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The Changing Nature of High Seas Fishing

How flags of convenience provide cover for illegal, unreported and unregulated fishing

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Note

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Total Pages: 83. Please note that not all photos used in this report illustrate Illegal, Unreported and Unregulated (IUU) fishing. Where it is known that the image is documenting IUU fishing, it is noted in the caption.

Front cover image

Australian Customs officers aboard an inflatable boat approach an illegal fishing vessel. © Australian Customs Service

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Executive Summary

The report *The Changing Nature of High Seas Fishing: how Flags of Convenience provide cover for illegal, unreported and unregulated fishing* is the culmination of over a year of investigation and research funded by the Australian Government Department of Agriculture, Fisheries and Forestry, the International Transport Workers' Federation and WWF International, on Flags of Convenience and Illegal, Unreported and Unregulated (IUU) fishing on the high seas. IUU fishing is one of the most serious threats to the health of the world's fisheries and oceans. This report:

- documents trends in the use of Flags of Convenience (FOCs) which allow for extensive IUU fishing operations on the high seas;
- describes specific examples of IUU activity;
- names FOC countries, companies and vessels with an opportunity to engage in or support IUU fishing;
- identifies major components of the global infrastructure supporting high seas fishing and companies that could be enlisted to address the IUU challenge;
- describes the impact of free-riding FOC fishing States on resource management, human rights and marine conservation;
- recommends solutions or steps to be taken to eliminate IUU fishing and the FOC system.

Australian Customs and Fisheries patrol boat in pursuit of the IUU boat, *Viarsa*, on the Southern Ocean. © Australian Fisheries Management Authority

Confiscated illegal catch of Patagonian toothfish (also known as Chilean Sea Bass or Miro). © Australian Customs Service

The study analyzed information available from the Lloyd's Register of Ships between 1999 and 2005 on fishing vessels registered to the top 14 countries that operate open registries or 'Flags of Convenience' for large-scale fishing vessels. Over 1,000 large-scale fishing vessels continue to fly Flags of Convenience (FOCs) as of July 2005, in spite of significant global and regional efforts over recent years to combat IUU fishing on the high seas, primarily by FOC fishing fleets. The FOC system provides cover to a truly globalized fishing fleet engaged in what is largely illegal or unregulated fishing activity on the high seas, to the detriment of international efforts to conserve fisheries and protect other species in the marine environment. Many, if not most, of these vessels deliberately register with FOC countries to evade conservation and management regulations for high seas fisheries. The countries which issue FOCs are ultimately responsible for the activities of these vessels on the high seas, but turn a blind eye and exercise little or no control over the vessels concerned. It costs only a few hundred dollars to buy an FOC, and with that FOC vessels and fishing companies are free to catch millions of dollars worth of fish and threaten other forms of marine life on the high seas with impunity.

It is important to distinguish the three elements of IUU fishing: illegal, unregulated and unreported fishing. All three serve to undermine the conservation of fisheries and the protection of the marine environment although, by definition, unregulated or unreported fishing on the high seas may not always be illegal.

Key findings of the report include the following:

- **The FOC system is a thriving business:** Over 1,200 large-scale fishing vessels were registered to FOC countries in 2005, only slightly less than the number in 1999. At the same time, the number of large-scale fishing vessels on the Lloyd's Register of Ships whose flag is listed as 'unknown' has grown by 50% since 1999 to over 1,600 in 2004. The result is that a high percentage – approximately 15% – of the world's large-scale fishing fleet is flying FOCs or listed as flag unknown. While not all of these vessels are necessarily involved in IUU fishing, the large number of FOC fishing vessels severely impairs the ability of responsible countries and regional fisheries management organizations (RFMOs) to monitor, control and manage fisheries on the high seas and eliminate IUU fishing. The irony is that while the FOC fishing business on the high seas may be worth a billion dollars or more per year, the top four FOC fishing countries only take in a few million dollars per year in fishing vessel registration fees. The FOC system serves as a very inexpensive and often deliberate means for vessels fishing on the high seas to evade the rules and make enormous profits.

The top FOC fishing countries: Belize, Honduras, Panama, and St Vincent and the Grenadines have consistently topped the list of FOC countries with the largest number of large-scale fishing vessels registered to fly their flag. These four countries alone have accounted for 75% or more of the fishing vessels flying the flag of the FOC countries listed between the years 1999-2005 and which are analyzed in this report. Of the FOC countries identified in the report, Bolivia, one of the top 14, and Mongolia, a new entrant in the FOC business, are entirely landlocked countries.

