. Fishermen are expected to carry out 18 to 20 hours of back-breaking manual labour per day, seven days per week. Sleeping and eating is possible only when the nets are down and recently caught fish have been sorted. Fishers live in terribly cramped quarters, face shortages of fresh water and must work even when fatigued or ill, thereby risking injury to themselves or others. Fishers who do not perform according to the expectations of the boat captain may face severe beatings or other forms of physical maltreatment, denial of medical care and, in the worst cases, maiming or killing.[52]

The ILO, citing numerous other authorities, reported that fishers have been forced to work for 18–20 hours a day, 7 days a week, in adverse weather conditions while operating hazardous machinery. Fishers may not rest for days when fishing grounds are reached. Accommodation can be inadequate, with reports of cramped living quarters without proper mattresses, blankets, ventilation and noise reduction. Hygienic standards are poor. Vessels may not have toilets and ablution facilities, and fishers are required to wash on deck in salt water. In some instances food is scarce, and fishers have had to survive on fish bait and rice, or rotten meat and vegetables. Fresh water is also rationed.[53]

Surtees outlined how the cook aboard a Russian vessel described the inhumane conditions of the seafarers he was exploited alongside. During the crab-catching period, they would sleep only five hours in three days. They would sleep right in the corridor while the ship went from one crab trap to another. In about 15 minutes or half an hour, people would just fall down in the corridor dressed, dirty and not washed. 'I would ask them: "Will you eat?" And they would reply: "No, no, let us have a short nap because we will go to work again and will not have time to rest."'[54]

Browne reported on some men illegally recruited into the Thai fishing fleet (along with tens of thousands of other undocumented Burmese working in the Thai fishing industry) who fled murder on the high seas and inhuman working conditions by jumping ship on Tual.[55]

The EJF report *Sold to the Sea* exposed severe human rights abuses associated with human trafficking in Thailand's fishing industry and documented the testimonies of Burmese workers, as young as 16, who were forced onto fishing vessels for many months and subjected to arduous, often violent, working conditions without pay.[56]

Death

In one particularly horrifying case reported by EJF, 39 Burmese fishers died aboard a Thai fishing vessel that lay adrift in Indonesian waters for three months without fresh water or food, as the Thai captain did not want to approach shore for fear of being arrested for illegal fishing.[57]

In January 2011, Take Part reported on a South Korean fishing boat that sank off the coast of Antarctica in 'mid-December', while in pursuit of Antarctic toothfish (which passes as Chilean sea bass). At least 17 fishers drowned, many of them Vietnamese. (It can be assumed that the ship was unseaworthy.) The body of Nguyen Tuong, for example, was returned to his home in the central province of Ha Tinh to be buried. His family suffered a great loss, but got lucky in one respect: Nguyen's return was accompanied by a payment of $16,000 from the LOD Human Resource Development Corporation, a Hanoi-based employment company that provides workers to international fishing fleets.[58]

In June 2005 the Ukrainian-flagged *Simiez* caught fire in suspicious circumstances in Montevideo. The eleven crew (nine Chinese, one Indonesian and their Ukrainian skipper) died in the blaze. Montevideo port authorities were reported to believe that the crew were probably locked in their cabins at the time of the fire.[59]

Brennan reported that 33 per cent of the workers in his sample group reported working under superiors who physically abused their workers, and half of them had personally experienced abuse at the hands of their employers. At least one man, Interviewee 3, saw men beaten to death. In addition, four workers reported that fellow workers became sick and died during long-haul trips.[60]

See also Brennan's reports outlined under 'Payments'.

The ITF targeted the 'ruthless exploitation of migrant workers' in a statement concerning the death of 39 Burmese fishers on board a Thai fishing fleet. They had been left without fresh food and water for 75 days. It was alleged that the owner and captain had ordered their bodies to be thrown overboard.[61]

Browne related this Thai fisher's story:

> One day we were lifting the nets and a squid fell on the deck. The skipper told my friend to pick it up, but he didn't understand him. The water from the pipe was running around the deck and the squid was washed overboard. The skipper came down and hit him with a pipe. My friend raised his hand against the first blow, and his hand broke. Then the skipper hit him with the pipe a second time. The second blow smashed his shoulder blade. Then the skipper smashed him again on the back of his head. My friend fell to the deck. There were other Thai workers near him. The skipper dropped the pipe, washed his hands and went back up to the wheelhouse. He ordered his people to throw him into the water. We saw he was still alive. When he went back to the wheelhouse, the captain took the loudspeaker and warned everyone who was watching: 'What are you looking at? Get back to work. If you want to end up like him, then behave like him!'[62]

The US Department of Justice described extreme instances of coercion in its 2007 *Trafficking in Persons* report, as de Coning explained: 'In August 2006, more than 30 Burmese fishermen died from infectious diseases and lack of medical care on fishing vessels found off the coast of Thailand; the bodies of victims were tossed overboard, discarded like common refuse.'[63]

Exploitation

In a 2008 report the ITF alleged (again, according to de Coning) that the transit visa system in the United Kingdom was being abused by fishing operators that allowed migrant workers to stay in the country without proper oversight in breach of the visa conditions. It claimed recruitment agencies and fishing operators actively used transit visas to hire crew who subsequently became victims of exploitation in the United Kingdom without 'accountability or protection for human and trade union rights'.[64]

Food

Surtees quoted a fisher's account: 'Food that was delivered for ten days was stretched out for a month. Food was extremely scarce .... There was almost no drinking water. We had to collect rainwater or melt snow. We had one bag of rice and five kilogrammes of meat for 22 people for one month and 15 tonnes of fresh water for one month.'[65]

Imprisonment (on board ship)

Whitlow claimed that in some cases the alleged abuses are extreme. A Filipino fisher told him, 'I was chained for thirty days, that is for two periods of fifteen days, in a two square meter storeroom. I was not only chained but also beaten up with a baseball bat.'[66]

As noted above, in June 2005 the Ukrainian-flagged *Simiez* caught fire in suspicious circumstances in Montevideo. Montevideo port authorities were reported to believe that the eleven crew members who died were probably locked in their cabins at the time of the fire.[67]

Surtees reported how seafarers (including fishers) trafficked to Russia had their freedom of movement restricted. They were not able to leave the ship when it was in port; some vessels never entered ports at all. At other times the vessel did enter port but the crew's documents were withheld and they had no money. Moreover, the ship owner threatened them with arrest by the Turkish authorities (this being a Turkish-flagged ship) if they left the vessel, and intimidated them with stories of the inhumane conditions and abuse supposedly prevalent in Turkish prisons.[68]

Medical attention, lack and denial of

One fisher noted, 'We were taken by force to work even we were sick. We were denied access to medication and treatment .... We were given very little food

and water. Most often we drink dirty water, so that some of us constantly suffer from severe stomach ache and diarrhoea. We work 20 to 22 hours daily but were only allowed some two hours night sleep .... We were hit like animals every time we commit errors in our work.'[69]

Surtees' report on Ukrainian seafarers concluded that unsafe working conditions regularly led to serious injuries, illness and even death. Many seafarers/fishers became ill, and suffered a range of health problems, including heart problems, liver dysfunction, problems with gums and teeth, bronchitis, kidney problems, bladder infections, gastric diseases and so on. For many, the health problems endured beyond the trafficking period and became chronic issues. There was no access to medical care aboard the vessels and no opportunity to obtain medical care when in port.[70]

One of Surtees' respondents said, 'I worked in ice-cold water, my legs were wet. That's why I had purulent otitis [a middle ear infection with purulent discharge]. I asked the captain for medical help but he said that I should hold on as there were no doctors and no medicine on the ship .... I started encountering heart problems. I had difficulties breathing. I felt dizzy. However, I was denied any medical help .... When the ship entered a Japanese port, I asked the ship owner to provide me with medical help. He said that there was no money and that I should wait. I had neither money nor insurance, so I couldn't go myself to doctors either in Korea or in Japan.'[71]

See also the reports under 'Death' above: in many cases the death results from lack of medical attention.

Murder

Winn reported:

> 'Years ago, I saw an entire foreign crew shot dead,' said Da, a 38-year-old Thai crewman who has worked the seas since 18. 'There were 14 of them. They'd been out to sea for five years straight without compensation. The boss didn't want to pay up, so he lined them up on the side of the boat and shot them one by one.' 'Twelve bodies dropped into the sea', Da said; two slumped forward, and bled out on the deck. 'I was ordered to dump them into the water,' he said, 'and clean up the mess.'[72]

According to Winn, murder is obscenely common. Of the seven ex-slaves interviewed by *GlobalPost* (for whom he reported) in Thailand and Cambodia, four had witnessed a killing aboard a Thai trawler. So had nearly 60 per cent of a 49-man set of rescued captives profiled by a UN anti-trafficking team in 2009.[73]

Browne reported this story: 'One day one of the Burmese crew was defecating over the side of the boat. While he was defecating, the other people reported it

to the skipper. The skipper came down, looked around, picked up a pipe then he hit him only one time. We saw he was hit. But didn't see exactly where he'd been hit. His body fell directly into the water. After that, whenever it was busy, everybody was terrified to shit or pee. Some people did it in their pants while they were working.'[74]

This account too is recorded by Browne: 'The problem was one of our young Burmese guys; a Thai cook beat him with an iron bar in front of my eyes. The skipper asked if the guy was dead or not. I told him: "He hasn't died yet, leave him alone, I'll look after him." The guy was hit at the back of his head and his brains spilled out. I grabbed him. He took an hour to die – the young guy took an hour to die. I think our Burmese boatman die like dogs and pigs. We can't go back to Burma, we have no contacts. When we have contacts, we don't have money. We've got a lot of difficulties back in Burma, so we can't go back.'[75]

According to Leithead, Zaw Zaw, a Burmese, is one of thousands of young men trafficked into Thailand's fishing industry, which is one of Britain's biggest suppliers of fish. The 26-year-old spent only three months on board before he escaped, but in that time saw three men killed, watched the captain lace the drinking water with drugs and was forced to work around the clock.[76]

Leithead also repeats this story:

> Three men tried to escape at 2am. They grabbed fishing net floats and jumped in the sea, but it was very rough and two drowned as they couldn't swim. The other was caught when he got to shore. They brought him back to the boat – his face swollen from being beaten and tortured. They called us all on deck and the Thai captain said this is what happens if you try to escape. The man was tortured with electric shocks and was then shot in front of us all and thrown overboard.[77]

A Cambodian fisherman told Yea and Thio the classic case of being promised work in Thailand at a rate of 800 baht per day on a fishing boat operating in Thai territorial waters, but then being sold for 8,000 baht to a *reau* tour boat leaving Pak Nam and forced onto a fishing boat bound for Malaysian waters. During his six months on board, he witnessed the captain shoot and kill three fishers, and finally escaped when the boat went ashore in Malaysia.[78]

UNIAP found that 59 per cent of interviewed migrants trafficked about Thai fishing boats reported witnessing the murder of a fellow worker.[79]

See also the UNIAP report described under 'Beatings' above, and Browne's report under 'Conditions, working' above.

No Crew List

Bowmaster claimed that employment practices aboard the *No. 1 Insung*, owned by the Insung Corporation of Seoul, were not unusual. According to maritime

officials in New Zealand – the country closest to the Patagonian and Antarctic toothfish's primary hunting ground – other recent sinkings of fishing boats from Asia, crewed primarily by Filipinos and Indonesians, had failed to produce a list of workers lost at sea. Maritime inspector Grahame McLean said the Asian crews 'earn nothing, it's basically slave labour'.[80]

Safety

Surtees reported a fisher's comments:

> When we were on the Russian crabbing boat, we slept only two hours a day and all the time we were working. Sometimes people got really hurt when they were standing next to the crab traps. Sailors were standing and literally almost sleeping. The traps were falling and sometimes people lost their hands or legs. Nobody cared about this there.[81]

See also the IJF investigations mentioned under 'Abuse, general' above, and the sinking of the *Amur*, under 'Abandonment' above.

Slavery

The EJF reports that every year thousands of men, women and children are trafficked into Thailand from Cambodia and Burma; some of the most unfortunate are the men and boys who end up working on the Thai fishing vessels that ply the South China Sea, Sold by unscrupulous brokers to Thai fishing boat captains, these individuals are treated as virtual slaves. Workers are subject to constant beatings and forced to work in inhumane conditions, often for days, without sleep or meals. Wages and travel documents can be withheld for years; even if they are paid, when crew members try to send money to relatives the payments are required to go through brokers affiliated with the captain. In many cases the money is stolen, never reaching the crewman's family.[82]

Escaped slaves described to Winn a brutal rhythm aboard Thai trawlers. A typical work day amounts to 18–20 hours of manning nets and sorting catch. Sleep comes only after the last fish is sorted and the nets, prone to ripping, are stitched up. The vessels, typically about 15 m long, provide little cover from the blistering sun. When they are permitted to sleep, fishers often lay their heads on wooden decks that shudder above a deafening motor. 'You never really get used to the vibrations,' Sokha said. A meal can consist of rice porridge flecked with bits of meat.[83]

UNIAP described how 49 Cambodian men and boys trafficked onto Thai long-haul fishing boats had been assisted over 18 months by a network of

responders spanning Cambodia, Thailand and Malaysia. There were some variations in the scenarios they faced, but the common theme was deception and debt bondage by two or more Khmer and Thai brokers; their sale to a Thai boat owner for 10,000–15,000 Baht; and slave-like working conditions at sea, including beatings, deprivation of food and inhumane work hours.[84]

EJF confirmed that even if a vessel actually does enter harbour, the ship's officers will ensure that disgruntled or abused individuals cannot escape by withholding both passports and wages, and crews can find themselves imprisoned on the vessel.[85]

A Cambodian fisher related to Yea and Thio how he was sold for 10,000 baht in Pak Nam and put on a *reau* tour, which delivered him to a fishing boat in Malaysian waters. He was kept at sea for 22 months, enduring beatings by the captain using a stingray tail, and finally was allowed to leave when the boat returned to shore. He estimated that he slept an average of 2.5 hours a day and worked every day that he was at sea, and was beaten every time he fell asleep.[86]

To repeat Surtees' comments, 'It was slavery-like conditions, people could not stand it any longer and tried to escape to the shore. But these criminals had it all covered there because the local police caught the seafarers [who escaped] and brought them back to the ship.'[87]

Many of the cases outlined above also detail working conditions that are tantamount to slavery.

Threats

Most of the fishers in Schulz's study admitted that they were afraid of the Thai police because they believed that they would be discriminated against or that they would be sent back to Myanmar because of their status as illegal, undocumented workers.[88]

One of Brennan's interviewees' stories (no. 12) deserves repetition here. He left his home in Burma, hoping to find work across the border in Thailand. At the Burma–Thai border, he met an agent, a Burmese man, who said there were factory jobs in Mahachai. Once in Mahachai, the story changed. 'The agent said everyone should work on this boat.' Interviewee 12 had never been to sea before, but he had heard that the work on boats was hard. He was nervous about it, but felt trapped. 'I had no choice; I had to go on the boat. I owed the agent.' The agent told another man from Burma that he could have him arrested for being an undocumented migrant if he didn't go on the boat. Interviewee 12 had also heard from others that the agent had gangster connections. 'The agent was friends with gangsters. I thought they might hurt me,' he explained.[89]

Trafficking

Many of the cases outlined above concern abuses related to the trafficking of individuals. Typical of the problems are those the US Department of Justice *Trafficking of Persons* report uncovered regarding trafficking in Timor-Leste: 'Male victims are forced to labour on fishing boats with little space, no medical care, and poor food .... Victims report traffickers subjected them to threats, beatings, chronic sleep deprivation, insufficient food and fresh water, and total restrictions on freedom of movement – victims on fishing vessels rarely or never went ashore during their time on board.' (Neither the victims nor the fishing vessels were from Timor-Leste.)[90]

Wages

The Indonesian Seafarers' Union (Kesatuan Pelaut Indonesia) investigated claims by 28 fishers that they had worked for three years on the vessel FV *Lanthe*, yet upon completion were refused any pay whatsoever.[91]

The Belize-flagged *Salus* arrived in Rønne, Denmark on 17 October 2001. In February of the following year, the ITF became involved when officials were told by crew members that none of them had been paid since their arrival on board, for some of them a period of two years. Instead of paying the crew, the managing director of the Kaliningrad-based ship operators arrived in Rønne issuing threats of violence and demanding that the crew sign a declaration against the ITF.[92]

Brennan reported that long-haul boats typically withhold the bulk of a worker's wages until the end of a fishing expedition, which in some cases may last as long as two to six years.[93]

Brennan's Interviewee 9, aged 35, worked on a boat in Indonesian waters for roughly six years, and anticipated a sizeable payment when the boat returned to Thailand. Then the captain informed him and his fellow workers that the boat company was going out of business and would be unable to pay the workers. Having received only small subsistence payments while at sea, Interviewee 9 was left with nothing to show for his six years of work.[94]

Indonesians working for foreign fisheries companies are also known to suffer from a lack of legal protection because of inadequate employment agreements. In a case investigated by the KPI, 28 fishers were recruited by PT Baruna Siwa agency in Bali to work on the *Ianthe*, operated by the Micronesia Longline Fishing Company. During their three-year period of employment they received no wages. They had no collective bargaining agreements or individual contracts.[95]

News reports out of New Zealand following the sinking of a South Korean fishing ship claimed that those employed on it were working for between $270 and $1,350 for up to three months' work, or $3 to $15 per day.[96]

CHAPTER 11

Escape from Hell

Introduction

During 2011 a Cambodian who had escaped and been rescued said with tears in his eyes, 'Don't believe them, you'll end up in hell,' when he saw others contemplating the promises of labour brokers.[1]

The conditions of exploitation and slavery on board at least some fishing vessels are such that the crews seek ways of escape. They do so by desertion: running away at ports, and even swimming ashore. Others, more aware of their basic rights, take strike action in port to stop the ship sailing until some of their demands are met. The most powerless in resisting abusers are fishers on vessels that tranship catches at sea. They can be in total isolation, and spend months, or even years, without shore contact. Under the circumstances of hardship and abuse some resort to mutiny and murder.

This chapter describes various responses to abusers at sea. In particular it outlines the success achieved by fishers in their struggles for fair wages and treatment when they have the support of NGOs and trade unions in taking court action, as in the example of New Zealand.

Desertions

A basic reaction by fishers to intolerable conditions may be to desert the boat when an opportunity presents itself. This is an act of desperation, and it usually means giving up the wages that are owed and sacrificing clothing (as the sailor's term 'skinning out' indicates). There is always the possibility of arrest and imprisonment for illegal entry to the country the deserter comes ashore in, or being beaten by police and returned on board for further punishment. In any event there can be problems of survival when people flee in a foreign state. 'The fate of slaves who flee ashore – penniless and in rags – often relies on chance encounters with altruistic strangers', Winn commented.[2] In some ports people can find temporary assistance from trade unions and missions, but elsewhere it is a matter of concealment and finding illegal temporary (and normally low-paid) work. There is also the deterrent factor that if the fisher's family has put up collateral, it will be called in when they desert.