Deliberately built to fly an FOC: About 14 per cent of large-scale fishing vessels built between 2001 and 2003 were flying FOCs by the end of 2003. This is a real problem as a significant portion of new large-scale fishing vessels appear to be built with a view to engaging in IUU fishing. Of the 51 fishing vessels over 24 metres built in Taiwan during the same period, 50 were flagged in FOC countries by the end of 2003 – only one was flagged in Taiwan. Altogether, over 100 large-scale fishing vessels built since 2000 were flagged to FOC countries as soon as they rolled out of the shipyard.

EU and Taiwanese companies are top profiteers of FOC fishing: Many of the companies identified as owners of fishing vessels flagged to one of the top 14 FOC countries are listed on the Lloyd's Register of Ships as being based in European Union countries and Taiwan. Using Lloyd's data, Taiwan, Honduras, Panama, Spain, and Belize are the top five countries where companies that own or operate fishing vessels flagged to one of the top 14 FOC fishing countries are based. The EU as a whole (all EU countries combined) tops the list of countries of residence of the owners or operators of FOC fishing vessels, with Spain/Canary Islands comprising approximately one half the EU total. The owners of most FOC vessels listed as being owned by companies based in Honduras, Panama, Belize, and St Vincent and the Grenadines are likely to be fictitious or shell companies whose true owners are hidden and likely to reside elsewhere.

Laundering pirate fish catches: IUU fishing continues to plague the fisheries for Patagonian toothfish (also known as Chilean Sea Bass or Miro) in the Southern Ocean and the fisheries for high value species of tuna worldwide, such as those for bluefin and big eye tuna used for sashimi and sushi. The report identifies a recent trend of companies and vessels with a history of IUU fishing for toothfish in the Southern Ocean attempting to 'legitimize' their IUU fishing activities by moving from the use of FOCs to registering their vessels to fly the flag of one of the member countries of the regional fisheries treaty organization CCAMLR, which regulates the fisheries in the region. In the Atlantic, Pacific and Indian Oceans, laundering IUU catches of high grade tuna through at-sea transshipment of catches is a widespread practice.

Human rights abuses: Not only is FOC fishing causing damage to ocean life, there is a deadly human cost also. The report 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 life saving equipment did not function and, as a result, many of the crew died.

The infrastructure supporting high seas fishing fleets is well-organised and largely unregulated: Many high seas fishing vessels, in particular fleets fishing high value tunas, transship their catches to refrigerated cargo vessels while at sea and depend on at-sea refuelling and resupply vessels to allow them to fish longer and at lower cost. The at-sea transshipment, resupply and refuelling fleets are not, for the most part, operating illegally, but they are almost entirely unregulated. At least some vessels in these fleets provide services to IUU fishing fleets as well as legitimate fishing fleets. The report profiles the

Australian Customs officers in a rigid inflatable vessel on a Southern Ocean operation. © Australian Customs Service

at-sea infrastructure servicing high seas and distant water fleets and provides specific recommendations for regulating the companies and vessels providing these services.

The report provides a series of specific and practical recommendations that, if adopted by countries, regional fisheries management organizations and the international community as a whole would greatly enhance the implementation of the landmark agreement adopted by the United Nations Food and Agriculture Organization in 2001 – the UN FAO International Plan of Action to Prevent, Deter and Eliminate IUU fishing. Amongst these, the single most effective means to implement the agreement, which highlights the FOC role in perpetuating IUU Fishing, is to eliminate the FOC system; a system which allows an exceptionally large fleet of high seas fishing vessels to roam the world's oceans in search of high value species of fish and operate completely outside the rule of international law. It is a system that needs to be dismantled forthwith.

Introduction

Many of the world's fisheries and marine ecosystems are being exploited at rates far in excess of sustainable levels. Fishing on the high seas has increased over recent decades as a result of the overfishing of coastal waters and in response to growing market demand for seafood products.[1]

Unfortunately, with some exceptions, the international community is losing the battle to effectively conserve and manage fisheries on the high seas.[2] A major reason for this is the prevalence of illegal, unreported and unregulated (IUU) fishing. While some progress has been made in combating IUU fishing in the region, nowhere is this more evident than in the fisheries for Patagonian toothfish in the Southern Ocean around Antarctica. Elsewhere the level of IUU fishing for tunas in the Indian, Pacific and Atlantic Oceans has become an issue of serious concern. The concern over IUU fishing is not only focused on management and overfishing but also the broader ecosystem impacts of IUU fishing, such as the bycatch of sea turtles, seabirds and sharks in the high seas longline fisheries for tunas and Patagonian toothfish.

The overall extent and value of IUU fishing on the high seas is very difficult to estimate with any real degree of accuracy given the nature of such fisheries and the complex corporate structures used to hide these realities. Even in cases where catches may be reported in unregulated fisheries, there is no global database of fish catches on the high seas. The UN Food and Agriculture Organization (FAO), in its 2002 Report on the State of World Fisheries and Aquaculture, states "It is difficult to assess the development of fishing on the high seas because reports to the FAO of marine catches make no distinction between those taken within Exclusive Economic Zones (EEZs) and those taken on the high seas".[3]

Nonetheless, a recent report by the Marine Resources Assessment Group roughly estimated that the annual value of IUU fishing on the high seas could be in the vicinity of

Silky shark caught by the fin on a longline hook. © Cat Holloway

Box 1. Definition of Illegal, Unreported and Unregulated (IUU) Fishing[7]

Illegal fishing refers to activities:

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

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

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

Unreported fishing refers to fishing activities:

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

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

Unregulated fishing refers to fishing activities:

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

in areas or for fish stocks in relation to which there are no applicable conservation or management measures and where such fishing activities are conducted in a manner inconsistent with State responsibilities for the conservation of living marine resources under international law.

(Definition from the UN FAO *International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated fishing,* Articles 3.1 – 3.3. *FAO, Rome 2001)*

$1.2 billion USD.[4] The figure is based on estimates, from a variety of sources, of the extent of IUU fishing on the high seas for tunas (primarily bluefin, yellowfin, albacore and big eye), sharks, toothfish, cod, redfish, alfonsino, orange roughy, and squid. The Environment Justice Foundation, in a report published in 2005, cites an estimate of the cost of IUU fishing to developing countries alone at $2 - $15 billion dollars (US) per year.[5]

There has been a concerted and productive international political effort over recent years to identify and address the problem of IUU fishing – most notably the adoption in 2001 of the UN FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing. Regional fisheries management organizations have adopted a variety of measures to prevent or deter IUU fishing and there have

been a number of UN related resolutions and declarations committing States to take more effective action. More recently, the UN Secretary General established a Consultative Group on Flag State Implementation and the Fisheries Ministers of several countries jointly established the Ministerially-led High Seas Task Force on Illegal, Unreported and Unregulated Fishing on the High Seas. However, this political effort must prompt more effective action if IUU fishing is to be prevented or eliminated. In reviewing the effectiveness of the Plan of Action in 2004, the FAO stated "information available to FAO indicates that IUU fishing is increasing in both intensity and scope and that it is continuing to undermine national and regional efforts to sustainably manage fisheries".[6]

Deficiencies in the governance of fisheries on the high seas also play a major role in allowing or failing to prevent IUU fishing. Numerous

Illegal toothfish longliner *Grand Prince* from Belize, Indian Ocean.
© Greenpeace/ Daniel Beltra

areas of the high seas were, for many years, effectively without any multilateral fisheries regulation whatsoever for a variety of fisheries and species despite the advent of commercial, large-scale factory fishing fleets, which greatly expanded high seas fishing operations in the 1950s and early 1960s. The high seas fisheries for deep-water species increasingly targeted in recent years remain largely ungoverned or unregulated despite the efforts of some countries to prevent degradation of these vulnerable fish populations and the fragile environments in which they are exploited within their EEZs and, to a lesser extent, on the high seas. Where regional fisheries management organizations (RFMOs) do exist, many have failed to establish or effectively enforce regulations sufficiently stringent to prevent overfishing on the high seas by both member countries and FOC/ IUU countries and fleets.

Fortunately, considerable impetus is now being given to creating new RFMOs in areas of the high seas where fisheries are not regulated, and upgrading existing RFMOs to incorporate the principles and obligations related to conservation, precautionary management and the ecosystem approach contained in the 1995 UN Fish Stocks Agreement, the UN FAO Code of Conduct for Responsible Fisheries and related instruments.

As part of this process, RFMOs also need to eliminate procedures that allow individual States to either 'opt out' of agreement with legally binding measures adopted by the RFMO or which allow a single State to prevent the adoption of such measures in the first place. Moreover, RFMOs must establish much more effective means to ensure compliance of member states with conservation measures adopted by the RFMO.