A region that is exceptional for the arrival of massive numbers of deserters is the remote Indonesian island of Tual. This is a hub for fishing vessels. It has held 700–1,000 Burmese (at any given time) who have fled from fishing boats. They were originally illegal refugees into Thailand from rural areas of Burma who were then trafficked onwards for sale to fishing vessels. David Brown, who went to Tual with the president (in exile) of the Burmese Seafarers' Union, an affiliate of the ITF, says of these men that 'they have fled murder on the high seas and brutal working conditions'.[3] Most are living in concealment inland, foraging for food to avoid being deported back to Burma. One successful escapee recalled three others who 'tried to reach freedom by swimming from a vessel offshore':

> They grabbed fishing net floats and jumped into the sea, but it was rough and two drowned as they couldn't swim. The other was caught when he got ashore. They brought him back to the boat, his face was swollen from being beaten and tortured. They called us on deck and the Thai captain said this is what happens when you try to escape. The man was tortured with electric shocks in front of us all and thrown overboard.[4]

There are cases of swimming ashore even in the cold waters off Port Stanley in the Falkland Islands, although 'some are reported not to reach the shore alive'.[5] Also in the more benign environment of the Pacific Islands where even the police were not interested in their complaints of abuse:

> On 26th September 2005 six Chinese fishers jumped ship in American Samoa. They sought assistance from their company's agent but no advice was forthcoming. They were turned away from the police station and eventually took refuge in the Pago Pago Seafarers' Centre, which alerted the ITF to their plight. The men gave eye witness accounts of the extreme physical abuse suffered by crew members on board the *Tunago #61*, on which they received beatings sporadically and systematically every day at the whim of the skipper and his brother, the chief engineer. The men were also subject to death threats by the skipper.[6]

Many of those who jump ship simply disappear into remote areas or port towns. Others are content to be taken to a deportation centre, and eventually return home without remuneration and have to face the penalty sought by employment agencies.

Strikes

Going on strike by refusing to work when in port or to sail again is an activity associated with specific demands. It is often ship-specific in fishing, as it is difficult to organise concerted action over several ships and many crews because

of their mobility and the diversity in crew composition, even when there are common complaints. Nor are there always legal advice or trade unions available to support the strikers. Furthermore, there is no ILO convention which specifically states that there is a 'right to strike', although it could be claimed that there is one under 'freedom of association' (Conventions 87 and 98 and ILO General Principles on Right to Strikes).

Striking fishers are still criminalised and vulnerable in many countries under these circumstances, although under human rights law all workers have a right to withhold their labour under dangerous conditions. Strikes have been banned in the fishing industry by several countries, not all of which have repressive regimes. In Iceland between 2001 and 2003, the original medieval 'mother of parliament' prohibited strikes demanding minimum wages for fishers.[7]

The standard legal channels available to fishers for complaints are considered to be first, to protest to the captain, and where possible to company management, recruiting agents, port or government officials, national trade unions, the ITF, seafarers' missions and NGOs. Any of these sources could give advice and even try mediation. If this does not provide a result, then the complainants can institute court proceedings, sometimes the help of one or more of these bodies. One of the problems with recourse to the law for crews of fishing vessels is that it can be costly. There are also difficulties related to the lack of information on precisely what they are entitled to under vague contracts, and their rights under international conventions and other legal instruments at national and regional levels. Litigants need to take time off without pay when they are required to appear as witnesses, and sometimes when preparing their case, and this can leave them unable to provide financial support for their families.

New Zealand

New Zealand provides an example of how foreign fishers in its waters resolved the problem of deprivation of entitlements through direct action and legal action taken with the assistance of lawyers, NGOs and trade unions. There was a long series of actions in New Zealand leading up to the legal action. The fishers began by walking off the ships, proceeded by gaining public support, and then initiated claims for unpaid wages and compensation through the lawcourts. Box 11.1 details the initial sequence of walk-offs and strike action.[8]

The strikes increased after 2005, when the ten Indonesians walked off the Korean vessels *Melilla 203* and *Sky 75*, and publicly protested against abuses, including non-payment of already low wages and near starvation. As a result of this, and revelations by NZ trade unions, the Slave Free Seas (SFS) organisation (which included academics at Auckland University Business School) and a voluntary team of lawyers, there was criticism by media and public outrage

Box 11.1 Reported cases of fishers leaving ships in New Zealand waters because of abuse and exploitation, 2005–11

2005 Six Indonesian fishers sought refuge from the Korean vessel *Melilla 203* citing mistreatment. Ten Indonesian fishermen fled the Korean vessel *Sky 75* claiming physical and mental abuse. In a later incident two Vietnamese fishers fled *Sky 75* also claiming abuse. Four Chinese fishers fled the Korean vessel *Oyang 96* citing abuse. Eight Indonesian fishers fled the *San Liberatore*, a NZ-owned vessel. Crew jumped ship from the Korean vessel *Melilla 201*; this incident 'revealed a history of death, injury and pollution on that ship and its sister ship the *Melilla 203*' (Maritime Union of New Zealand, 2011).

2006 Nine Indonesian fishers fled the Korean vessel *Marinui* claiming physical and mental abuse. 27 crew aboard the Ukrainian vessel *Malakhov Kurgan* went on strike over a wage dispute. Burmese crew aboard the Korean vessel *Sky 75* claimed abusive treatment.

2009 Eleven Indonesian fishers fled the Korean vessel *Shin Ji* claiming physical and verbal abuse and the non-payment of wages. Four crew jumped ship from the Korean vessel *Melilla 201* citing abusive treatment and long shifts.

2010 A Korean vessel, the *Oyang 70*, sunk with the loss of six lives. Survivors complained of physical and mental abuse aboard the vessel as well as non-payment of wages.

2011 Seven Indonesian crew fled the Korean vessel *Shin Ji* claiming physical, mental and sexual abuse as well as the non-payment of wages. Thirty-two Indonesian crew fled the Korean vessel *Oyang 75* claiming physical, mental and psychological abuse as well as the non-payment of wages.

Source: C. Stringer, G. Simmons and D. Coulston, 'Not in New Zealand's waters, surely? Linking Labour issues to GPNs', *Journal of Economic Geography*, 23(Sept.), pp. 1–20 (2013).

against the tolerance of abuse in NZ waters. In response, in 2006 the government introduced a nonbinding code of practice (CoP). This laid down the minimum entitlements of migrant workers on chartered vessels in NZ waters. A fact sheet on the CoP was supposed to be made available to foreign fishers in their own language. It indicated also that the living and working conditions on board were to be commensurate with those on NZ ships. The CoP was expected to be implemented by the vessel owners and monitored by the NZ charterers as a condition of being allowed to charter.

Neither of these commitments was fully carried out. The fishers remained

unaware of the pay and conditions they were entitled to. Strikes continued: in 2006 the Ukrainian crew of the chartered Russian fishing vessel *Malakov* went on strike, as did the 49 crew of the *Aleksander Ksenofortov* in 2007. They objected to deductions from their contract pay, and held the ships for over two and a half months until the company agreed to their demands. The result was a victory for the crew.[9]

Two events took the issue onto a larger stage. In 2010 the 38-year-old Korean vessel *Oyang 70*, which was in a terrible seagoing state with poor crew accommodation, capsized in calm weather with the loss of the Korean captain and five fishers (see below under 'The Skippers'). The terrible conditions on this vessel were well publicised. Then in May 2011 the crew of the *Shen Ji* made a stand, as had its previous crew in 2009. The new crew walked off and showed that the conditions and pay to which they were entitled in the CoP under New Zealand law had not been honoured. They refused to leave New Zealand until they were given their back pay entitlements. A strong group of activists and lawyers, including Slave Free Seas, came to their aid, as did the missions and trade unions. The company that had chartered this vessel and was supposed to guarantee that proper wages were paid went into voluntary administration and the crew received nothing at that stage, for what has been described in New Zealand as their heroic action.

When the crew returned to Jakarta the manning agency refused to pay them the retained portion of their salaries, and all the crews were blacklisted. Eventually through negotiations the *Shin Ji* crew accepted a payment of much less than was due to them. In the case of claims for loss of life on the *Oyang 70* there was even more haggling. Craig Tuck, a barrister and director of Slave Free Seas, described one of several ugly moments when a widow was reporting verbally to SFS:

> Yula (not her real name) was called to the agent's office to collect her deceased husband's insurance money – he was killed following the sinking of *Oyang 70*. The crewing agent told her she must sleep with him for a week before he would hand over her money. When recounting what happened to SFS she burst into tears and ran from the room crying.[10]

The CoP underwent strengthening when the government incorporated the measures into 'Immigration Instructions'. This meant that sanctions on companies could be enforced. As a result the legal teams were able to mount a series of claims on ships for under-payment of wages required by NZ law. It was an expensive task for these bodies. Some claims were settled out of court. Sometimes the claims, such as those for the *Oyang 70* widows, were processed without fees, but in other cases the teams depended on fees paid out of wage recoveries. There was no form of government legal aid to cover this kind of case. In total

nearly US$30 million has been identified as owing to fishers by the companies, which means there might be many more court cases.

It was also possible for the evidence of ill treatment of crews documented by the campaigning groups to be provided to the Korean flag state. The Koreans sent a high-level team to New Zealand and also heard evidence from some of the fishers, who were brought to Korea through a local Korean civil rights group. A number of Korean officers were arrested by the Korean authorities and tried on several charges, including forging of documentation, and violent acts of sexual molestation and assault at sea by Koreans on board.[11]

The final result in New Zealand was a decision that from 2016 only NZ flag vessels would be allowed to fish in the NZ EEZ. This was a measure also already adopted in Australia, where the cabotage regulations reserved fishing in Australian waters for Australian ships. There are concerns expressed in this connection in New Zealand regarding the ability if necessary to replace the 1,500 or so foreign fishers with New Zealand fishers. Also there are small quota holders who wish to continue chartering, not least those in the Maori community. To deal with these issues some exceptions have been negotiated, and this has caused some suspicion regarding the government's long-term commitment to reflagging. Nevertheless the CoP has been a considerable success in identifying accountability, and giving fishers awareness of their rights. Most of all the New Zealand case shows that fishers cheated out of due wages can reclaim them if they have sufficient support through the courts (see also Chapter 14).

Mutinies and Murders

Since they have little prospect of ever receiving support such as that available in New Zealand, the fishers on distant-water vessels engaged in transhipments at sea remain in physical and legal isolation. They are prevented from going ashore and are not even aware whether the agreed payments are being made to their families. They are often brutally abused physically and sometimes sexually. They suffer extremities of stress and feelings of helplessness. As a consequence some have resorted to mutinies and the killing of those they regard as their tormentors.

Mutinies clearly differ from strikes. They take place when the vessel is at sea. This involves disobeying the lawful commands of the master, which can threaten the safety of the ship. As a result taking part in a mutiny was in the distant past always a hanging offence. However there has often been a fine line between crews assembling at sea to protest against their treatment and accusations of mutiny. Protests that could be considered to develop into mutinies still take place on both large and small vessels. Box 11.2 summarises several diverse examples in chronological order from the period 2000–14.

Box 11.2 Examples of mutinies and murders at sea

2000. *Ming Man.* Taiwan owned, Taiwanese captain and chief engineer, two Taiwanese officers and one Filipino third mate. The Chinese crew were badly cheated of their earnings and assaulted with iron rods. They retaliated by attacking the second and third officers who went overboard, but were rescued by another Taiwanese vessel. The captain and two other Taiwanese were taken as hostages. The captain arranged a ransom payment of $30,000 for each hostage. Coastguards posing as company representatives with money raided the vessel, and arrested the mutineers who were taken to Taiwan.[1]

March 2002. *Full Means.* A fishing vessel with a Taiwanese skipper and PRC crew under the flag of Seychelles was intercepted south-east of Hawaii by US coastguards. They found the body of the Chinese first mate in the freezer but the master was missing. On investigation it was found this was murder by one member of the crew. The crew handed the killer over to the US coastguards.[2]

2003. *Windful No.1.* Asian captain, Fijian crew. In a dispute said to be over deprivation of food, the Fijian fishers cut the fishing lines adrift, and returned with the ship to Fiji. They were sacked by the Fijian Chinese owner and an inquiry took place through the Marine Board with possible charges of mutiny.[3]

2004. During this period there was unusually a concerted strike action extending over many ships. One event involving 196 fishers was regarded as mutiny when the Filipinos on eight vessels stopped routine work when on the high seas off the coast of Papua New Guinea. They were on vessels supplying the tuna processing plant at Madang owned by the Philippine company RD Tuna Venture Inc. The fishers were protesting against a level of wages below the ILO minimum, which they maintained erroneously was the basis for their wages. They also claimed the ships had inadequate safety equipment and there was a lack of compensation provisions for injuries and deaths at work.

There were a number of industrial problems at the RD shore plant and local agitation against alienation of customary land in building the plant, all of which added to the problems of the company. Ten of the ringleaders of the protests on the ships were arrested, taken to the Philippines and charged with mutiny. Also charged were the leader of the PNG Maritime Industrial Union, the ITF inspector and two other activists. Ultimately after negotiations between local unions and leaders of the ITF who came from London, the mutiny charges were withdrawn by the company 'in the interest of good relations'. The Philippine Government in

turn set up an inquiry into the conditions of crews on Philippine vessels engaged in distant-water fisheries.[4]

2007. *Shengen 168* (58 tons). This ship had a Taiwanese owner, captain and chief engineer, and Indonesian crew. The vessel came under suspicion and was intercepted by an Indonesian navy patrol off Papua Province. They found eight Indonesians on board and the body of the captain,but the three Taiwanese officers were missing. The Indonesian fishers were arrested under suspicion of mutiny and murder.[5]

2007. *Fatima II*, a small fishing vessel under the Italian flag. Three Italians were cast adrift on a dinghy in the Mediterranean by the crew comprising two Egyptians and one Tunisian. A mutiny was assumed and there were reports of shooting on board.[6]

2008. On another small fishing vessel the Libyan skipper went overboard near Malta after a conflict with the crew of five Tunisians. The skipper was picked up by a patrol boat.[7]

2009. *Yu Chien No 166*. This vessel had a Taiwan owner, captain and chief engineer, and an Indonesian crew. The captain and chief engineer locked themselves in the bridge when threatened by the crew with knives. The coastguard was called and the ship escorted to Taiwan.[8]

2009. *Balena*. Taiwanese owner, captain and chief engineer, and crew of 29 Vietnamese. Ten of the Vietnamese mutinied after having been on board under slave conditions for 18 months. They imprisoned the captain and asked permission to enter Cape Town harbour. A South African Task Force boarded and arrested the mutineers, who were imprisoned. They were defended in court by the lawyer Alan Goldberg. The company withdrew the mutiny accusations and paid for the repatriation of the crew to Viet Nam.[9]

2011. *Supoporn*. Thailand owned. The crew of seven young Burmese (average age 25) mutinied. They had been trafficked into service and some were on their first trip. The vessel avoided ports for over five months via transhipping at sea. The mutineers killed the Thai captain and chief engineer. They brought the ship close to Phuket in Thailand with the intention of leaving the vessel at sea and swimming ashore. The engines failed farther off land and while the ship was drifting the coastguards boarded. They found the galley was spattered with blood but the bodies of the captain and chief engineer were not found.[10]

2013. *Te Hung Hsing No 368*. This vessel had a Taiwanese owner, captain and chief engineer, and a crew of nine Indonesians. The owners lost radio contact with the vessel for over a week when it was supposed to be fishing for shark and swordfish north-west of Papetee. A patrol vessel found the ship

with the skipper Chen Te-Sheng (55) and chief engineer Ho Chang-Lin (67) missing.[11]

2014. The Taiwanese fishing vessel *Guorong 333* sailed from Palau to Solomon Islands waters in June 2014. The owners lost radio contact. After a search the vessel was found with all the Indonesian crew alive but Captain Chen Zhiwen from Taiwan missing. The crew said he had fallen overboard in rough weather.[12]

Sources: 1, Jou Ying-Chang,'Saga at sea', *Taipei Times,* 2000; 2, J. A. Roach, 'Initiatives to enhance maritime security at sea', Marine Policy, 28(1), p. 42 (2004); 3, *Fiji Times*, 6 March 2003; 4, *Philippine Press*, 'R D Tuna withdraws mutiny charges against tuna crew', 28 October 2004; 5, Free Library.com, Kyodo New Intern'l Inc (accessed 24 August 2013); 6, *Times of Malta*, 7 July 2008; 7, *China Post*, 'Meeting on Pingting-based *Yu Chun No. 166*', 7 October 2009; 8, 'To Vima: *Fatima II*', *Greek News*, 2008; 9, UNODC, *Transnational Organized Crime in the Fishing Industry*, Vienna: UNODC, 2011, p. 44; 10, Sert Tongder and Nuansirsi Chisunkanokwat, 'Rebellious crew chop cruel captain and ships engineer to death', *Phuket Wan Tourism News*, 914, October 2011; 11, Shih Hsiu-Chuan, *Taipei Times* editorial, 21 July 2013 and report, 31 July 2013; 12, as related to Dr Jaleel of Seafarers' Rights International in interviews in Taiwan during fieldwork in September 2014.

Disappearances from ships can usually be ascribed to mutiny and murder. Occasionally there are ambiguities: for example someone is reported as having been washed overboard but there are no witnesses, which is unusual. Such a person might perhaps have jumped overboard at night. There are some well recorded, but limited, records of suicides at sea. One research project found that 13 per cent of deaths recorded as through illness and related causes appeared to be suicides, but added that 'these figures would be even higher if 50 per cent of seafarer deaths through "disappearances at sea" are included'.[12]

It is impossible to be sure to what extent such findings apply to the fishing sector. Generally the view is that there are more suicides on distant-water fishing vessels than in the small-scale community-based fisheries. The accepted causes of suicides at sea tend to support this.[13] They include insecurity, bullying and harassment, loneliness, family and financial problems, fear of carrying sexual infection, fatigue, feelings of hopelessness, use of drugs and depression. There is little opportunity for fishers on distant-water vessels – especially if they are engaged in transhipment operations – to obtain help on these occasions; in any case they may be reluctant to be labelled with the 'stigma' of having a mental health problem. However the little available evidence indicates that the 'overall rate of suicides of seafarers is well above that for the general population', and a study of suicides of seafarers on Polish ships stated that 'suicide among deep-sea fishermen was the highest in the whole study group of seafarers'.[14]

The Skippers

That skippers are sometimes violent to foreign crews is well attested, but many skippers are also themselves victims of the greed of companies. They are expected to be enforcers in making untrained migrants carry out long periods of exhausting effort without sharing a common language with them. They have to disregard the normally expected duty of care for the crew. They must also focus on maximising catches of the most valuable fish through dumping the bycatch. They are at risk of losing their jobs if they do not follow these rules.

An example of the relationship between a skipper and crew was given at the coroner's inquest in New Zealand into those who died as a result of the sinking of the *Oyang 70* in 2010. The Indonesian crew described a massive haul of 120 tonnes of fish in the net. They could see the danger of trying to haul this on board and some wanted to cut away the gear. The skipper could not face doing that. In the process of hauling in the net the vessel began to flood. It became clear that the boat was doomed. The crew described the skipper starting to weep. He refused a lifebelt, held on to a post and went down with the ship. There was inadequate provision of life rafts, there had never been a safety drill, and five others drowned in calm weather. The court condemned the skipper for his lack of professional judgement and neglect of safety equipment. It was also critical of the Korean officers.

Conclusion

The questions raised in this chapter include what drives young men to desert, mutiny and sometimes kill captains or possibly commit suicide. The most obvious answer is that they see one of these alternatives as a last resort when they are desperate to escape from a situation that they regard as hell on earth. However, there are further implications regarding this state of affairs.

The *Maritime Bulletin,* in comments on the killing of captains, noted that 'this happens from time to time on Taiwanese fishing vessels manned by non-Taiwanese crews but commanded by Taiwanese skippers'.[15] The implication was that because the ship environment comprises stressed captains untrained in staff management, and young, inexperienced and untrained crews with incomprehensible languages who are beaten into learning fishing tasks, and deprived of the most basic human support, the situation drives people to violence and madness.

The legal complexities of this situation of transnational ownership and multiracial crewing extend to the subsequent treatment of crew who are arrested for either mutiny or murder. We have not found it possible to obtain information on what happens to fishers who are arrested for these most serious

crimes. It would be useful to know whether the men are normally sent to trial in these situations, whether they have the opportunity to plead that there were mitigating circumstances, and what their sentences were.

Many who escape from ships, almost by definition in dire situations, face even worse after their departure: they might be imprisoned or find themselves in remote locations without identity cards or seamen's books. Thai labour rights activist Patima Tangpratyakan appealed to her government in December 2014 to 'Help hundreds of Thai fisherman believed to have escaped from exploitative work on trawlers to hide on Indonesian islands.' [16]

CHAPTER 12

Fishing Vessels and the Drugs Trade

> In Florida you bring in a boatload of fish and everyone thinks it's marijuana. In San Francisco you bring in a boatload of marijuana and everyone thinks it's fish.
>
> Bruce Perlowin[1]

Introduction

The poverty in many fishing communities and the dangerous and adverse conditions at sea are important contributory causes to the use of fishing craft in the transhipment of illegal drugs as well as for other criminal activities. In addition to the mainly distant-water IUU fishing already discussed, the criminal use of fishing vessels is varied and widespread, and includes the associated trafficking of people directly into the fishing industry. Fishing boats are also used to varying degrees in the illegal trafficking of migrants, for example across the Mediterranean from North Africa to Southern Europe, and in arms smuggling and terrorism. A spectacular example is the Mumbai terrorist attack in 2008, in which a fishing boat was used to bring the terrorists to the city. However, people trafficking and arms smuggling involving fishing boats are by their very nature poorly documented.

Much better documented and widespread is the use of fishing vessels, and to varying extents fishers themselves, in the drugs trade. This chapter considers in turn the geography and recent development of the drugs trade in relation to the world's fisheries, the nature and patterns of ocean voyages and transhipment activities, the specific roles of fishing boats and fishers, and the nature of countermeasures including the interception of vessels and seizure of drugs at sea. Specific examples of drug-related activities and arrests of fishers are listed in Table 12.1. The examples are also the basis for Figure 12.1, which shows the main routes involving fishing craft.

Markets, Producers and Organisation

The drugs trade (our concern throughout this chapter is illegal and unregulated substances, not the legal trade in pharmaceuticals) is part of a multi-billion-

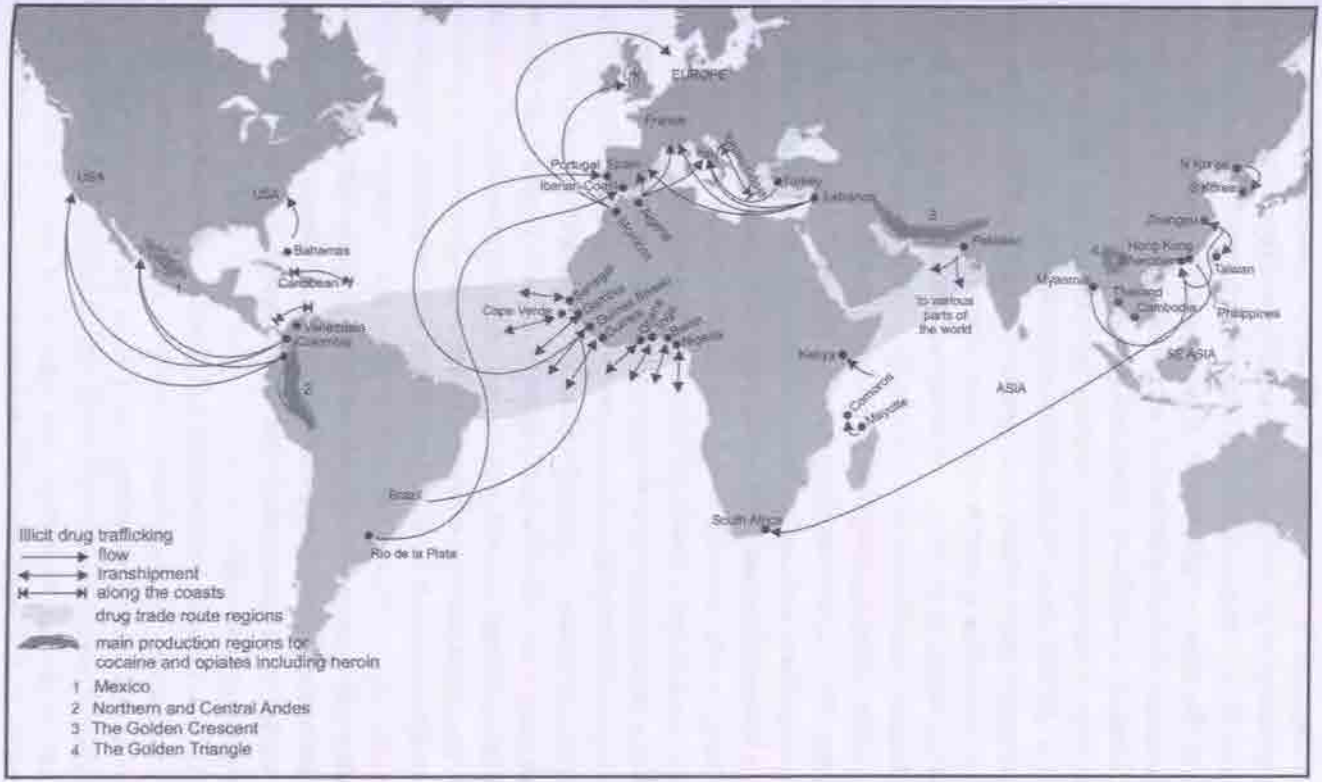

Figure 12.1 Fishing vessels used for illicit drug smuggling: some reported incidents and activities, 2005–11

Data source: UNODC, *Transnational Organized Crime in the Fishing Industry*, Vienna: UNODC, 2011.

dollar global industry of great complexity. Although its roots extend back many centuries, its modern manifestation is rooted in the post-Second World War expansion of the global economy. To begin with the ultimate driver of demand was located largely in the rich worlds of the United States and Western Europe, but the liberalisation of the Chinese and former Soviet Union economic systems in the course of the 1980s and 1990s has driven a surge of demand in these regions also.[2] Thus the overall pattern of an apparently insatiable demand is now one in which all the world's urban industrial core regions in both developed and developing worlds are associated with widespread drug use. This is graphically mapped in Figure 12.1, which uses information from the annual reports of the UN Office on Drugs and Crime (UNODC).[3]

During the early part of the present phase of evolution of the drugs trade there was a particular focus on the production of marijuana and hashish in the tropics and subtropics of the Americas, Africa and Eurasia, and its import into the United States and Western Europe. As the industry expanded in the late 1970s and 1980s, marijuana (cannabis) came to be increasingly grown in these market regions; in the United States for example, there was competition between home-grown marijuana and that produced in Colombia, to the detriment of the latter. In the Western Hemisphere from the early 1980s onwards the marijuana trade was fairly rapidly replaced by the cocaine trade, based on supplies from the northern Andes region, especially Colombia. Cocaine was and remains a higher-value product, less bulky to transport and thus more easily concealed.

In the Eastern Hemisphere, the present phase of evolution is based on the production of opiates, especially from the 'Golden Triangle' of Burma (later Myanmar), Laos and Thailand, and the Golden Crescent of Afghanistan, Pakistan and Iran. The progressive economic liberalisation of Asia has since been associated with the expansion of opium production in rural areas, including in China itself. It is from South-West Asia (especially Afghanistan) that the world supply of heroin now largely originates. It is again destined for the core urban industrial regions throughout the world, especially in the United States, Western and Eastern Europe and the Russian Federation. Of the major trades of marijuana, cocaine, opiates and heroin, heroin is most valuable and can generate the largest profits.

In the past two decades traditional drugs based on crops have been supplemented in the markets by manufactured amphetamine-type stimulants (ATS), notably metamphetamine and ecstasy on a large scale, together with most recently a class of manufactured new psychoactive substances (NPS) intended to mimic effects of controlled drugs. The numbers of users of each of these categories of drug are comparable – in the order of 15–20 million worldwide – except for marijuana, which has about 180 million users. Cannabis production is very widespread and serves numerous local markets. Manufactured drugs are sourced mainly from the world's urban industrial regions. By 2012 the inter-

national drug control system was floundering under the impact of NPS drugs. There are some 251 substances not presently covered by drug conventions.[4]

The global non-medical drugs industry, despite being largely outlawed both nationally and internationally, is not only vast but very resilient. It is still probably expanding overall, fuelled by the continuing insatiable demand not only of the rich urban industrial world, but increasingly also of the developing world. It is closely intertwined not only with conventional businesses – including fisheries – but also with political movements in the major producing areas of the Andean region and South-West Asia and North Africa in particular, as the proceeds of the trades are invested in legal businesses and in furthering political ends, including those of insurgents in South-West Asia and North Africa. The earlier phase of development from the 1970s onwards was associated with the prominent role of organised crime in both the production and market regions, as it still is, most notably in the present Mexican drug cartels and their now somewhat diminished Colombian forerunners. However, in both production and consumption regions large-scale organised crime is vulnerable to the onslaught of state power through both policing and military functions, as has happened in the United States, Colombia and elsewhere, including the invasion of Panama by US forces in 1970, which was partly related to the drugs problem.

The trade's organisation at present is thus mainly in small networks, based on the nature of interactions among the players during transactions.[5] The players include not only fishers and boat captains, but various individuals who play a role onshore. They manage their risk by changing methods quickly and often, outsourcing wherever possible, getting collateral from others in the distribution chain, paying in product rather than in cash, dividing operations into compartmentalised functions so that participants operate on a 'need to know' basis, limiting the time product and money are in transit, and clearly identifying who pays for lost product.

Despite the high-profile violence among cartels and sometimes violence and corruption in the context of enforcement, especially in poor countries destabilised by a strong drugs economy, most of the vast networks operate without violence. The fishing industry of vessels and fishers belongs in part to this resilient global web of innumerable networks.

Ocean Voyages and Transhipment

The principal global trade routes link the major areas of drug crop production with the major markets, which are still dominated by the United States and Western Europe, with growing markets elsewhere, including the Russian Federation, East and South Asia as well as smaller outposts. In the context of the role

of fishing vessels on these routes, the two main trade routes for the American market are by both sea and land from the northern Andean highlands to the coasts of the southern and western United States as well as the land boundary with Mexico. The maritime component of the eastern route consists of the complex of routes from the southern shores of the Caribbean via numerous Caribbean islands mainly to Florida. The western route is from the western coasts of the northern Andean highlands either directly to the West Coast of the United States or via points on the western coast of the Central American mainland, especially in Mexico. On these routes marijuana was largely replaced by cocaine as the principal drug from the early 1980s.

The European market trade routes include a northerly land route through Central Asia into Eastern Europe, especially the Balkans, and a more southerly route served at least partly by a geographical hub in Pakistan, which passes partly by sea through South-West Asia and East Africa, and thence to locations in Africa and to Europe. The principal drugs are opiates including heroin. More recently there have been added routes across the South Atlantic between one, the northern shores of South America and the Caribbean islands, and two, the coasts of West Africa (see Figure 12.1), corresponding with the expansion of the cocaine market in Europe. As well as links to the Gulf of Guinea, there would appear also to be a linguistic (Portuguese-speaking) link from Brazil via the western African coast to Portugal.[6] Also important is the trade route for cannabis and hashish from North Africa across the Mediterranean to Spain, France and Italy.[7] Among the less important routes may be noted the trade in methamphetamines from East Asia to South Africa in exchange for abalone (see Figure 12.1 and Table 12.1).

The scale of the drugs trade may be gauged from both estimates of production and the numbers of users aged between 15 and 64 in the main markets.[8] A little under 5,000 tonnes of heroin was produced in 2012; between 850 and 1,050 tonnes of cocaine were produced in 2011. Both are estimated to have between 16.5 and 18.0 million users. This contrasts with the localised market geography of cannabis and hashish production (mainly in Afghanistan and Morocco), supplying an estimated 180 million users. By way of comparison, in 2011 there were 33.8 million ATS users, including 19.4 million ecstasy users. Overall there are variations from year to year in quantities passing along the routes. For example, in 2012 for cocaine from Colombia the Atlantic/Caribbean route seems to have gained relative to the Pacific route. Maritime trafficking (including fishing boats) is the least common transport mode by incidence (11 per cent), but the most important by weight (41 per cent) because of the large carrying capacity of both fishing boats and merchant ships.

The transport of drugs consists of an endlessly flexible multimodal system which derives both from the physical realities involved and the methods used to combat the illegal trades. Fishing boats have been and continue to be used

Table 12.1 Fishing vessels engaged in drug trafficking

Incidents	Regions involved	Vessels used	Nationals
Cocaine trafficking from the Andean region to North America is conducted by a number of organised criminal groups taking responsibility for the various segments of the trafficking operations. According to the UNODC *Globalization of Crime Report*, the transport by sea is often organised by smaller criminal groups, mainly of Colombian origin.	Andean region		Mainly Colombian
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. The role of fishing vessels in drug trafficking in Latin America was pointed out at the 16th Meeting of Heads of National Drug Law Enforcement Agencies of Latin America and the Caribbean. In the report from the meeting it was stated that fishing vessels play 'multiple roles in maritime drug trafficking throughout the region, including as transport vessels for point-to-point delivery of cocaine consignments, as transport from offloading mother ships to remote landing sites and commercial ports, and as the providers of offshore refuelling and provisioning for "go-fast" boats in transit'.	Latin America	Fishing vessels	
According to the Costa Rican Security Ministry the police authorities dismantled a cocaine smuggling network that used fishing vessels to transport drugs from Ecuador and Colombia to Central America and Mexico in January 2011. The police investigations revealed that the maritime routes in the Pacific consist of fishing vessels transporting cocaine from Colombia interacting and transhipping to smaller speedboats along the way. These fishing vessels act as 'mother ships'. On the Atlantic side speedboats are used to traffic drugs, whereas fishing vessels are used to supply fuel along the way. Costa Rica also noted its concern about the involvement of the fishing fleet in cocaine trafficking at the 64th UN High-Level Meeting on Transnational Organized Crime in 2010.	Ecuador and Columbia	Fishing vessels and speed boats	

(continued overleaf)

Table 12.1 continued

Incidents	Regions involved	Vessels used	Nationals
An example from December 2010 of the use of fishing vessels to traffic cocaine is a former Colombian maritime training instructor who according to a US police press release pleaded guilty on charges of conspiring to transport thousands of kilograms of cocaine. According to the press release he was part of a Colombian drug trafficking syndicate that transported cocaine on board fishing vessels and speedboats to the high seas to be transhipped on board mother ships for shipment to the United States and other countries. The vessels were stated to have been specially equipped for the job, with 'high frequency radios, global positioning system devices, satellite phones, large amounts of fuel, and multiple outboard motors to facilitate the transport of cocaine over long distances on the high seas until the destination or off-loading rendezvous point was reached'.		Fishing vessels	Columbian
According to a 2010 US Department of Justice media release the US Coast Guard in cooperation with the Caribbean Corridor Strike Force seized nearly 1,500 kg of cocaine worth about US$46 million from a fishing vessel in May of that year. The vessel was intercepted and seized off Aruba near Venezuela in the Caribbean. The 26 m fishing vessel had 66 bales of cocaine hidden inside the ballast water tank. Five Central American crewmembers were apprehended and faced charges of drug trafficking.	Arrests off Aruba near Venezuela in the Caribbean by USCG and Caribbean	Fishing vessels	Central American
Recent media reports suggest that cocaine is also leaving the United States with the assistance of fishing vessels. In the Bahamas, customs officials in November 2010 alerted the Parliamentary Joint Select Committee on Violence and Gun Crime of the problems experienced with drugs transhipped at sea and brought to shore. It was believed drugs were dropped from yachts with a GPS attached, picked up by fishing vessels in the vicinity and taken to port. The vessels did not actually interact, which hampered detection. In light of the growing Caribbean market for drugs, the Jamaican Minister of Agriculture and Fisheries was also reported to have voiced concern about possible involvement of Jamaican fishers in a drugs-for-guns trade with Haitian gun dealers.	USA and Bahamas	Fishing vessels/ yachts	

Incidents	Regions involved	Vessels used	Nationals
In a case highlighted by the media in 2009 a cargo of frozen shark intercepted by Mexican authorities was found to contain cocaine hidden in the shark carcasses. The more than 20 shark carcasses contained a ton of cocaine slabs, said to be preserving agents. According to media reports, the same year Costa Rican authorities also came across cocaine hidden in the freezing compartment of a van containing shark and red snapper.	Interception by Mexico, Costa Rica	Fishing vessels	
According to a media report, in September 2009 the UK Royal Navy seized about 5,500 kg of cocaine worth approximately £240 million (US$386.6 million) on board a fishing vessel in the Caribbean. The 42 m fishing vessel had the cocaine hidden in compartments under the ship's regular stores beneath a concrete floor and steel panels. It took the navy crew 24 hours to search the vessel, and the floor had to be broken up and unbolted to expose the cocaine. The cocaine was seized and the fishing vessel sunk.	UK (in Caribbean)	Fishing vessels	
In 2008, the UNODC report *Drug Trafficking as a Security Threat in West Africa* noted that transhipments between fishing vessels are a common method to traffic drugs in West Africa.	West Africa	Fishing vessels	
UNODC identified two main transhipment hubs in West Africa: one in the Eastern Central Atlantic around Guinea and Guinea-Bissau, including Cape Verde, Senegal and Gambia; the other in the Gulf of Guinea, including Ghana, Togo, Benin and Nigeria. There are suggestions that the Eastern Central Atlantic transhipment hub is part of a 'Lusophone connection' between Brazil and Guinea-Bissau. There are however indications that this became less prevalent in later years.	Brazil		
A UNODC 2008 study suggested that unstable governments and low risk of detection make transhipments in the Bay of Guinea advantageous. A number of cocaine seizures have been made in Ghana and there are suggestions that cocaine is stockpiled in the country for further shipments.	Guinea, Ghana		

(continued overleaf)