In this regard, many responsible flag States must make a far greater effort to deter, prevent and eliminate IUU fishing on the high seas by vessels registered to fly their flag. A recent survey of UN FAO Member Countries highlights the work that remains to be done. Of the 64 countries responding to the survey, over half indicated that their ability to control the activities of their flagged fishing vessels on the high seas was either insufficient or ineffective. Only 23 countries declared that control measures had been put into place to ensure that vessels flying their flag complied with high seas conservation and management measures. Half had not developed the practice of avoiding registering fishing vessels with a history of IUU fishing (discussed in Section 2 in relation to Southern Ocean high seas fisheries). All told, while many countries

have adopted measures to ensure more effective flag State compliance, much more action by non-FOC countries is required.[8]

Nonetheless, improvements in the performance of flag States and RFMOs will be enormously difficult to put into place or simply will fail to have the intended effect if the problem of high seas fishing by vessels flying Flags of Convenience continues at anywhere near the scope and intensity of current practice.

This report uses the commitment made by all countries to prevent, deter and eliminate IUU fishing through the UN FAO Plan of Action on IUU fishing and reinforced by numerous declarations and resolutions, including several adopted by the United Nations General Assembly, as the basis for evaluating the effectiveness of international efforts to combat IUU fishing, in particular FOC fishing, on the high seas.

In Section 1, the report reviews recent trends in the use of FOCs by large-scale fishing vessels, particularly since the adoption of the UN FAO Plan of Action in 2001, based on publicly available information. It highlights the fact that the number of large-scale fishing vessels flying Flags of Convenience continues to be a significant portion of the world's industrial fishing fleet. This Section also includes information on countries where the owners or operators of FOC fishing vessels are based, the use of FOCs by newly built vessels, and the growing number of fishing vessels listed as flag 'unknown' on the Lloyd's Register of Ships.

Section 2 uses the example of IUU fishing for Patagonian toothfish ('Chilean sea bass') in the Southern Ocean to review developments in the use of FOCs such as flag hopping. An apparent and more recent trend by companies and vessels with a history of IUU fishing to 'legitimize' their IUU activities by moving from the use of Flags of Convenience to registering their vessels to fly the flag of Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) member countries is also examined. This section also provides some very disturbing information on the abuse of human and workers' rights in these fisheries, a situation which has on occasion resulted in the deaths of seafarers.

Australian Customs National Marine Unit officer in Southern Operation.
© Australian Customs Service

The Uruguayan-flagged, *Viarsa 1*, suspected of fishing illegally for Patagonian toothfish in Australian Antarctic waters, was apprehended in August 2003 after a marathon hot pursuit across the Southern Ocean. The vessel was apprehended with assistance from the South African and United Kingdom authorities, and brought back to Australia. © Australian Fisheries Management Authority

Sections 3 and 4 provide detailed information on the global infrastructure for at-sea transshipment of fish catches and the refuelling and resupply of distant water fishing vessels operating on the high seas – both IUU and legitimate fishing vessels. This section identifies opportunities to regulate transshipment at sea, which provides a major avenue for the movement of high value IUU caught fish such as tunas to market. These regulations would strongly enhance the effectiveness of measures to prevent or eliminate IUU fishing, particularly for high value species of tuna as well as other high seas fisheries that depend on at-sea infrastructure to support their operations.

Section 5 reviews several additional industries and sectors providing support for distant water fleets fishing on the high seas and identifies a number of actions to enlist their support and help combat IUU fishing.

Section 6 describes several economic issues behind the FOC system for fishing vessels and explores potential legal means of addressing the problem. With the strengthening of international fisheries law – through, for example, the entry into force of the UN Fish Stocks Agreement in 2001, the movement to create new RFMOs and upgrade existing RFMOs in conformity with international law, and the adoption by a number of RFMOs of more stringent conservation and management measures as well as measures designed to tackle IUU fishing – IUU fishing on the high seas is increasingly becoming 'illegal' as opposed to 'unregulated' fishing. This section explores options for using the International Tribunal for the Law of the Sea and other international arbitration mechanisms to provide legally binding incentives to flag States to desist from failing to prevent their flagged vessels from engaging in IUU fishing. It identifies gaps in international law – in particular the need to define the 'genuine link' in Article 91 of the UN Convention on the Law of the Sea to mean that a vessel is beneficially owned and controlled in the flag State.