Table 12.1 continued

Incidents	Regions involved	Vessels used	Nationals
Anecdotal evidence of the use of fishing companies to facilitate drug trafficking is also found in the Gambia. According to the UK Serious Organised Crime Agency (SOCA), Gambian police seized 2,100 kg of cocaine worth hundreds of millions of dollars in 2010. The cocaine was found in a concealed underground bunker at a warehouse belonging to a fishing company.	Gambia		
Fishing vessels seem to be part of the modus operandi of cocaine trafficking to North America, to Europe, and to Europe via West Africa. According to the international Maritime Analysis and Operations Centre – Narcotics, fishing vessels are not the vessel type most frequently interdicted or disrupted with cocaine, but the few fishing vessels that are interdicted or disrupted often carry large quantities of the drug.		Fishing vessels	
According to a news article, in June 2009 a smuggling organization used *kwassas-kwassas* (small wooden craft) to smuggle migrants, tobacco, cannabis and skin-whitening drugs to the French overseas territory of Mayotte. The operation was well organised, with accommodation and taxis waiting for the migrants on arrival in Mayotte. The *kwassas-kwassas* also returned to nearby Comoros with stolen goods sourced from local burglars.	Mayotte, Comoros		
Intermediaries provide Asian organised crime syndicates with abalone in exchange for drugs, primarily precursors for methamphetamines, but also cocaine and heroin. 'A highly valued delicacy in Hong Kong and surrounds, abalone … from the coast of South Africa has traditionally been bartered for the ingredients for "tik", brought in from Asia. This straight exchange of commodities leaves no paper trail, as there is no exchange of money, making it harder to track criminals involved in such dealings.'	Coast of South Africa		
Heroin on the southern route is trafficked from Afghanistan through Pakistan to a wide number of destinations around the world. Shipments by sea are made through the ports of Gwadar, Karachi or Qasim or smaller fishing ports along the Makran coast.	Afghanistan		

Incidents	Regions involved	Vessels used	Nationals
Fishing vessels may also be used on the southern route. According to media reports, in March 2011 Kenyan officials seized more than 100 kg of heroin as it was offloaded from a fishing vessel in the port of Mombasa. The heroin was allegedly concealed in dog food packaging. According to the media reports, three Kenyans, two Iranians and a Pakistani were arrested in connection with the seizure.	Mombasa, Kenya	Fishing vessel	Kenyan, Iranian, Pakistani
According to court documents Coluccio was monopolising the fishing industry along the Ionian coast and forcing local fishers to hand over their catches. They also say that Coluccio exerted his power along the coast to traffic drugs.	Ionian coast	Fishing vessel	
In August 2008 Spanish and Uruguayan police authorities dismantled a drug trafficking syndicate known as the 'Mafia Gallega' during Operación Huracán. According to media reports, the syndicate was operating a drug trafficking route from Rio de la Plata to the Iberian coast. In the first operation, 2,200 kg of cocaine transhipped on the high seas was discovered when a fishing vessel entered Spain. The second operation revealed 300 kg of cocaine stacked among the fish in a container on its way to Europe. The head of the Uruguayan Anti-Drugs Office was quoted in a news article as stating that transport by sea is an area of 'most concern' and that the fishing industry is a sector in which there are 'more opportunities'. In the opinion of the Uruguayan police, 'containers with frozen fish are ideal for smuggling since dogs can't sniff the narcotics and there are fears that if left open for too long it could spoil the cargo'. Shortly after the arrest the NGO Oceana issued a press release linking the fishing vessels owned by the suspected drug trafficking syndicate to marine living resource crimes (illegal capture of toothfish and shark).	Uruguay, Spain	Fishing vessels	
In a 2007 article in *Global Crime*, Aning referred to the use of a cannery and a fishing company 'as cover for operations'. According to the article, 'the group involved had actually registered a fishing company, had trawlers and cold stores that engaged in legitimate fishing business but that also provided the legitimate cover under which massive amounts of drugs could be trafficked to Europe and North America'.		Trawlers	

(continued overleaf)

Table 12.1 continued

Incidents	Regions involved	Vessels used	Nationals
Fishing vessels have been associated with illicit traffic in cannabis from North Africa to Europe. According to a 2004 study, fishing vessels were regularly intercepted carrying cannabis from Morocco to Europe in the 1990s. At the time it was estimated that the vessel owner could earn approximately €40,000 (US$57,000) for a shipment to Europe, and that 'fishing companies from Galicia, Gibraltar and Ireland, as well as Dutch transport companies, [were] renowned for their involvement in the illegal trade with Morocco'.	North Africa (Morocco)	Fishing vessels (Galicia, Gibraltar, Ireland, Netherlands)	
In 2005 Europol seized 8,000 kg of cannabis on board a fishing vessel from Morocco destined for the British market. The drug traffickers had been under investigation for some time and the vessel was seized in open waters off the coast of Spain. The vessel's crew from the United Kingdom, Estonia and Spain were arrested. Additional arrests were made in Glasgow in connection with the case.	Morocco, United Kingdom	Fishing vessel	United Kingdom Estonia Spain
Traditional fishing communities in Spain are increasingly becoming deprived of a livelihood by quota restriction, which is necessary because of past overfishing. The media reports from these traditional fishing communities that young men are no longer able to take up the profession. The police estimate that in one badly affected fishing community about 10 per cent of the population (predominantly young men) are involved in the trafficking of hashish, which arrives by means of small motorised vessels along the beach at night.	Spain	Small motorised boats	
More recently, a report suggests that large shipments of hashish are transported to Spain, Italy and France from Algeria and Lebanon using fishing vessels.	Algeria, Lebanon	Fishing vessels	
According to a 2008 Canadian news report, a suspected former leader of the Calabrian N'drangheta was arrested in Toronto, Canada. The news report states that according to the Canadian court documents the former leader was believed to have monopolised the fishing industry along the Ionian coast and forced local fishers to hand over their catches, as well as exerted influence to traffic drugs along the coast.	Turkey, Canada	Fishing boats	

Incidents	Regions involved	Vessels used	Nationals
A number of sources suggest that the illegal fishing industry may be involved in the barter of marine living resources against illicit ATS and ATS precursors in some regions of the world. Ad hoc reference is made to the use of fishing vessels for the purpose of illicit traffic in cannabis and heroin.	General	Fishing vessels	
According to a 2011 media release South Korean police arrested 13 people believed to be part of an Asian organised crime syndicate involved in the trafficking of ATS from North to South Korea. Allegedly the police seized 5.95 kg of methamphetamines with an estimated street value of US$17.5 million. The story suggested that the drugs were trafficked into South Korea 'on ships disguised as fishing trawlers'.	North Korea South Korea	Ships disguised as trawlers	Asia
In a journal article, Hastings referred to a heroin trafficking case from Zhangzhou, China, involving fishing vessels: 'In one interesting case, a gang of smugglers led by two Taiwanese ... brought thirty-nine packets of heroin from Myanmar into Shenzhen, in Guangdong, in September 2007 and sold four packets there. They then transported the rest to Zhangpu, in Fujian Province, where they had a fishing boat ready to take it to Taiwan for sale. When the Chinese police caught them on October 18, they found that the network extended from Zhuhai, near Macao, to Fujian and Taiwan, and included at least eight Taiwanese, five mainland Chinese, a van, and two fishing boats.'	Myanmar PR China	Fishing vessels	Taiwanese, Chinese
In a 2010 Institute of Security Studies report, Hübschle described the sophistication of poaching operations in South Africa. The local organised criminal group receives methamphetamines from an Asian transnational organised criminal group in exchange for abalone.	South Africa		

Source: UNODC, *Transnational Organized Crime in the Fishing Industry*, Vienna: UNODC, 2011. (Detailed original sources are given in this document.)

to widely varying extents as the transport system evolves. The fundamental constant in arrangements is the distinction between long-distance transport and the handling of shipments close to coasts. For both tasks fishing boats possess particular advantages, including especially their cargo-carrying capacity and opportunities for concealment of packages of drugs, together with the 'camouflage' function of fishing itself, under the cover of which the trades can take place (discussed further below). The ocean-going capabilities of distant-water fishing vessels are especially needed on the Pacific routes linking the west coast of the Andean highlands, Mexico and the United States; to a relatively limited extent on the Caribbean and Mediterranean routes; on the South Atlantic routes between South America and West Africa; and on the northern Indian Ocean routes linking South-West Asia and East Africa. By contrast inshore coastal fishing boats are used for transhipment from distant-water fishing boats, to collect aerial drops and for commercial shipping to coastal locations. These are conventional inshore boats associated with both commercial and artisanal fisheries in the locations in which these operate. Transhipment from 'mother ships' is likely to be located in international waters, just beyond territorial sea limits, and to take place at night.[9]

The Involvement of Fishing Vessels and Fishers

The use of fishing vessels and the participation of fishers have evolved as the drugs trade has developed. By far the best documented are the Western Hemisphere trades into the US market from the Caribbean and South America, originating with the great expansion in the use of cannabis in the 1960s, most famously in California. The expansion of marijuana smuggling followed from this in the course of the 1980s and early 1990s. On the West Coast this was a long-distance operation using tuna boats specially fitted out for the trade, which had the necessary operating range to steam from California to Colombia and Ecuador, perhaps with a fuel stop on the Mexican coast. Such voyages typically were around 8,000 miles in length for the round trip, taking at least five weeks of sea time. A noteworthy example was the activities of the Golden Gate Smuggling Company,[10] which operated from 1979 until 1983, and which had a shore base at a fish plant in the fishing port of Moss Landing, south of San Francisco. Cargoes of marijuana were flown out of the Andean highlands and air-dropped into the sea, picked up by local fishing boats and dried for onward transhipment on the tuna boats. These boats landed the cargoes on the shores of San Francisco Bay.

The Caribbean route complex focused on the East Coast trade was and remains more complex. From the early 1980s marijuana was rapidly overtaken by cocaine as the principal cargo. The use of fishing boats was and remains

extensive, although fluctuating in competition with yachts and go-fast boats (the latter are more easily detected) according among other things to the changing efficacy of interdiction operations.[11] Commonly drugs were and are flown to a midshipment location such as Cuba, the Bahamas, Honduras or the open sea where an air drop took place. However an air drop at sea risks loss, with the knock-on effect that at least one party will be blamed for it. Drugs headed for the US market are loaded onto small, fast fishing boats for onward transport to the Florida coast; those headed for West Africa are picked up by distant-water fishing vessels acting as mother ships, which then unload on to small fishing boats off the West African coast.[12] Local fishers are often willing to participate so long as substantial profits can be made.

Fishing boats have particular advantages in the drugs trade, beginning with the operational aspects. It is both easy and advisable for both distant-water and nearshore operations to combine the illegal trade directly with normal fishing operations at sea, or at least camouflage it by having fishing gear, bait and fish on and below decks. Onshore it is even better to integrate it with processing and selling, as in the Golden Gate case noted above. In nearshore operations in particular, great attention was and is taken to meld in with normal fishing and fishing-related activities, such as those involved in lobster or shrimp fishing, especially in importing ports such as those on the Atlantic and Gulf of Mexico coasts of the United States.[13] The use of smuggling boats may be integrated with the use of decoy boats, and boat movements can be synchronised on a daily basis with normal fishing boats leaving and entering port as well as fishing on nearshore grounds. The activity can also be integrated with fishing competitions and regattas. Also important is good navigation, including the use of GPS. It is important to avoid having people on boats with ethnicities that do not match the usual pattern, travelling in bad weather, carrying extra fuel, not having fish on a fishing boat, and being on the water at unusual hours.

The mix of drug cargoes has evolved over the years. Marijuana is by far the most bulky, and thus requires greater carrying capacity (in terms of both space and weight) than cocaine or heroin. There is a progressive increase in value between marijuana and heroin, with a commensurate increase in revenue and profits. Once cocaine replaced marijuana as the main cargo in the US trade from the early 1980s, smugglers went to much greater lengths to modify fishing boats,[14] for example by installing sealed tanks, often next to the fuel tanks and between the bottom of the boat and the floor. Sealed tanks are difficult or impossible to detect at sea, especially if they are near to the fuel oil store, even using sniffer dogs. When drug smuggling is fully integrated with fishing, an option which it is also difficult or impossible to detect using sniffer dogs is to conceal the drugs inside, for example, frozen tuna mixed in with other fish in freezer compartments.

Another measure is to paint false waterlines, so that ballast can be replaced by drugs without the change being readily detected simply by looking at the

vessel from the outside. For weights greater than 400 kilos, fishing boats are more suitable than speedboats. Boat owners also commonly change the boat's name, paint it a different colour, and sometimes switch registration to the country where the journey midpoint is located.

The selection of crew is where the trades are most dependent on fishers. Inshore boats commonly have three or four crew, sufficient to handle a few hundred kilos of cargo, and easy to manage with a lower probability of snitching if they are all known to each other. An important consideration is the ethnicity of the crew; some smugglers prefer to use Cuban or American crews to blend in with the locals.[15]

As already noted, drug traffic on northern Indian Ocean routes appears to be increasing.[16] This is graphically illustrated by recent seizures of heroin and marijuana, including possibly the largest ever seizure of heroin in April 2014 by the Royal Navy from a dhow 48 km off the coast of Kenya/Tanzania. The heroin had been concealed in a cargo of cement. By early June naval interventions in this region had yielded 2.5 tonnes of heroin and hashish worth some £240 million. Current smuggling operations appear to be linked to the operations of al-Qaeda and the Taliban.[17]

The Evolving Trade and Countermeasures

The trade we are discussing here is in illegal drugs, and countermeasures including interception have evolved in parallel to the trade. These include both legal and institutional actions, and physical attempts to disrupt the trade and intercept the drug shipments both at sea and along the coasts. Modern treaty law covering this issue began with the 1924 Liquor Treaty between the United States and the United Kingdom to combat rum-running during Prohibition, but comprehensive global and regional measures date from the origins of the present trade system in the 1960s. For the drugs trade overall, major international measures include the 1961 Single Convention on Narcotic Drugs, which replaced all previous conventions, and was amended by a 1982 Protocol. This was followed by the 1981 Convention on Psychotropic Substances, which is a companion instrument to the 1961 Convention.[18] Major treaties with specific provisions for high seas boarding rights include the 1988 UN Narcotics Convention, a 1990 Spanish-Italian treaty and a subsequent similar measure involving Portugal, a 1994 Council of Europe Agreement, and numerous US bilateral agreements with neighbouring states, as well as Article 108 of the UN Convention on the Law of the Sea.[19]

A central concern – and tension – has been the desire and indeed need to secure flag state approval for incepting vessels at sea, which can come into conflict with a coastal state's practical concern about dealing with drug smug-

gling off its coasts. The application of the relevant law to fishing boats is further complicated by the absence of comprehensive registers and the situation in which such vessels may be deemed as stateless in the context of the conventions. Further, in the often fraught conditions of interception at sea, due account must be taken of the obligation to use minimal force, and the fundamental requirement to respect human rights, including prohibition of torture and inhumane treatment as well as the right to liberty.

The panoply of regional legal measures, which are by far the most comprehensive relating to the drugs trade, includes those relating to trade and interception for the US market. Of particular significance is the 1981 US-UK Agreement, and the already noted US bilateral treaty arrangements which apply particularly to all the Caribbean and adjacent Central and South American states as well as the United Kingdom, and key flag states such as Malta and some Pacific countries. These are profoundly unequal, or at least nonreciprocal, a measure of US political influence and its prioritisation of the perceived need to control the drugs trade in its domestic market. Domestic US measures include the 1980 Comprehensive Drug Abuse and Control Act of 1980, which did not apply to the high seas; the 1980 Marijuana on the High Seas Act applied to US and stateless vessels, and the 1986 Maritime Drug Law Enforcement Act, both of which are evidence of the preoccupation with maritime trade, including both fishing boats and merchant shipping.

In addition to these is the 2003 Caribbean Agreement Concerning Co-operation in Suppressing Illicit Maritime and Air Trafficking in Narcotic Drugs and Psychotropic Substances.[20] This is based on extensive practical experience, taking due account of the geography of 'choke points' on trade routes. It strengthens coastal state jurisdiction, and has detailed provisions regarding law enforcement operations of all states parties in and over the territorial waters of contracting states. An additional recent measure is the 2008 CARICOM (Caribbean Community Common Market) Agreement, a security measure designed to facilitate interstate cooperation among the CARICOM Member States, which do not include the United States and the United Kingdom.

The institutional organisation and actions for dealing with the drugs trades is also strongest within the US sphere of influence, and has its beginnings in the 1960s, with the establishment in 1968 of the US Bureau of Narcotics and Dangerous Drugs. In the 1980s there was a dramatic increase in the use of drugs and associated violence, and a number of US unilateral actions including the 1980 US invasion of Panama, as already noted. The United States put vast resources into intervention on Caribbean routes, and smashing Colombian drug syndicates. These led to the rise of the Mexican drug cartels, and the attempt by Colombian interests to develop new routes through the Caribbean via small islands where the United States still did not have an effective presence.[21] Further

measures continue to be applied, such as the 2008 requirement for fishing boats off Colombia and Ecuador to be equipped with GPS.[22]

The 'war' on drugs intensified from the early 1980s under President Reagan. In 1982 the US Coastguard in association with the Department of Defense and the US Navy established Law Enforcement Detachments (LEDNETs) which are better able to deal with the physical reality of operations at sea and along coasts. As of 2010 there were 18 of these.[23] In Europe, seven states (Spain, France, Ireland, Italy, the Netherlands, Portugal and the United Kingdom) established the Maritime Analysis and Operations Centre – Narcotics (MAOC-N) to coordinate action against the drugs trade, although it falls short of being a true international organisation.[24]

Interceptions of ships at sea are logistically complex, potentially dangerous and often very expensive. Only a limited number of states have the resources and trained personnel to conduct them, using either using naval or coastguard ships. For distant-water fishing vessels, confirmation of registry by the requested flag state, which is a requirement under the UN Narcotics Convention, may be difficult. The competent authority might lack round-the-clock access to its national register of shipping.[25] Naval power is prominent in the northern Indian Ocean and to some extent among the Caribbean islands,[26] while the United States relies principally on the US Coast Guard, backed up by naval resources where necessary. For example, in 2010 the US Coast Guard intercepted 26 per cent (90 tonnes) of the cocaine imported into the United States, while in 2009 the Royal Navy intercepted several vessels including the MV *Cristal*, a converted fishing vessel, which gave no indication that the crew was fishing or that there was any fishing gear aboard. The crew were of Panamanian, Colombian, Peruvian and Venezuelan nationality. The Panamanian crew members were transferred to the Panamanian Coast Guard, and the others transferred to the custody of the US Coast Guard[27] (see Table 12.1).

If a fishing boat is pursued, the crew's options include surrendering, throwing the cargo overboard, sinking the boat, returning to a mid-shipment point or trying to outrun their pursuers. Throwing the load overboard or sinking the boat are not good options, as consignments are designed to float. Allowing law enforcement personnel to board the boat is not necessarily a bad option – often boats with cargoes in a hidden compartment have been boarded and released after the enforcement authority failed to locate the cargo.[28] It is difficult or impossible to deal at sea with hidden compartments or consignments hidden with fish in freezers. In the former case it is really necessary to dismantle the boat in a warehouse, as the smugglers partly do; in the latter case the legal and economic risks (including payment of damages) of apprehending what could prove to be a normal cargo of fish are substantial. It should be emphasised, however, that cooperation between coastal and flag states can be effective in implementing the principle of forfeiture of drugs and assets (the vessels especially), including the destruction of vessels.[29]

Developing an effective response to the resilience of the drug-trading system underlined at the beginning of this chapter means working at every level in the system, on small, local scales as well as large regional and global scales. An impressive recent example of the latter was Operation Lionfish led by INTERPOL across central America and the Caribbean, which in July 2013 netted nearly US$1 billion worth (30 tonnes) of cocaine, heroin and marijuana.[10]

Conclusion

The use of fishing vessels and fishers remains a critical component of the maritime trade part of the vast global enterprise that is the illegal drugs industry. Although the incidence of maritime trafficking in the transport system is relatively low, commercial shipping and distant-water fishing vessels lead in the quantities carried. The enduring model of participation is for distant-water boats to ply the ocean routes, and tranship to local inshore fishing boats at either end. In semi-enclosed sea areas with islands, such as the Caribbean, local inshore boats can also be used for the relatively short entire voyage. Fishers act as captains and crews, but are not generally involved in directly managing the trade, which is done from shore at both production and market locations.

The principal advantages of using both inshore and distant-water fishing vessels are anonymity; the option of modifications to the vessel such as building a specialised compartment, or hiding the consignments in cargoes of fish; and the capacity to carry large loads. The first two of these alone make interdiction at sea very difficult, a situation which may be further complicated by the legal frameworks involved and their application by responsible organisations including navies and coastguards.

CHAPTER 13

Piracy and Armed Robbery

Introduction

Over many centuries pirates and sea robbers have been constant features of seagoing in several parts of the world. In recent decades the capture of merchant ships and the holding of seafarers for ransom have received most international publicity, and have been the subject of UN resolutions, military action at sea and on land, and legal processes. There has been less attention to attacks on fishing vessels. In practice there are probably many more assaults on these craft, but most remain unreported even by the victims. Some of the piracy acts against fishers are hit-and-run raids. The attackers generally rob crew of cash, personal property, boat stores and sometimes their catch. There is often violence involved and occasionally there are deaths. There is also organised systematic piracy whereby a fishing boat suitable for use as a mother ship in attacks on merchant vessels is selected and seized. This can be accompanied by the coercion of the skipper into service and/or he might be held for ransom, along with several of the crew. The young men in particular may be induced to join the gangs in what appears a considerably more profitable activity than scraping a living from declining fish stocks.

The reasons for the paucity of reports of attacks include the fear by fishers of reprisals during subsequent trips, and the likely retaliation on their communities. If they are illegally fishing they will in any case not report attacks in these zones. To avoid raids on their boats it is possible for fishers in some areas to obtain 'piracy immunity' by making regular protection payments. If they are engaged in illegal fishing they may still be subject to attacks by aggrieved legitimate fishers who could confiscate their catches. Some official patrols in the illegal zones may do likewise unless the skipper has ready cash to pay on-the-spot fines, otherwise they are likely to be both robbed and arrested. On any of these occasions there can be violence as vessel crews resist boarders.

The distinction between piracy and robbery is important in a legislative context. UNCLOS 82, Article 101 defines acts of piracy to attacks that take place on the high seas. This means that a warship of any flag can take action against piracy. On the other hand only coastal states have these powers in their territorial sea. An exception came with UN Security Council Resolutions 1838 and 1851 of 2011, which allowed the pursuit of pirates from high seas to

Table 13.1 Regions and positions of robbery and piracy, 2012

	In port	Territorial sea	High seas
South China Sea	60	18	11
Arabian Sea	32	5	0
West Africa	22	11	23
Indian Ocean	20	5	6
Malacca Strait	11	1	9
East Africa	7	10	41

Source: International Maritime Organization (IMO), *Annual Report 2012*, London: IMO.

territorial sea and ashore, but only in the case of Somalia. Similarly, when a ship is at anchor it will normally have to depend on coastal state authorities for its protection. The master could possibly take defensive measures under the Convention for Suppression of Unlawful Acts Against the Safety of Maritime Navigation 1988 (SUA), or the International Ship and Port Facility Security Code (ISPS), but they would need to know their rights under the flag state, as well as the regulations of the port state, especially if there was violence. As Table 13.1 shows, in 2012 there were more attacks in port (including, and indeed mainly, anchorages) than at sea.[1]

In trying to curtail attacks there are counter-piracy agreements between states, but some of these can be hazardous or confusing in practice. Innocent fishers have been killed by guards on passing merchant ships that suspected them of piratical intent. If deaths are reported it can result in the detention of both the fishing and merchant ship for investigation and a subsequent court case. For this reason guards report merely firing warning shots and will not admit hits. Even more complicated is the confrontation between the warship and a hijacked ship if there is killing of innocent fishers on board the captured vessel, and even shooting of the coerced skipper on the bridge. In addition complex decisions have to be made by the commander of the warship about where multinational captives who may claim not to be pirates can be landed, and there are the problems of where pirates should be tried, repatriated or imprisoned, with due regard to their defence, fair trial and human rights. Because of these difficulties only 738 pirates out of 2,000 apprehended between 2008 and 2010 were taken to a court and found guilty. Usually the boats are sunk, weapons confiscated, and the pirates released.

Many of the crews of the vessels arrested are clearly former fishers who joined voluntarily or collaborated with the use of their vessels for piracy. It is frequently argued that this behaviour is the result of the alienation of people in many small poor fishing communities that have been subject to discrimination and neglect. Chapter 7 outlined such situations in Malaysia during 1966 and from 1970–73, and Indonesia from 1980–82, and periodically until the

Indonesian Government banned foreign vessels (temporarily) in 1993. There were similar reasons for retaliations against foreign craft attempted by 'vigilante' groups in Guinea.[2]

Table 13.2 shows the overall situation of piracy and robbery as reported to the International Maritime Bureau (IMB) for bigger fishing vessels from 2000–13. During this period there were 184 such attacks reported from 30 sea areas. A 10 per cent sample of the circumstances and violent acts selected from each region and year is listed in Table 13.3. The evidence indicates a wide spread of incidents in the seas of developing countries. Table 13.2 shows that out of 184 attacks, 44 occurred in South-East Asia and 62 in East Africa. For this reason these two piracy-prone regions are summarised as case studies. These also show the movement of pirate vessels from a centre of activity to intercept distant local fleets, as is the case of the Indian Ocean islands, or by the spread of information regarding high profits to be offered from ransoms, as is the case of the spread of kidnapping in West Africa.

South-East Asia

This region was considered the main 'hot spot' of piracy until 2000. In particular there were numerous reports attributed to the activities of Asian criminal syndicates. These included the Japanese Yakuza and Chinese Triads. For example:

> In February 1996 a fishing vessel with a crew of ten was boarded off the southern Philippines. Gunmen killed nine members of the crew. A tenth man escaped, despite being shot in the back of the head and swam away. The vessel was never seen again.[3]

This vessel was probably taken as a mother ship. The main aims of these groups in hijacking fishing vessels were mainly to use them to capture more valuable cargo ships. These were then taken to small ports in China. This is another example:

> In March 1999 a cargo ship loaded with soda ash was attacked near Thailand. The pirates put the crew into rubber rafts. After six days at sea they were rescued by Thai fishermen. The ship was found at the Chinese port of Fangcheng.[4]

Fangcheng was one of several ports on the southern coast of China where in the early 1990s ships and cargoes could be sold without questions being asked and the crew abandoned, or even killed. These activities spread fear among fishers. As late as December 1998 'the bullet-ridden bodies of seven sailors were pulled up in fishing nets off the southern coast of China. The victims had been bound and gagged and weighed down with steel bars.'[5]

Table 13.2 *Actual and attempted acts of piracy on fishing vessels, 2000–July 2013*

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013*	Total
Bangladesh	1	3		12	3										19
Brazil					1										1
Caspian Sea										1					1
Eritrea								1							1
Gulf of Aden									3	6	1	1	1		12
Guyana								5							5
India				1											1
Indonesia		1		1	1	1									4
Kenya				1	1					1					3
Madagascar											1				1
Malacca Straits	1	1	10	7	3	1	5					1	1		30
Malaysia	2	1	4	1	1		4		2		1			1	17
Myanmar					1										1
Nigeria			1												1
Panama			1												1
Philippines		2		1	1		3		1						8
Saudi Arabia.							1								1
Sierra Leone			1				1								2
Solomon Islands								1							1
Somalia		2		1		5	1	4	3	7	14	9	3	1	50
South China Sea							1	2		1	2				6
Sri Lanka			1	1											2
Suriname								2							2
Taiwan			1												1
Thailand		2						1							3
Trinidad & Tobago					1		1								2
Trinidad Island				2											2
USA			1												1
United Arab Emirates					2										2
Viet Nam					2		1								3
Total	4	12	20	28	17	7	18	16	9	16	19	11	5	2	184

2013* = till end July 2013 Source: Extracted from the records of IMB, London.

Most of the strategic concern in the period was for the security of the vital Singapore and Malacca Straits, given the abilities of pirates to board vessels, and the added possibility of international terrorism. The International Maritime Organization (IMO) was successful in 2001 in achieving regional cooperation from the littoral states and multilateral agreements in the wider China Sea to combat piracy. As a result in 2009 there were only 13 pirate attacks in the region involving large vessels, as these had become more difficult to hide and to dispose of or sell.

It was a different matter for small fishing craft. In addition to the hit-and-run opportunistic attacks there were continued activities by branches of the major syndicates in abduction, coercion and protection rackets. These gangs invariably recruited disgruntled young men from poorer fishing communities. For example, in 2001 after an attack on a buoy service tender vessel it was established that eight of the 13 pirates involved had been hired from Karenum Island in the Riau Archipelago south-east of Singapore. The sea areas around these islands had been overfished by many foreign vessels, and the reefs damaged by use of chemicals and explosives, as well as tank discharges from ships passing through the Philip Channel.[6]

Other organised forms of piracy persisted in the region. These comprised guerrilla actions in 'wars of independence', and other politically motivated attacks. The most notable of these were by the Moro Islamic Liberation Front (MILF), and Abu Sayyaf, both related to the Philippines, and Gerakan Aceh Merdeka (GAM) from Sumatra, Indonesia.[7] They all collected regular dues from fishers in their areas of influence. Sabirin bin Ja'afar in his 2007 study showed a copy of the GAM's 'Surat Injin Operasional' (operational permit) allowing Malaysian fishermen access. He described shootings, abductions and ransoms when boats did not comply.[8] These actions affected not only local fishers but also boats from Thailand and elsewhere. The leaders of the movements claimed they were blamed for atrocities that were actually perpetuated by the 20 or so '*samseng*' (thug groups) from Riau and South Malacca against fishing boats and small cargo ships. In the case of GAM (the breakaway Sumatra movement), peace was declared with the government of Indonesia in 2005.

This, and more rigorous interrelated protection arrangements north and south of the Malacca Strait, have resulted in some decline in piracy activity in South-East Asia. From about 2000 onwards the incidents of reported acts of piracy began to shift from Asia to East Africa.

East Africa

This area extends from the Gulf of Aden to south of Mozambique, covering over 1 million square miles of EEZ, with about 2.5 million fishers. It became very

pirate prone, especially by raiders from the north Somalia coast of Puntland. The promoters of attacks in the region included Somali clan warlords backed by hidden rich tycoons and businessmen from the Arab world, Asia and possibly some Western countries. The instruments used in their piracy were again disgruntled young fishers from disadvantaged villages, including recruits under the age of 18. They launched attacks from small skiffs, sometimes working from mother ships about 35 km from the coast. These skiffs and bigger fishing vessels were often acquired by force from legitimate fishers.

Somalia, which became the epicentre of attacks in the Indian Ocean, is one of the least developed countries in the world. It has a coastline over 3,000 km in length and a population of nearly 10 million. Most of the people in the 1980s lived away from the coast as nomadic herders of camels and sheep. During the 1980s the coastal people were supported by 3,000–5,000 fishers operating a fleet of 700 or so small vessels. They worked in government-assisted fishing cooperatives, 100 or so private boats, and a state fleet of 11 larger trawlers. The catch of the local vessels was around 10,000 tonnes per annum. Fishing was also carried out by foreign vessels under government licences, possibly catching another 18,000 tons.[9] Supervision was always lax and there was corruption in access payments.

Somalia was particularly subject to environmental stresses which added to the poverty. There were disastrous droughts between 1974 and 1986, and as a consequence people migrated from inland to coastal villages. This meant there was pressure to increases catches and find alternative employment related to fishing. In 1991 the central government collapsed and a civil war started, accompanied by famine. Among other problems this brought for fishers was the disappearance of what little official supervision had existed in the fishery. It coincided with the search by EU states for access to new sources of fish. With open access the foreign vessels in Somalia waters increased to 800 or so, including major factory ships. These boats came from Spain, Italy, France and the United Kingdom as well as China, Japan, Taiwan, South Korea, the Philippines, India, Russia, Kenya and Yemen. They fished close up to the shore for rock lobsters and pursued stocks of tuna widely. Many foreign fishers showed aggressive behaviour towards the small-scale Somali boats that got in their way.

A fishery consultant in the early 1990s requested that the United Nations get involved in the Somali fishery and control the activities of the foreign vessels that were freely depleting the stocks.[10] He pointed out the multiple losses to the Somali people. In 1992 Dr Mustafa Tolba, the former Executive Director of the UN Development Programme (UNDP), confirmed not only serious overfishing but the concern that Italian companies were commercially dumping toxic waste in this ungoverned sea, and earning $2–3 million in profit.[11] The Organization of African Unity reported likewise. There were further appeals along these lines from several other sources between 1995 and 2006, including the FAO,

which was concerned about the high levels of fish discards and the ecological impacts of them.[12] In 1997 Mr Mahdi Gedi Qayad, a UN consultant, warned the international community about the likely adverse consequences if such practices continued, and recommended that a mechanism should be established for monitoring and protecting Somalia's territorial waters.[13] However an official report to the UN Secretary-General in 2011 stated that the nexus between these issues and piracy was not yet proven (see below).

It is claimed by spokespeople for the fishery communities in Somalia that it was pollution from dumping, and the behaviour of foreigners taking their life-sustaining fish stocks, that brought about protective measures in the form of the 'National Volunteer Coastguard of Somalia', which may also have included the remnants of the disbanded coastguard service. They demanded taxes from the foreign boats or would put them under arrest. This subsequently resulted in attacks on foreign fishing vessels if they refused to pay up. These actions were designated as piracy by the foreign fishing ships, but were seen by local fishers as justified attempts at protection to deter the stealing of their fish. However their actions ultimately extended to the less justifiable capture of foreign vessels, and abuses of merchant seafarers with demands for ransoms for their release. The ruling warlords elsewhere in Somalia had previously offered their services to foreign ships as protection against local attacks, and were selling them unofficial bogus licences to fish. They soon recognised that much greater business potential lay in capturing vessels for ransom, and they extended this to merchant ships using the vital sea routes along the coast and in the Indian Ocean.[14] The country was at this time impoverished and virtually ungovernable. The ordinary coastal people suffered even more after the 2004 tsunami destroyed whole villages and boats. It was therefore a relatively easy matter for the clan warlords and business agents to recruit fishers for the purposes of capturing merchant vessels on the coastal routes.

The attacks on merchant ships in the region were extensive during 2005. In 2006 there was a lull as a new government run by Islamic courts, while oppressive of human rights, prohibited piracy. With the overthrow of this regime there was a revival of piracy in 2007–8 with hundreds of ships under attack. This brought a declaration of the 'War Against Piracy' in 2009 which involved several navies of major countries, and the hiring of armed guards for merchant ships. Nevertheless in 2010 149 merchant ships were taken and the number of persons held as hostages between 2008 and 2011 reached nearly 2,000.[15] The cost for the release of a ship and crew was between US$3 million and US$9 million per vessel. Profits were enormously high for the promoters but the fishing villages received little, and the returning young men proved socially disruptive. At the same time the foreign fishers continued to reap the benefits of unrestricted fishing under the protection of naval forces.

Many legitimate Somali fishers were now scared of going to sea in case they were fired on by passing ships, or taken as recruits along with their skiffs by the pirate gangs. It is claimed that foreign firms continued to profit from the commercial disposal of waste offshore. There was more evidence of this when toxic chemicals and other materials were cast ashore during the tsunami, and there are claims that local people suffered health problems as a result.[16] This practice was denied by those accused of dumping.

In the war against piracy many innocent villagers and fishers suffered. When in 2012 the international forces attacked suspected pirate supply bases with missiles fired from helicopters, the fishers complained that their boats were being destroyed.[17] There were also landings by French commandos from helicopters. The case of a fisher who claimed to have been abducted in 2008 during such a helicopter raid, and later abandoned in France, was eventually heard by a French court on appeal in October 2012. He was proven innocent and awarded compensation.[18] This war also saw the deaths of captors on vessels which were under rescue, and captives used as human shields by the pirates. The most publicised incident was the killing of a fishing skipper on the mother ship *Jih Chung Tsai 68* in a rescue encounter with the USS *Stephen W. Groves* (see below).

The Secretary-General of the United Nations sought a report on the situation in Somalia and guidance on what should be done. The January 2011 report concluded:

> Although the nexus between piracy, on the one hand, and illegal fishing and toxic waste on the other, continues to be invoked without having been proven to date, piracy has in essence become an organised lucrative and attractive criminal activity undertaken for heinous ends. The extension of acts of piracy further away from the Somali coast shows that these acts have nothing to do with a desire to protect national interests.[19]

These conclusions were accurate as far as the single-minded pecuniary motives of pirate gangs were concerned, but they understated the genesis of the situation as far as the fishing communities went. It was quite clear that money alone was the motives of the warlords and the business people. Their activities ranged much wider in the Indian Ocean. In November 2008 for example the tanker *Sirius Star* was hijacked about 450 miles south of Mombasa. By this time, the pirates had advanced GPS tracking systems, automatic weapons and rocket-propelled grenades. They had become more violent and communicated widely in order to carry out concerted attacks. The case of the Seychelles is an example of this spread of activities. Once again it was the ordinary local fishers that suffered most, although this was mitigated by sufficient countervailing coastguard forces in these islands.

The Seychelles

The seas around the Seychelles are rich in tuna and attract high numbers of EU fishing vessels. The local communities and national economy are dependent on the fishery and the foreign processing plants that have been established. Extensions of piracy from East Africa were reported by the authorities in the Seychelles quite early in the period (see Box13.1).

West Africa

By 2012 the highest frequency of reported attacks had shifted from East to West Africa. There is no doubt that the naval forces and armed guards on merchant ships had reduced piracy in Somali waters. The IMB reports show piracy attacks globally had reduced in 2012, but in West Africa they had by then risen to 19 per cent of the world total. Even this was an incomplete picture for West Africa, as there was a reluctance to report attacks on fishing vessels, partly because of fear, but also because there was little chance of any investigation. The Gulf of Guinea in particular was already regarded as a high-risk area, with 41 attacks reported in 2008 from raiders using well-armed and fast speedboats. By 2013 most of these were for stealing cargoes,[20] but by 2013 the value of crew kidnapping also brought other gangs into play.[21] Their first targets were European captains and chief engineers of tugs and oil platform service vessels, who had the potential to bring the highest ransoms. Local fishers already suffering from illegal plundering of stocks were nervous of the gangs as food security and incomes were affected throughout the area. Their boats were often boarded and shootings occurred as there were plenty of arms available from local conflicts, but there are no records of any actual prosecutions of pirates in the Gulf of Guinea during 2012.