The report concludes, in Section 7, with a set of recommendations designed to give specific and practical effect to the implementation of the UN FAO International Plan of Action on IUU fishing covering the issues identified in previous sections.

Section One

Global review of recent trends in the use of Flags of Convenience by large-scale fishing vessels

An analysis of information available from Lloyd's Register of Ships provides a good indication of trends in relation to fishing vessels and the Flag of Convenience system. The report analyzed data from the years 1999, 2001, 2003 and 2005.[9] These years were chosen to provide an overview of the use of Flags of Convenience by large-scale (≥ 24m) fishing vessels since 1999, when the UN FAO Committee on Fisheries first agreed to draft the International Plan of Action to Prevent, Deter and Eliminate IUU Fishing. The FAO Plan of Action was adopted in 2001.

This report analyzes information available in the Lloyd's databases on fishing vessels ('fishing vessels', 'trawlers' and 'fish factory ships') registered to 14 selected countries with open registries (Table 1.1). These 14 countries were chosen using the following criteria. Four of the countries – Panama, Belize, Honduras, and St Vincent and the Grenadines – consistently top lists of FOC countries in terms of numbers of large-scale (≥ 24m) fishing vessels on their registries and because they were most often identified by regional fisheries management organizations as being the flag States of particular concern in a survey of FOCs and IUU fishing worldwide conducted in 2002.[10] Additionally, Bolivia, Georgia, Equatorial Guinea, Sierra Leone, and Cambodia were chosen because they have been subject to import sanctions at one time or another by the International Commission for the Conservation of Atlantic Tunas (ICCAT) as a result of IUU fishing for tuna in the Atlantic Ocean by vessels flying their flags. The remaining five were chosen from the list of FOC countries identified by the International Transport Workers' Federation (ITF) and the report of the UN Secretary General's Consultative Group on Flag State Implementation[11] as having the highest number of fishing vessels on their registries (in addition to the nine other countries mentioned above).

The list of countries on Table 1.1 in fact could be much longer. The International Transport Workers' Federation (ITF) identifies 32 countries as operating Flags of Convenience, including fishing and merchant vessels.[1] As of August 2005, the website *www.flagsofconvenience.com* listed 14 countries on its open registry list, including six countries – Dominica, Jamaica, Malta, Mongolia, the Slovak Republic, and the Union of Comoros – not listed on Table 1.1.[13] A UN FAO report published in 2002 lists 32 States operating Flags of Convenience or open registries and having registered fishing vessels within recent years.[14]

In addition to the vessels registered to the 14 countries listed on Table 1.1, there are many fishing vessels whose flag is not known or listed on the Lloyd's Register but which may also be registered to FOCs as well. In a random selection of 30 large-scale fishing vessels on the 2003 Lloyd's database listed as flag 'unknown', the authors determined the flags of 13 of these by using data from other sources including Lloyd's Marine Intelligence Unit, the International Telecommunications Union, INMARSAT, and various national agencies responsible for the IMO programme of Port State Control. Of these, eight were flagged to one of the 14 FOC countries listed above, another four were flagged in other known FOC countries, and one vessel was found to have been scrapped. As shown in Table 1.2, the numbers of large-scale fishing vessels on the Lloyd's Register of Ships whose flag is listed as 'unknown' has grown by approximately 50% since 1999 to over

Table 1.1. Number of vessels, total tonnage, average tonnage and average age of fishing vessels ≥ 24 metres in length registered to 14 countries with open registries (FOCs) comparing data from 1999, 2001, 2003 and 2005. Source: Lloyd's Register of Ships