Conclusions and Legal Issues

In the space of eight years the piracy business promoters have made vast profits from ransoms for merchant seamen with minimum investment, and have remained unprosecuted. By contrast many of the fishers who operated the attacking craft were killed, injured or are imprisoned in 13 countries, under variable conditions of custody; and several have been sentenced to death.[22] Villagers have suffered loss of boats, social disruption and poverty. There is still debate over whether it was illegal overfishing that first fuelled the violence. What is clear from Somali sources is the resentment towards these vessels has again increased (2013). Similarly the dismissal of the complaints on commercial dumping from foreign ships continues, despite the arrest on 12 December 2012

Box 13.1 Piracy incidents in the Seychelles

2 October 2009 A European Union Spanish tuna purse seiner licensed to fish in and outside the Seychelles EEZ was captured by Somali pirates while fishing in Seychelles waters. The industrial fishing vessel had a mixed crew from Spain, Madagascar, the Seychelles, Senegal and the Ivory Coast. The vessel and the crew were released a month later after the Spanish government paid a large ransom.

29 March 2010 *Galate*, a Seychellois fishing boat, was captured by Somali pirates in Seychelles territorial water. On board were six Seychellois fishermen. They were freed by the Seychelles Coast Guard who fought and captured the pirates. They returned to Mahe on 1 April 2010. The pirates were arrested and detained. Later, in 2011, they were sentenced to from 10 to 20 years in prison.

20 April 2010 Four Seychellois fishers were captured by Somali pirates while on a fishing trip in Seychelles water. They were rescued by the Seychelles Coast Guard a day later and the pirates were arrested.

16 November 2010 *Faith*, a Seychellois fishing boat, was captured with seven fishermen on board who were rescued by the Seychelles Coast Guard on 20 November 2010.

30 October 201 *Aride*, a Seychellois artisanal fishing boat of 10 to 18 m, was captured by Somali pirates some 60 nm west of Mahe, close to a well-known fishing spot locally known as Seagull Bank. On board were two fishermen in their 60s. By December 2011 the fishing boat was anchored in a port in Somalia and the Seychelles authority had undertaken negotiations with the pirates for the safe release of the fishers, who had been able to communicate with their relatives by phone.

Some of these and other attacks occurred close to the 115 small islands in the archipelago and also within 60 miles of the capital, as well as in the high seas fishing areas. Albert Napier of the Apostleship of the Sea describes the fear of artisanal fishers, the subsequent loss of fish as food and in the supplies to tourist hotels, plus the loss of income from reduced foreign fishing licences and the avoidance of berthing in the islands by cruising yachts.

Source: Albert Napier, *Report on Artisanal Fishermen as Victims of Somali Piracy*, Apostleship of the Sea, 2012.

under the Transitional Federal Parliament of the *MV Daesen* for dumping 5,000 tonnes of cement 13 nm off the coast of Puntland.[23]

As well as recruiting the desperately poor, the piracy business tycoons have also employed skilled professional negotiators, who were experienced in estimating the costs and benefits to companies of holding a ship, cargo and crew, and negotiating ransoms over the telephone. Even when capturing private yachts they investigated the amounts a family was able to pay. The responses by commercial companies to demands determined how long merchant ships were held. The tanker *Sirius Star,* which was carrying oil essential for major refinery programmes, had ransom money dropped by parachute almost immediately, whereas the small cargo vessel *MV Iceberg 1* and crew were held for three years from 29 March 2010, virtually abandoned. As one sailor reported on rescue 'We thought nobody was coming to check if we were alive.'[24]

There were few prospects of big payoffs from holding a fishing vessel for long. When people suffered protracted periods in captivity, it was usually because their vessels were being used as mother ships for the skiffs engaged in piracy. For the crew of these ships there were multiple hazards, including the armed resistance by the pirates when confronted with warships, and being used as human shields. As well as the inhumanity of the pirates in this, some of those rescued expressed resentment at the apparent 'lack of concern' of rescuers of ships for their lives, particularly when their shipmates had been killed.[25]

The legal situation surrounding these deaths and other hazards can be complex. The case of the Taiwan fishing vessel *Jih Chung Tsai 68,* already referred to, reached a civil court in the United States when the widow of the captain brought an action for 'wrongful death and wilful destruction'. Briefly, the circumstances involved an attempt to rescue the ship, which had been taken by pirates for use as a base, along with a coerced captain and crew. While operating in the Indian Ocean during May 2011 it was challenged by the American warship *Stephen W. Groves,* which eventually on returning fire killed the Taiwan captain (who was also the owner) and several of the crew, both pirates and fishers. The remainder were taken on board the warship. The captain was buried at sea, and the ship shelled and sunk. Later all the crew were released without, as the widow's lawyer stated, 'even arranging for any trial or judicial proceedings'.[26] Ironically, the captain's wife had managed to raise the ransom money in Taiwan and a negotiator had agreed to a release.

Another example of a complex court case is the Korean owned 241-ton fishing vessel *Golden Wave.* This was engaged in illegal fishing in Somali waters during October 2010. It was boarded by 'volunteer Somali militia' demanding a fee. This was refused by the ship's agency in Mombasa. The militia then handed the vessel over to a pirate gang. It was used on 17 raids as far as the Seychelles. Ultimately some ransom payments were agreed and the ship returned to Mombasa. The crew of 39 sued the captain for exposing them to illegal fishing

in a dangerous area without their knowledge, and subsequently endangering their lives and costing them their freedom by leaving them in captivity.[27] This mirrors to some extent the claim by several of the crew of the *Maersk Alabama* against Captain Richard Phillips. They argued that he had endangered their lives by deliberately ignoring the standing orders of the company to keep beyond 600 miles from the Somali coast. The ship was 300 miles off the coast when the pirates boarded it.[28] There are several more complex legal issues in the robbery/piracy/terrorism field, which are discussed at greater length in Chapter 14.

A more recent outcome of the reduction in pirate activity in Somalia is the search by the investors in piracy for alternative ways of profit making. The UN Monitoring Group on Somalia and Eritrea has found, according to the *Kenya Press*, that 'Somali pirate gangs in search of new revenue are now providing armed protection teams for ships illegally fishing Somali waters. Erstwhile pirates are also trafficking in arms, drugs, and humans.' The report added that fishers in Puntland have confirmed that the private security teams on board such vessels were normally provided from pools of demobilised Somali pirates and coordinated by a ring of pirate leaders and associated businessmen operating in Puntland, Somaliland, the United Arab Emirates (UAE), Oman, Yemen and Iran.[29] For the poor fishing communities this is a return to the concerns over plundering of fish to which they had reacted some eight years previously.

Table 13.3 Selected incidents of piracy on fishing vessels, 2000–July 2013

Date/time/ status/type	Name of ship/Type/ Flag/Grt/IMO number	Position
2000		
3 October	*Shafiullah*, fishing vessel, Bangladesh	Bauria Ghat Sandwip Island Bangladesh
2001		
26 August Boarded	Unnamed fishing boat, Philippines	Off Alicia Town, Zambonga. Philippines
12 January Hijacked	*Horrizon I, Horrizon II*, fishing boat, Belize, 117	Kisimayu
2002		
17 April 0630LT	Unnamed fishing trawlers, Malaysia	Malacca Straits
25 October	*Pelangi, Burak*, fishing boat/ Indonesia	06:03N 097:09E, Malacca Straits
2003		
12 August 0230 LT Steaming/ boarded	2206 QNG, fishing trawler, Viet Nam	04:50N,108:02E, Indonesia
4 January Steaming/boarded	Unnamed fishing boat, Bangladesh	Chaltabari Canal, Sundarbans, India
2004		
16 January Steaming/boarded	Unnamed fishing boats, Viet Nam	Viet Nam's southern coast with Thailand
3 June Daylight Anchored/boarded	*Beira 7*, fishing vessel, Korea	Mombasa Inner Anchorage, Kenya
2005		
24 December 1900 LT Steaming/ hijacked	*Serba Guna I*, fishing boat, Indonesia	04:14.00N – 098:23.00E, near Sembilan Island, Ujung Tamiang, off eastern coast of Ache, Indonesia

Narration
While underway, pirates boarded the fishing vessel, killed nine crew members and dumped them in the cold room of the vessel.
While underway, pirates armed with guns raked six fishers with gunfire then left their bodies onboard their two boats, which were stripped of the engines. Local fishers found the bodies onboard the boats on Sunday and called the police. Police intensified their patrols in the area because of the killings.
While underway, Somali gunmen hijacked the ships and detained them at a port in Somalia. They held the 29 crew members and the fishing boats for illegal fishing and demanded a ransom for their release.
While underway pirates armed with rifles in a large boat approached four trawlers which were casting nets. They took hostage 12 fishers, hijacked the trawlers and sailed them to Indonesian waters. The pirates demanded a ransom of RM30,000 for the crews' release. The crew were released after the ransom was paid. The crew subsequently lodged a police complaint.
While underway armed pirates opened fire on a fishing boat and boarded her. They threw overboard all the nine crew members and hijacked the boat. The crew were in the water for two days. A passing ship rescued the fishers, brought them to Langkawi Island, Malaysia and handed the over to the authorities.
While underway, pirates armed with guns boarded the ship and shot dead the master. The pirates stole the ship's property and escaped.
While underway, pirates arrived in two motorboats at the fishing ground where several fishers were catching crabs and fish. They looted their money and fish and took 30 men as hostages. They threatened to kill them unless a ransom was paid. Locals claimed that attacks have been rampant in the area.
While underway, pirates armed with guns attacked two fishing boats. They killed one of the crew, injured another and forced the remaining 15 crew overboard. Five crew were lost; the rest were rescued by other fishing boats.
While at anchor, nine robbers boarded the fishing trawler, stole property and escaped.
Five pirates armed with machine guns, hand grenades and knives hijacked the fishing boat while underway. They released five crew members, held two crews as hostages and demanded a ransom from the owners.

(continued overleaf)

Table 13.3 continued

Date/time/ status/type	Name of ship/Type/ Flag/Grt/IMO number	Position
2006		
27 January 2200 LT Steaming/ boarded	*Mujin 5*, fishing trawler, Korea	Off Yelibuya Island, Sierra Leone
2007		
26 April Steaming/boarded	*Qionghai 08099*, fishing vessel, China	Spratly Islands, South China Sea
15 May 0840 UTC/ Steaming/hijacked	*Mavuno No. 2*, fishing vessel, Tanzania	01:10N–049:00E, 210 nm off Somalia
2008		
6 May 1400 LT Steaming/ boarded	*Al-Aziz*, fishing boat, Philippines	Off Tapul Island and Parang, Sulu, Philippines
18 November 0930 LT Steaming/ hijacked	*Ekawatnava 5*, fishing vessel, Kiribati, 566/ 9094846	14:17.15–050:15.70E, 30 NM east of Ash Shir, Gulf of Aden
2009		
27 August 1400 LT Steaming/ boarded	Tai Island III, fishing vessel, Saudi Arabia	45:31.49N–050:37.28E, North Field Coral (2) Eastem Region, Caspian Sea
2010		
3 March 0235 LT Steaming/ hijacked	*Sakoba*, fishing vessel, Kenya, 250 5011157	05:14S–042:37E, 151NM east of Pemba Island (Tanzania), off Somalia
25 December 1030 UTC Steaming/hijacked	*Shiuh Fu No. 1*, fishing vessel, Taiwan	12:58S–051:52E (Around 120 NM east of Nosy Ankao, Madagascar)

Narration
Fourteen armed pirates dressed in military fatigues in a boat approached the fishing trawler as it was underway. Two of them boarded, while the remaining 12 stayed in the boat. There were two naval personnel stationed on board the trawler to provide escort. Pirates in the boat opened fire on a nearby navy patrol boat, forcing the patrol boat to respond. In the ensuing gun battle, the captain of the trawler was injured and was taken ashore for treatment. One pirate was detained and a machine gun was recovered. No naval personnel were injured.
Armed pirates boarded the fishing vessel and robbed it of its catch while it was taking shelter because of engine trouble. The master informed his family about the robbery and that another vessel was approaching it. All contact with the fishing vessel was lost after the master's last call. The fate of the vessel and crew members is unknown.
While underway, five pirates armed with guns boarded and hijacked the fishing vessel. They sailed the vessel to a new location and moored in position 04:30N–048:10E. The eleven crew members were held hostage on board. On 4 November 2007 the vessel and crew were released after lengthy negotiations. It appears that a ransom was paid to secure the release of the ship and crew.
Four speedboats carrying 20 pirates, all armed with automatic weapons, attacked the fishing vessel which was carrying 20 passengers. The pirates fired upon the fishing vessel, killing four passengers and injuring eight others. The wounded passengers were sent to shore for medical treatment.
Pirates in three speedboats boarded the fishing vessel while underway. They took hostage 16 crew members and hijacked it into Somali waters. When a warship approached the vessel, armed pirates opened fire on the vessel. In the ensuing exchange of fire, the fishing vessel sank. Two crew members were rescued by a Yemeni fishing boat. One of them succumbed to injuries and died later. 14 other crew members were missing. Coalition warships and Yemeni authorities carried out a search for the survivors.
Pirates armed with guns opened fire on and boarded the fishing vessel. They stole the crew's property and the vessel's equipment and escaped. One crew member died from gunshot wounds.
Eleven pirates in three skiffs armed with guns and RPG boarded the drifting fishing vessel. They took hostage 16 crew members and threatened to injure or kill them if their instructions were not followed. The main intention of the pirates was to use the fishing vessel to hijack another vessel. The pirates stole the crew's cash and personal belongings and sailed the vessel with the skiffs in tow. On 5 March 12 crew members were transferred onto a hijacked chemical tanker while the remaining four crew were still held on board. The crew and the vessel were released on 19 July after a ransom was paid. The vessel arrived at Mombasa on 24 July. All crew members were safe.
Pirates hijacked the fishing vessel along with her 26 crew members. A previously hijacked merchant ship was reported to be in the vicinity during the hijacking of the fishing vessel.

(continued overleaf)

Table 13.3 continued

Date/time/ status/type	Name of ship/Type/ Flag/Grt/IMO number	Position
2011		
3 November 2100UTC Steaming/hijacked	*Chin I Wen*, fishing vessel, Taiwan, 290	06:10S–051:10E (around 260 nm SW of Seychelles Island), off Somalia
2012		
14 February 1930 LT Steaming/ boarded	Unnamed fishing vessel, Oman	Around 35 nm of Masirah Island, Oman, off Somalia
2013		
28 March 07:46 UTC Hijacked	*Saad 1*, fishing vessel, Iran (Islamic Republic of)	East Africa 11 nm WNW of Raas Caseyr, Somalia 1°52.00'N 05°18.00'E

Source: IMO, *Reports on Acts of Piracy and Armed Robbery Against Ships, 2000–2013*, London: IMO.

Narration
Pirates attacked and hijacked the fishing vessel while underway with her 28 crew members as hostages. The hijackers sailed the vessel towards the Somali coast. On 5 November the crew managed to regain control of their vessel and made a rendezvous with a warship that provided assistance. All 28 crew members were safe.
Twelve pirates armed with guns in a 7 m, brown-coloured dhow with its name written as *Hander*, attacked and boarded a fishing vessel engaged in fishing activities. They took hostage eight crew members, stole their cash and personal belongings, two drums of diesel and all food items available on board the vessel, and escaped. There were no injuries to the crew. The fishing vessel reported the incident to the Omani authorities.
Pirates boarded and hijacked the fishing vessel and took its 20 crew members hostage. The fishing vessel was rescued on the same day and sailed to a safe place. The crew were unharmed

CHAPTER 14

Conclusion: Problems and Prospects

The focus of this book has been on the conditions of sea fishers in a globalised industry which is faced with threatened and declining stocks of fish. In this industry over 16 million fishers support about 400 million people who work in related activities, and many millions more are dependent on fish as an essential protein in their diets. The purpose of this final chapter is to pull together several of the main concerns of fishers and to consider how dangerous and difficult situations can be dealt with in the future.

The most striking initial conclusion lies in the evidence of criminality embedded in various functions of the industry, and the harm this does to fish stocks and people. Criminal offences on the supply side of fishing extend from catching to processing and marketing. Those on the labour side range from deceptive recruitment to exploitation at sea and illegal treatment in port. The sum total of these features indicates systemic criminality in some, although by no means all, fishing regimes.

There are many environmentally aware and honest owners and employers in the industry who are harmed by the competitive advantages accruing to the dishonest from their depletion of fish beyond sustainable levels. Particularly damaged in this way as victims of predatory crimes are the small-scale fishers (SSF) and their communities. We start here with some of the SSF problems and prospects, as they are frequently overlooked and overrun in the competitive race for fish in a transnational global economy.

The view of a small-scale fishing community given in the book shows abject poverty running counter to the aspirations of UNCLOS on who should benefit from adjacent coastal waters. The SSF have been disadvantaged by government policies to support large urban-based fishing enterprises, and to sell licences to foreign ships, many of which are subsidised by their rich states. The coastal fishers in many developing regions remain poor and vulnerable. Often they lack tenure to their ramshackle housing, which is exposed to the ravages of hurricanes and tsunamis, as are their boats and gear, while others have been stealing their livelihoods through overfishing. The solution of establishing Marine Protected Areas (MPAs) to allow vulnerable stocks to recover could totally

destroy a vulnerable human community. The MPAs need to be introduced with close local consultation and on a co-management basis with the fishers, thereby reviving some of the indigenous systems in their cultures which once controlled the access and sharing of resources, but now do so along with alternative occupations to fishing.

When it comes to the crews of the bigger urban-based and foreign vessels, who are drawn from global sources, there are many abusive and other illegal situations. These are well documented in the book. We want to draw attention here to the arrests and punishments of fishers for the illegal acts of the owners. There is clearly concern internationally regarding illegal fishing, but the attempts to control this frequently involve the punishment of innocent fishers who serve on the vessels. These are generally young men who have been trafficked and deceived into service at sea, often on FOC ships. There they have been abused and cheated, and when the ships are arrested and taken to a port they are abandoned by the owners and confined on board without basic amenities and with loss of wages. Recall here the description of 75 fishers on seven vessels arrested in South Africa:

> The crew spent three months stranded in Cape Town's Table Bay, sleeping crowded together in dirty, airless quarters that reek of diesel ... they had been abandoned by their agents, and no one knows who the owners of these vessels are.[1]

Such crews are ultimately sent home after many months and possibly years, with the stigma of deportation, without return of earnings, and with the prospect of facing the demands of crewing agencies for repayment of initial loans and fees. These are innocent working people suffering more than triple jeopardy as payment for the crimes of their bosses.

Usually in reports of such arrests and abandonments of fishers Articles 73(2) and 292 of UNCLOS are cited. These state that the prompt release of a crew of an arrested vessel is necessary 'upon the posting of a reasonable bond or security', but in practice there is no one to pay the bond, the owners are unknown and the flag state unconcerned. The ship is then used as a prison, but without the amenities that real criminals would expect. For example, in Australia on 7 February 2002 the fishing vessel *Volga* was arrested for catching endangered species in the Southern Ocean. There was a Russian captain and a crew mainly from Galicia in Spain. The authorities set a 'reasonable bond' of A$3.33 million for the release of the crew, and demanded to know who the owners were. This information was not forthcoming, but the Russian Federation successfully appealed to the International Tribunal for the Law of the Sea on several counts. On 23 December 2002 some money was paid, and after nearly ten months the arrests were lifted, although the Russian captain had died after 'consuming a bottle of cleaning fluid in the mistaken belief that it was alcohol'.[2] Here is another example drawn

from Australia of the unfairness in these practices of detaining crews on board their ships: 'In Australia, a practice of confining arrested Indonesian seafarers on board their boats was found by the Australian Human Rights Commission to break the rights of prisoners to humane conditions of detention.'[3] This violation is a common occurrence in several places.

A similar concern for the disregard of basic rights of fishers is shown in the book with their arrests for violations of boundaries and the use of fishers as pawns in international territorial claims. The crimes against these fishers include detention without trial for a long period. For example, 'Several Myanmar fishermen spent over a year in a jail in India after they had accidentally drifted into Indian waters and were arrested. Charges were dropped against them.'[4] These disputes are widespread and periodically result in the deaths of fishers. It is often said that such disputes can be resolved through international law and diplomacy, but the only genuine efforts, as distinct from political posturing, have come from the attempts by fisher folk bodies to obtain methods of mutual exchange of those who have been held. Malaysia and Indonesia agreed a MoU in June 2013 for prevention and management of fisheries issues in the overlapping maritime border areas. We hope this will result in improvements to the treatment of fishers under arrest.

Their seamanship, navigational skills and local knowledge can mean that fishers are regarded as assets by drug cartels and pirate gangs. For fishers this can involve being paid by the gangs, coercion or imprisonment. There is little evidence of tangible links between the organisations involved in drug running and piracy, although some connections have been made in Bangladesh by the Trawl Owners Association, which claims that thousands of boats have been attacked by pirates locally.[5] An observer (unnamed) considered that what are being witnessed are 'turf wars' between drug smugglers using fishing boats, which result in innocent fishers being killed. This will be solved only with improvements in the SSF communities.

More positively, we have seen very successful recourse to law to tackle inhumane conditions on board ships in New Zealand. This example in the book shows the strength of harmonised action by a coalition of the NGO Slave Free Seas, trade unions, the ITF, individual lawyers, activists and academics. Their support also empowered migrant fisher crews in making contributions by filing affidavits at the New Zealand courts testifying to violence, sexual harassment, deception and other offences on board. The outcome was an Act of Parliament which ensures that companies chartering foreign vessels and crews do so in accordance with New Zealand standards. As we have seen, the issue came to public prominence with the loss of the *Oyang 70*. In 2011 Slave Free Seas was formed. As a result on 31 July 2014, the Minister for Primary Industries said of the Bill before Parliament:

> This will give us full jurisdiction over areas like employment and labour conditions on vessels fishing in New Zealand's Exclusive Economic Zone. It will help ensure fair standards for all fishing crews working in our waters. I want to thank other political parties for allowing this bill to pass on the final sitting day of this Parliament.

The key features of the Act are:

- A requirement that all foreign-owned vessels operating in New Zealand waters carry the New Zealand flag from 1 May 2016, and operate under full New Zealand legal jurisdiction.
- It enables the Ministry for Primary Industries (MPI) to consider employment, pollution/waste discharge issues and vessel safety matters as well as fisheries matters, when assessing applications for the registration of foreign-owned fishing vessels.
- It allows MPI fishery observers to collect information on employment, pollution/waste discharge and vessel safety matters, as well as the scientific information they collect now.
- It creates new powers to suspend the registration of non-compliant foreign-owned fishing vessels.

The campaign did more than that. As was noted in Chapter 11, there were arrests and prosecutions in South Korea, in particular at the insistence of the coastguards. The cases confirmed the systematic underpayment of crews through false time sheets and deliberate fraud by the companies. The claims presented in the NZ courts against companies in Korea, New Zealand and agencies in Indonesia have reached $30 million, and much has already been successfully obtained for the fishers. Some agencies were able to buy off fishers through out of court settlements for lesser amounts, and obtained agreements indemnifying them from further claims, and there was coercion and threats of blacklisting. The successes continue through the NZ courts with the legal teams of Slave Free Seas. They rightly see the enabling Act as a victory for human rights in New Zealand over the profiteering charterers who opposed it.

In response to similar criticism, and especially to trafficking, the government of Thailand under new policies has assured 'customers overseas that there is neither child labour, forced labour or human trafficking in Thailand' said the Deputy Permanent Secretary of Labour in July 2014.[6] However a commentator wrote on 23 September 2014 that 'The question is when, if ever, Thai officials are going to finally figure out that more anti-trafficking posters at the airport, and big seminars with public pronouncements of commitment are not convincing anyone that Thailand is systematically addressing the trafficking problem.'[7] The trafficking system is considered to be very firmly embedded in

Table 14.1 Issues and the Conventions addressing the rights of fishers

	Issues	UNCLOS	STCW-F	FAO Code of Conduct	WIFC 188	IMO Resolution A.930(22)
1	Abandonment				■	■
2	Accommodation				■	
3	Arrests of fishers	■				
4	Bathing water					
5	Blacklisting				■	
6	Child employment			■	■	
7	Coercion					
8	Compensation				■	■
9	Crew list				■	
10	Debt bondage					
11	Enforcement of compliance	■	■	■	■	
12	Fair fishing	■		■		
13	Food and water				■	
14	Freedom of association					
15	Hostages					
16	Hours of work				■	
17	Illegal fishing			■		
18	Living conditions			■	■	
19	Loss of life at sea				■	
20	Medical provisions				■	

The levels of current address of issues are distinguished by the intensity of shading, the darkest being the most addressed. Sources: UNCLOS, STCW-F, FAO Code of Conduct, WIFC 188, IMO Resolution A.930(22).

parts of the financial, law enforcement and political sectors at national levels in Thailand, as is testified especially by EJF surveys.

On an international level in addition to an ILO major new convention which is considered below, there has been the recent establishment of a High-Level Global Commission aimed at the 'health of the oceans and food security' for the future. The Commission has set up long-term environmental programmes with an emphasis on technological monitoring to curtail illegal fishing and extend

	Issues	UNCLOS	STCW-F	FAO Code of Conduct	WIFC 188	IMO Resolution A.930(22)
21	Minimum safe manning	■			■	
22	Minimum working age				■	
23	Mortality	■	■			
24	Placement fees	■	■		■	
25	Pre sea training for crew	■	■		■	
26	Pre sea training for skipper	■	■		■	
27	Prosecutions					
28	Recruitment methods				■	
29	Repatriation costs	■			■	■
30	Role of agencies				■	
31	Safe working equipment				■	
32	Sexual abuse					
33	Trials					
34	Unfair contracts				■	
35	Unseaworthy vessels	■		■		
36	Violence and physical abuse	■				
37	Wages				■	
38	Work conditions	■		■	■	
39	Work-related injuries				■	

jurisdiction over the high seas beyond national jurisdictions, largely through a protocol to UNCLOS 82. Other bodies involved include Ocean 5, a coalition of NGOs trying to stop illegal fishing in EU waters. At the Global Oceans Action Summit in 2014, with multi-state backing from private and state sources, there was a commitment by Barack Obama that the United States would 'expand and protect marine resources in the Central Pacific'. These are international projects supported by the United Nations with massive state and private funding. They

are very technologically based, with satellite coverage which will ensure the arrests of vessels engaged in illegal fishing. The extent to which fisher folk will be involved as a component in the future international management of the sea's living resources remains to be seen. However there are more immediate measures that can be put into practice and that consider the point of view of fishers in working at sea. Let us now look at some of these.

After several years of negotiations with governments, employers and workers' organisations, the ILO together with some NGOs has formulated a Convention on Working at Sea (WIFC, no. 188), and a Recommendation (R199) as a guide for implementation. Convention 188 subsumes a number of other ILO Conventions. It is flexible and there is recognition of 'substantial equivalence', and progressive implementation by states. This instrument has still to be ratified by the member governments. It then has to be adopted by national parliaments, entered into national laws and implemented. The Articles of the Convention offer the prospect of resolving many of the dangers and evils of international fisheries for both people and fish stocks. A comparison between the problems identified in the book and the existing and proposed legislation is given in Table 14.1.

As can be seen from Table 14.1, 25 of the 39 problems identified can be dealt with through the application of Convention 188. Table 14.2 follows the same alphabetical sequence and shows the relevant Articles from Convention 188 and other instruments. These positive comments indicate the significance of the new Convention, and the importance of the measures introduced for both stocks of fish and the livelihood of fishers when these issues are considered together, as they need to be.

There are several blanks shown in Table 14.1 including 'Freedom of association'. This is because the issue is implicit in the ILO Declaration on Fundamental Principles and Rights to Work covering all employment; it is also covered in the UN Universal Declaration of Human Rights. It has been shown elsewhere that appeals to these agreements, and human rights advocacy, have been effective in achieving successes in court as rights claims in fisheries.[8] This would apply also to several abuses such as sexual harassment, and in the case of 'trials' where there has been detention without trial. Taking WIFC 188 and the other provisions in relation to the issues given in the book it can be concluded that there is sufficient 'top down' regulation as far as fishers are concerned, other than on the politics of boundary disputes at a regional level, the issues of which are beyond the scope of maritime law. However, until the WIFC 188 is ratified the existing ILO Fishery Conventions need to be promoted, namely Minimum Age, 1959 (no. 112), Medical Examination, 1959 (113), Articles of Agreement, 1959 (114), and Accommodation of Crew, 1960 (126).

What are necessary are increased 'bottom-up' pressures from NGOs as in New Zealand, and also from the consumers of fish. The most progressive

fish-processing companies already purchase their fish only from vessels carrying a Marine Stewardship Council (MSC) certificate, and as processors they also meet MSC criteria. It would be a considerable advance if MSC criteria, in addition to covering environmental standards in catching fish, also applied to human rights on board, along the lines of Convention 188. Many more large-scale retailers in turn would see the force of this as the final supply link in the 'net to table' chain. Researchers who conducted a survey for the retail related body FishWise, which is concerned with human rights in business, said:

> Survey results indicate that human rights are more important to seafood consumers – and many of them are willing to avoid high-risk products and pay more for those that are certified to be free of abuses. The majority of companies who sell seafood acknowledged that human rights abuses are a problem, but much fewer admitted that abuses could be happening within their own supply chains. These companies also believed that it was their responsibility for ensuring that their seafood products were produced ethically.
>
> The time is ripe for the seafood industry to live up to this responsibility – so that it can assure customers that products are produced without human rights abuses and to use this effort to build additional brand recognition, confidence and trust with consumers.[9]

A further confirmation of concern over human rights violation in the supply of fish is a letter sent to the Prime Minister of Thailand in January 2015 from 45 parties, including Seafish, commercial, government, trade union and NGO representation. The letter deplored a proposal by the Government of Thailand to start recruiting crews from men serving serious criminal sentences in Thai prisons. The protesters pointed out that shortages of crews would be overcome only by improved conditions and wages.[10]

However, what is not yet available as an improvement in the fishing industry, even for the large vessels in the distant-water fleet, is a base wage rate for fishers which can be appealed to, in the same way as the ILO-negotiated minimum wage for able-bodied seafarers in the mercantile marine. Even on fishing vessels under EU flag states there are considerable differences in wages between national and migrant workers. The minimum national flag state rate should apply to all those who work within the territorial sea at the very least. New Zealand has set the standard in this respect.

Those serving under atrocious conditions and for low wages clearly need extended support in pursuing their demands. However, there is major concern when it comes to migrant fishers' complaints about wages, and more so about the conditions on board, regarding the problem of their vulnerability to repercussions on returning to their home country. As a final comment on this, the following quotation is from the New Zealand campaigning team on Fishers' Rights regarding the attack on Yusril (see Chapter 10):

The lengths to which certain factions in the fishing industry went to, to silence crew is perhaps best illustrated by an extension to our original research by renowned slavery expert E. Benjamin Skinner. Published in Bloomberg Business Week in February 2012, Skinner's article featured a crew member who he called Yusril and who was also one of our own participants. Within 36 hr of Skinner's article being published online, Yusril had been identified. He sent a text message to Skinner, 'Strangers in my house. I'm very scared. Leaving with my family. Please help.' Skinner contacted the U.S. Embassy in Indonesia who provided protection to Yusril. In a subsequent radio interview, an emotional Skinner (2012) stated:

'This is a message I have to send very directly to anyone who is harassing my sources. You can come after me on my journalism, my reporting on this piece is bullet proof.... You can come after me as much as you like... but it is unconscionable to go after a 28 year old source, his 22 year old wife and their 1 year old son and drive them into hiding... that is as despicable a corporate practice as I have ever heard.' [11]

Table 14.2 Articles in the Conventions protecting the rights of fishers

	Issues	Addressed by
1	*Abandonment*	
	Articles 21–22	WIFC 188
	Fishers are entitled to repatriation at the owner's expense: • after their work agreement has expired • after their work agreement has been terminated for justified reasons by them or the fishing vessel owner • if they are no longer able to carry out the duties required under their work agreement, or • if they cannot be expected to carry out their duties under the specific circumstances.	
	Shipowners are urged to comply with the Guidelines of the Resolution in respect of all seagoing ships and should arrange a financial security system which complies with these Guidelines.	IMO Res'n A930(22)
	The financial security system should provide for: 1) the expenses of the repatriation of the seafarer, which are to be met without costs to the seafarer; 2) the maintenance of the seafarer from the time of abandonment to the time of arrival at the place of repatriation; 3) payment to the seafarer of all outstanding remuneration and contractual entitlements; and 4) payment to the seafarer of other expenses incurred during the period of abandonment arising from the abandonment.	
	Shipowners should ensure that their seagoing ships engaged on international voyages have on board a certificate attesting to the existence of a financial security system in the event of abandonment of seafarers. It should be posted in a prominent position in the seafarers' accommodation.	

	Issues	Addressed by
2	*Accommodation*	
	Article 8	WIFC 188
	Food and accommodation: owners must provide food and water to the fishers on board at no extra cost. Minimum accommodation standards must also be upheld as set out in Annex 3.	
	Joint responsibility: working with the competent international bodies and with the input of the fishers, it is the owner's responsibility to review on an ongoing basis the problem of vibration on board with an ultimate goal of protecting fishers from the adverse effects of vibration.	
	Articles 25–28, and Annex III	
	Design and construction of accommodation: there are strict minimum standards that include:	
	• the size of sleeping rooms and other accommodation spaces • the number of fishers per room • the minimum sanitary standards and facilities • facilities for sick and injured fishers • headroom • heating and ventilation • noise, vibration and other ambient factors • lighting • insulation.	
3	*Arrests of fishers*	
	Article 73	UNCLOS
	Coastal state penalties for violations of fisheries laws and regulations in the exclusive economic zone may not include imprisonment, in the absence of agreements to the contrary by the states concerned, or any other form of corporal punishment.	
	In cases of arrest or detention of foreign vessels the coastal state shall promptly notify the flag state, through appropriate channels, of the action taken and of any penalties subsequently imposed.	
5	*Blacklisting*	
	Recruitment:	WIFC 188
	Laws, regulations or other measures must be in place to: • prevent blacklisting of fishers • ensure that fishers are not – under any circumstances – asked to pay to secure a job or work, either directly or indirectly, in whole or in part • establish conditions for the operation, suspension or withdrawal of the licence or certificate of private agencies.	

continued overleaf

Table 14.2 continued

	Issues	Addressed by
6	*Child employment*	
	Chapter II	STCW-F
	Certification of skippers, officers, engineer officers and radio operators: the skipper and all crew must be trained and certified according to convention.	
	Officers should be no less than 18 years of age.	
	Article 9	WIFC 188
	The agreed minimum age for work on board a fishing vessel is 16 years. It is, however, up to the competent authority to authorise a fisher to work on a fishing vessel if they are between 15 and 16 years of age, are no longer subject to compulsory schooling and are engaged in vocational training in fishing.	
	Fishers under the age of 18 are prohibited from working at night (night is defined as a period of at least nine hours starting no later than midnight and ending no earlier than 5 am). Exceptions to these strict night work restrictions may only be made by the competent authority when fishers are required to carry out specific training.	
	Fishers under the age of 18 are not permitted to carry out tasks that are likely to jeopardise their health, safety or morals.	
	Article 31	
	Special consideration will be given to the safety and health of fishers under the age of 18.	
8	*Compensation*	
	Articles 34–39	WIFC 188
	In the event of injury from an occupational accident or disease, the fisher is entitled to access to:	
	• appropriate medical care, and	
	• compensation in accordance with national laws and regulations.	
	The protection may be ensured through:	
	• a system for fishing vessel owners' liability, or	
	• compulsory insurance, workers' compensation or other scheme.	
	In the absence of national provisions for fishers, flag states must adopt laws or regulations to ensure that fishing vessel owners are responsible for covering medical expenses during medical treatment in a foreign country, until the fisher has been repatriated.	

	Issues	Addressed by
	Shipowners are urged to comply with the Guidelines of the Resolution in respect of all seagoing ships and should arrange a financial security system which complies with these Guidelines.	IMO Res a
	The financial security system should provide for: 1) the expenses of the repatriation of the seafarer, which are to be met without costs to the seafarer; 2) the maintenance of the seafarer from the time of abandonment to the time of arrival at the place of repatriation; 3) payment to the seafarer of all outstanding remuneration and contractual entitlements; and 4) payment to the seafarer of other expenses incurred during the period of abandonment arising from the abandonment.	
	Shipowners should ensure that their seagoing ships engaged on international voyages have on board a certificate attesting to the existence of a financial security system in the event of abandonment of seafarers. It should be posted in a prominent position in the seafarers' accommodation.	
9	*Crew list*	
	Articles 15–20, and Annex II	WIFC 188
	Every fishing vessel shall carry a crew list, a copy of which must be provided to the authorities ashore prior to the departure of the vessel, or communicated ashore immediately after departure of the vessel.	
11	*Enforcement*	
	Article 146	UNCLOS
	With respect to activities in the Area, necessary measures shall be taken to ensure effective protection of human life. To this end the Authority shall adopt appropriate rules, regulations and procedures to supplement existing international law as embodied in relevant treaties.	
	Article 7–8	STCW-F
	Each Party shall establish processes and procedures for the impartial investigation of any reported incompetency, act or omission, that may pose a direct threat to safety of life or property at sea or to the marine environment.	
	Each Party shall prescribe penalties or disciplinary measures for cases in which the provisions of its national legislation giving effect to this Convention are not complied with in respect of vessels entitled to fly its flag or of fishing vessel personnel duly certificated by that Party.	
	Fishing vessels, while in the port of another Party, are subject to control by officers duly authorized by that Party to verify that all persons serving on board who are required to be certificated by this Convention are so certificated or hold an appropriate dispensation.	
	Article 8	FAO Code

continued overleaf

Table 14.2 continued

	Issues	Addressed by
	Flag States should take enforcement measures in respect of fishing vessels entitled to fly their flag which have been found by them to have contravened applicable conservation and management measures, including, where appropriate, making the contravention of such measures an offence under national legislation.	
	Enforcement	WIFC 188
	The convention sets a requirement for flag states to establish a system for the enforcement of compliance over vessels that fly its flag. In practical terms this means that a number of qualified inspectors will be required to check on living and working conditions and to issue certificates for certain vessels. In addition to this, port states can investigate complaints and report back to the flag state. Anyone with an interest in the welfare of the fishers can make a complaint. In short the enforcement system requires inspections, reporting, monitoring, complaints procedures, and appropriate penalties and corrective measures.	
	Port state control (PSC)	
	The other way of enforcing the convention requirements is through possible port state control (PSC) in foreign ports. The convention allows countries that have ratified it to enforce its requirements on foreign fishing vessels entering their ports.	
12	*Fair fishing*	
	Article 51	UNCLOS
	Without prejudice to article 49, an archipelagic state shall respect existing agreements with other states and shall recognize traditional fishing rights and other legitimate activities of the immediately adjacent neighbouring states in certain areas falling within archipelagic waters.	
	Article 6	FAO Code
	States should prevent overfishing and excess fishing capacity and should implement management measures to ensure that fishing effort is commensurate with the productive capacity of the fishery resources and their sustainable utilization. States should take measures to rehabilitate populations as far as possible and when appropriate.	
	States should cooperate in order to prevent disputes. All disputes relating to fishing activities and practices should be resolved in a timely, peaceful and cooperative manner, in accordance with applicable international agreements or as may otherwise be agreed between the parties.	
	States should ensure that fishing facilities and equipment as well as all fisheries activities allow for safe, healthy and fair working and living conditions and meet internationally agreed standards adopted by relevant international organizations.	

	Issues	Addressed by
	Article 8	
	States should ensure that only fishing operations allowed by them are conducted within waters under their jurisdiction and that these operations are carried out in a responsible manner.	
	Flag states should maintain records of fishing vessels entitled to fly their flag and authorized to be used for fishing, and should indicate in such records details of the vessels, their ownership and authorization to fish.	
	Article 6	
	States should prevent overfishing and excess fishing capacity and should implement management measures to ensure that fishing effort is commensurate with the productive capacity of the fishery resources and their sustainable utilization. States should take measures to rehabilitate populations as far as possible and when appropriate.	
	States should cooperate in order to prevent disputes. All disputes relating to fishing activities and practices should be resolved in a timely, peaceful and cooperative manner, in accordance with applicable international agreements or as may otherwise be agreed between the parties.	
13	*Food and water*	
	Article 8	WIFC 188
	Food and accommodation: owners must provide food and water to the fishers on board at no extra cost. Minimum accommodation standards must also be upheld as set out in Annex 3.	
	Articles 25–28, and Annex III	
	The water carried and the food served on board must be of sufficient nutritional value, quality and quantity to feed all crew members. The provision of food and potable water is now the responsibility of the fishing vessel owner at no personal cost to the fisher. If paid it is possible though to recover the cost as operational expenses on a share basis and if the CBA* so provides.	
16	*Hours of work*	
	Article 9	WIFC 188
	The agreed minimum age for work on board a fishing vessel is 16 years. It is, however, up to the competent authority to authorise a fisher to work on a fishing vessel if they are between 15 and 16 years of age, are no longer subject to compulsory schooling and are engaged in vocational training in fishing.	

* collective bargaining agreement

continued overleaf

Table 14.2 continued

	Issues	Addressed by
	Fishers under the age of 18 are prohibited from working at night (night is defined as a period of at least nine hours starting no later than midnight and ending no earlier than 5 am). Exceptions to these strict night work restrictions may only be made by the competent authority when fishers are required to carry out specific training.	
	Articles 13–14	
	Each fisher must be given regular periods of rest of sufficient length to ensure safety and health.	
	Additional requirement for vessels of 24 m in length and over:	
	The minimum hours of rest shall not be less than 10 hours in any 24-hour period and/or 77 hours in any seven-day period; however, the competent authority may permit temporary exceptions to these limits.	
17	*Illegal fishing*	
	Article 8	FAO Code
	States should ensure that only fishing operations allowed by them are conducted within waters under their jurisdiction and that these operations are carried out in a responsible manner.	
	Flag states should maintain records of fishing vessels entitled to fly their flag and authorized to be used for fishing and should indicate in such records details of the vessels, their ownership and authorization to fish.	
	Flag states should take enforcement measures in respect of fishing vessels entitled to fly their flag which have been found by them to have contravened applicable conservation and management measures, including, where appropriate, making the contravention of such measures an offence under national legislation.	
	States should prohibit dynamiting, poisoning and other comparable destructive fishing practices.	
	Article 7	
	States should adopt measures to ensure that no vessel be allowed to fish unless so authorized, in a manner consistent with international law for the high seas or in conformity with national legislation within areas of national jurisdiction.	
18	*Living conditions*	
	Article 6	FAO Code
	States should ensure that fishing facilities and equipment as well as all fisheries activities allow for safe, healthy and fair working and living conditions and meet internationally agreed standards adopted by relevant international organizations.	

	Issues	Addressed by
	Article 8	WIFC 188
	Food and accommodation: owners must provide food and water to the fishers on board at no extra cost. Minimum accommodation standards must also be upheld as set out in Annex 3.	
	Health and safety: owners must ensure that, depending on the size of the vessel, on board measures or procedures are in place to prevent occupational accidents, injuries and disease. Further to this, each fisher must receive the basic safety training necessary for the safe navigation and operation of the vessel and should be familiarised with the equipment on board. In addition, it is the responsibility of the fishing vessel owner to provide any personal protective clothing or equipment required by fishers on board.	
	Joint responsibility: working with the competent international bodies and with the input of the fishers, it is the owner's responsibility to review on an ongoing basis the problem of vibration on board with an ultimate goal of protecting fishers from the adverse effects of vibration.	
19	*Loss of life at sea*	
	Articles 15–20, and Annex II	WIFC 188
	Every fishing vessel shall carry a crew list, a copy of which must be provided to the authorities ashore prior to the departure of the vessel, or communicated ashore immediately after departure of the vessel.	
20	*Medical provisions*	
	Articles 29–33	WIFC 188
	After consideration of the number of fishers on board, the location of operation and the length of the voyage, a vessel should:	
	carry appropriate medical equipment and medical supplies	
	have at least one fisher on board who is qualified or trained in first aid and administering medical care, and who knows how to use the medical equipment and supplies	
	be equipped for communication with services ashore that can provide appropriate medical advice.	
	All medical equipment and supplies carried must be accompanied by instructions in a language and format understood by the fishers on board.	
	Fishers also have the right to medical treatment ashore and to be taken ashore in a timely manner for treatment in the event of any serious injury or illness.	
	Additional requirements for fishing vessels of 24 m in length and over:	

continued overleaf

Table 14.2 continued

Issues	Addressed by
The medical equipment and medical supplies on board must be determined by the competent authority and must be properly maintained and inspected.	
Fishing vessels must carry a medical guide approved by the competent authority or the latest edition of the International Medical Guide for Ships.	
Fishing vessels must have access to a system of medical advice for vessels at sea via radio or satellite communication, including specialist advice, which should be available at all times.	
Fishing vessels must carry on board a list of radio or satellite stations through which medical advice can be obtained.	
Medical care must be provided on board or while landed in a foreign port to all fishers on board and at no personal cost.	
Article 8	
Medical care: fishing vessel owners must cover fishers' medical expenses, including related material assistance and support, during medical treatment in a foreign country, until the fisher has been repatriated – unless the fisher has been found to be in serious default of his/her work agreement.	
Articles 10–12	
Fishers cannot work on board a ship unless certified medically fit for their duties.	
Fishers may be granted exemption from the need to have a certificate, but not if they work on a fishing vessel of 24 m in length or over and remain at sea for more than three days.	
All medical certificates must be issued by a qualified medical practitioner, or in the case of an eyesight certificate, by a recognised eye care practitioner.	
The fisher's hearing and sight are to be ensured to be satisfactory for their duties on the vessel.	
They do not suffer from any medical condition likely to be aggravated by work at sea, likely to render them unfit for service, or endanger the safety or health of anyone else on board.	
The medical certificate is valid for two years. For fishers under the age of 18, it will only be valid for a maximum of one year.	
If the certificate expires while at sea then the certificate will remain in force until the end of that voyage.	
Articles 29–30	
Each Member shall adopt laws, regulations or other measures requiring that:	
fishing vessels carry appropriate medical equipment and medical supplies for the service of the vessel	

Issues	Addressed by
fishing vessels have at least one fisher on board who is qualified or trained in first aid and other forms of medical care and who has the necessary knowledge to use the medical equipment medical equipment and supplies carried on board be accompanied by instructions or other information in a language and format understood by the fisher or fishers fishing vessels are equipped for radio or satellite communication with persons or services ashore that can provide medical advice fishers have the right to medical treatment ashore and the right to be taken ashore in a timely manner for treatment in the event of serious injury or illness. Fishing vessels of 24 m in length and over must: ensure the medical equipment and medical supplies carried on board must be properly maintained and inspected carry a medical guide adopted or approved by the competent authority, or the latest edition of the International Medical Guide for Ships have access to a prearranged system of medical advice to vessels at sea by radio or satellite carry on board a list of radio or satellite stations through which medical advice can be obtained to the extent consistent with the Member's national law and practice, medical care while the fisher is on board or landed in a foreign port must be provided free of charge to the fisher.	
Articles 38, 39 In the event of injury due to an occupational accident or disease, the fisher is entitled to access to: • appropriate medical care, and • compensation in accordance with national laws and regulations. The protection may be ensured through: • a system for fishing vessel owners' liability, or • compulsory insurance, workers' compensation or other scheme. In the absence of national provisions for fishers, flag states must adopt laws or regulations to ensure that fishing vessel owners are responsible for covering medical expenses during medical treatment in a foreign country, until the fisher has been repatriated.	

continued overleaf

Table 14.2 continued

	Issues	Addressed by
21	*Minimum safe manning*	
	Article 94	UNCLOS
	Every state shall take such measures for ships flying its flag as are necessary to ensure safety at sea with regard, inter alia, to:	
	(a) the construction, equipment and seaworthiness of ships; (b) the manning of ships, labour conditions and the training of crews, taking into account the applicable international instruments; (c) the use of signals, the maintenance of communications and the prevention of collisions.	
	Article 8	WIFC 188
	Manning: owners must ensure that the skipper is competent and has all the resources necessary to ensure that the vessel complies with the obligations of the convention. Further to this the vessel must be fully and safely manned to ensure safe navigation and operation.	
	Articles 13–14	
	Additional requirement for vessels of 24 m in length and over:	
	A minimum level of manning for safe navigation must be established by the competent authority specifying the number and required qualifications of fishers.	
22	*Minimum working age*	
	Article 9	WIFC 188
	The agreed minimum age for work on board a fishing vessel is 16 years. It is, however, up to the competent authority to authorise a fisher to work on a fishing vessel if they are between 15 and 16 years of age, are no longer subject to compulsory schooling and are engaged in vocational training in fishing.	
	Fishers under the age of 18 are prohibited from working at night (night is defined as a period of at least nine hours starting no later than midnight and ending no earlier than 5 am). Exceptions to these strict night work restrictions may only be made by the competent authority when fishers are required to carry out specific training.	
	Fishers under the age of 18 are not permitted to carry out tasks that are likely to jeopardise their health, safety or morals.	
23	*Mortality*	
	Article 146	UNCLOS
	With respect to activities in the Area, necessary measures shall be taken to ensure effective protection of human life. To this end the Authority shall adopt appropriate rules, regulations and procedures to supplement existing international law as embodied in relevant treaties.	

	Issues	Addressed by
24	*Placement fees*	
	Recruitment. Parties must:	WIFC 188
	ensure that fishers are not – under any circumstances – asked to pay to secure a job or work, either directly or indirectly, in whole or in part, and	
	establish conditions for the operation, suspension or withdrawal of the licence or certificate of private agencies.	
25	*Pre-sea training*	
26		
	Article 94	UNCLOS
	Every state shall take such measures for ships flying its flag as are necessary to ensure safety at sea with regard, inter alia, to:	
	(a) the construction, equipment and seaworthiness of ships; (b) the manning of ships, labour conditions and the training of crews, taking into account the applicable international instruments; (c) the use of signals, the maintenance of communications and the prevention of collisions.	
	Chapter II	STCW-F
	Certification of skippers, officers, engineer officers and radio operators: the skipper and all crew have to be trained and certified according to convention.	
	Officers should be no less than 18 years of age.	
	Article 9	
	Parties to the Convention shall promote, in consultation with and with the assistance of the Organization, support for those states which request technical assistance for the training of administrative and technical personnel, establishment of institutions for training of fishing vessel personnel, supply of equipment and facilities for training institutions.	
	Article 8	WIFC 188
	Manning: owners must ensure that the skipper is competent and has all the resources necessary to ensure that the vessel complies with the obligations of the convention. Further to this the vessel must be fully and safely manned to ensure safe navigation and operation.	
	Occupational safety, health and accident prevention	
	Fishers must be trained in the handling of similar fishing equipment to that which they will be expected to use and given information regarding the fishing operations with which they will be engaged.	
	They should also be aware of the following:	
	• special consideration will be given to the safety and health of fishers under the age of 18	

continued overleaf

Table 14.2 continued

	Issues	Addressed by
	• accidents on board must be reported and investigated by the flag state, and	
	• joint committees on occupational safety and health will be established.	
28	*Recruitment methods*	
	If there is a public service providing recruitment and placement for fishers, it must be:	WIFC 188
	part of a public employment service for all workers and employers, and free of charge.	
	Any private crew manning agencies must be regulated by the competent authorities in their country after consultation with fishers' and fishing vessel owners' representative organisations.	
29	*Repatriation costs*	
	Articles 21–22	WIFC 188
	Fishers are entitled to repatriation at the owner's expense:	
	• after their work agreement has expired	
	• after their work agreement has been terminated for justified reasons by them or the fishing vessel owner	
	• if they are no longer able to carry out the duties required under their work agreement, or	
	• if they cannot be expected to carry out their duties under the specific circumstances.	
	Shipowners are urged to comply with the Guidelines of the Resolution in respect of all seagoing ships and should arrange a financial security system which complies with these Guidelines.	IMO Res
	The financial security system should provide for: 1) the expenses of the repatriation of the seafarer, which are to be met without costs to the seafarer; 2) the maintenance of the seafarer from the time of abandonment to the time of arrival at the place of repatriation; 3) payment to the seafarer of all outstanding remuneration and contractual entitlements; and 4) payment to the seafarer of other expenses incurred during the period of abandonment arising from the abandonment.	
	Shipowners should ensure that their seagoing ships engaged on international voyages have on board a certificate attesting to the existence of a financial security system in the event of abandonment of seafarers. It should be posted in a prominent position in the seafarers' accommodation/	
30	*Role of agencies*	
	Recruitment:	WIFC 188

	Issues	Addressed by
	If there is a public service providing recruitment and placement for fishers, it must be part of a public employment service for all workers and employers, and free of charge. Any private crew manning agencies must be regulated by the competent authorities in their country after consultation with fishers' and fishing vessel owners' representative organisations. Laws, regulations or other measures must be in place to: • prevent blacklisting of fishers • ensure that fishers are not – under any circumstances – asked to pay to secure a job or work, either directly or indirectly, in whole or in part, and • establish conditions for the operation, suspension or withdrawal of the licence or certificate of private agencies.	
31	*Safe working equipment* Occupational safety, health and accident prevention Fishing vessel owners must ensure that: a) fishers are provided with appropriate personal protective clothing and equipment to carry out their duties on board b) every fisher on board has received basic safety training c) every fisher is sufficiently familiarised with equipment on board and its operation, including relevant safety measures.	WIFC 188
34	*Unfair contracts* Article 8 Work agreements: owners must ensure that each fisher on board has a current work agreement that has been signed by both the fisher and the fishing vessel owner or by an authorised representative.	WIFC 188
35	*Unseaworthy vessels* Article 94 Every state shall take such measures for ships flying its flag as are necessary to ensure safety at sea with regard, inter alia, to: (a) the construction, equipment and seaworthiness of ships; (b) the manning of ships, labour conditions and the training of crews, taking into account the applicable international instruments; (c) the use of signals, the maintenance of communications and the prevention of collisions.	UNCLOS

continued overleaf

Table 14.2 continued

	Issues	Addressed by
	Article 219	
	Subject to section 7, states which, upon request or on their own initiative, have ascertained that a vessel within one of their ports or at one of their off-shore terminals is in violation of applicable international rules and standards relating to seaworthiness of vessels and thereby threatens damage to the marine environment shall, as far as practicable, take administrative measures to prevent the vessel from sailing.	
	Article 8	FAO Code
	States should ensure that only fishing operations allowed by them are conducted within waters under their jurisdiction and that these operations are carried out in a responsible manner.	
	Flag states should ensure compliance with appropriate safety requirements for fishing vessels and fishers in accordance with international conventions, internationally agreed codes of practice and voluntary guidelines. States should adopt appropriate safety requirements for all small vessels not covered by such international conventions, codes of practice or voluntary guidelines.	
	Flag states should take enforcement measures in respect of fishing vessels entitled to fly their flag which have been found by them to have contravened applicable conservation and management measures, including, where appropriate, making the contravention of such measures an offence under national legislation.	
36	*Violence and physical abuse*	
	Article 146	UNCLOS
	With respect to activities in the Area, necessary measures shall be taken to ensure effective protection of human life. To this end the Authority shall adopt appropriate rules, regulations and procedures to supplement existing international law as embodied in relevant treaties.	
37	*Wages*	
	Article 23–24	WIFC 188
	Wages must be paid monthly or be paid regularly.	
	Fishing vessels owners must ensure that fishers are able to send all or part of their earnings home, at no cost to the fishers.	
38	*Work conditions*	
	Article 94	UNCLOS
	Every state shall take such measures for ships flying its flag as are necessary to ensure safety at sea with regard, inter alia, to:	

	Issues	Addressed by
	(a) the construction, equipment and seaworthiness of ships; (b) the manning of ships, labour conditions and the training of crews, taking into account the applicable international instruments; (c) the use of signals, the maintenance of communications and the prevention of collisions.	
	Article 6	FAO Code
	States should ensure that fishing facilities and equipment as well as all fisheries activities allow for safe, healthy and fair working and living conditions and meet internationally agreed standards adopted by relevant international organizations.	
	Article 8	
	States should ensure that fishing is conducted with due regard to the safety of human life and the International Maritime Organization International Regulations for Preventing Collisions at Sea, as well as International Maritime Organization requirements relating to the organization of marine traffic, protection of the marine environment and the prevention of damage to or loss of fishing gear.	
	Occupational safety, health and accident prevention	WIFC 188
	Measures must be put in place to avoid work-related hazards and prevent occupational accidents and diseases on board fishing vessels.	
	Joint committees on occupational safety and health will be established.	
	Additional requirements for fishing vessels over 24 m in length and that regularly remain at sea for more than three days:	
	Fishing vessel owners must establish on board procedures for the prevention of occupational accidents, injuries and disease.	
	Fishing vessel owners, skippers and fishers must be provided with guidance on how to evaluate and manage risks to fishers' safety and health on board a fishing vessel.	
	Fishing vessel owners must ensure that fishers are provided with appropriate personal protective clothing and equipment to carry out their duties on board.	
39	*Work-related injuries*	
	Articles 29–33	WIFC 188
	Fishers have the right to medical treatment ashore and to be taken ashore in a timely manner for treatment in the event of any serious injury or illness.	
	After consideration of the number of fishers on board, the location of operation and the length of the voyage, for fishing vessels of 24 m in length and over:	
	medical care must be provided on board or while landed in a foreign port to all fishers on board and at no personal cost.	

Sources: UNCLOS, STCW-F, FAO Code of Conduct, WIFC 188, IMO Resolution A.930(22).

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