Flag State	Data Year	Vessels Registered in Flag State	As % of All FOC Vessels	Total Flag Gross Tonnage	Average Tonnage Per Vessel	As % of All FOC Gross Tonnage	Average Vessel Age
Belize	1999	402	29.4 %	329,397	819.4	31.6 %	24
	2001	443	33.8 %	329,285	743.3	29.4 %	24
	2003	261	20.4 %	301,885	1156.6	29.3 %	23
	2005	241	19.0 %	259,119	1075.2	26.9 %	22
Bolivia	1999	1	0.1 %	232	232.0	0.0 %	52
	2001	12	0.9 %	7,935	661.3	0.7 %	16
	2003	22	1.7 %	21,041	956.4	2.0 %	23
	2005	16	1.3 %	16,824	1051.5	1.7 %	26
Cambodia	1999	6	0.4 %	6,547	1091.2	0.6 %	20
	2001	15	1.1 %	17,336	1155.7	1.5 %	25
	2003	31	2.4 %	29,978	967.0	2.9 %	25
	2005	47	3.7 %	27,773	590.9	2.9 %	27
Cyprus	1999	62	4.5 %	212947	3434.63	9.9 %	20
	2001	50	3.8 %	108,721	2174.4	9.7 %	20
	2003	44	3.4 %	94,665	2151.5	9.2 %	20
	2005	27	2.1 %	66,483	2462.3	6.9 %	22
Equatorial	1999	56	4.1 %	30,984	553.3	3.0 %	20
Guinea	2001	51	3.9 %	28,088	550.7	2.5 %	19
	2003	39	3.1 %	23,196	594.8	2.3 %	21
	2005	39	3.1 %	21,636	554.8	2.2 %	22
Georgia	1999	29	2.1 %	10,792	372.1	1.0 %	22
	2001	39	3.0 %	25,338	649.7	2.3 %	24
	2003	50	3.9 %	23,574	471.5	2.3 %	20
	2005	60	4.7 %	45,756	762.6	4.7 %	22
Honduras	1999	394	28.8 %	172,675	438.3	16.6 %	27
	2001	289	22.1 %	123,070	425.8	11.0 %	27
	2003	432	33.8 %	168,009	388.9	16.3 %	25
	2005	416	32.8 %	158,842	381.8	16.5 %	24

continued...

Table 1.1, continued

Flag State	Data Year	Vessels Registered in Flag State	As % of All FOC Vessels	Total Flag Gross Tonnage	Average Tonnage Per Vessel	As % of All FOC Gross Tonnage	Average Vessel Age
Marshall	1999	11	0.8 %	18,701	1700.1	1.8 %	21
Islands	2001	9	0.7 %	14,787	1643.0	1.3 %	21
	2003	10	0.8 %	13,544	1354.4	1.3 %	17
	2005	7	0.6 %	11,434	1633.4	1.2 %	17
Mauritius	1999	22	1.6 %	7,581	344.6	0.7 %	31
	2001	23	1.8 %	8,760	380.9	0.8 %	31
	2003	24	1.9 %	10,331	430.5	1.0 %	30
	2005	24	1.9 %	9,632	401.3	1.0 %	30
Netherlands	1999	17	1.2 %	16,917	995.1	1.6 %	26
Antilles	2001	24	1.8 %	28,131	1172.1	2.5 %	22
	2003	21	1.6 %	18,100	861.9	1.8 %	22
	2005	20	1.6 %	8,294	414.7	0.9 %	24
Panama	1999	213	15.6 %	167,755	787.6	16.1 %	32
	2001	187	14.3 %	147,499	788.8	13.2 %	31
	2003	194	15.2 %	129,287	666.4	12.5 %	30
	2005	222	17.5 %	134,286	604.9	13.9 %	30
St Vincent and	1999	108	7.9 %	168,283	1558.2	16.1 %	25
the Grenadines	2001	98	7.5 %	154,581	1577.4	13.8 %	25
	2003	81	6.3 %	116,643	1440.0	11.3 %	25
	2005	74	5.8 %	97,893	1322.9	10.2 %	26
Sierra Leone	1999	27	2.0 %	9,768	361.8	0.9 %	33
	2001	23	1.8 %	8,183	355.8	0.7 %	32
	2003	28	2.2 %	9,415	336.3	0.9 %	29
	2005	27	2.1 %	8,679	321.4	0.9 %	29
Vanuatu	1999	37	2.7 %	50,912	1376.0	4.9 %	23
	2001	46	3.5 %	116,870	2540.7	10.4 %	16
	2003	40	3.1 %	70,953	1773.8	6.9 %	13
	2005	47	3.7 %	118,298	2517	12.3 %	11

Table 1.2. Fishing vessels (fishing vessels, trawlers and fish factory ships) ≥ 24 metres registered to all countries, combining the 14 FOC countries (from Table 1.1) and fishing vessels whose flag State is listed as 'Unknown' on the Lloyd's Register of Ships Database. Table lists number of vessels; FOC and flag 'unknown' vessels as a percentage of total number of fishing vessels, total Gross Tonnage (GT), average Gross Tonnage, and average age of the vessels. Source: Lloyd's Register of Ships.

Year	Flag States	Number of Fishing Vessels ≥ 24 m	Number as % of Total	Gross Tonnage (G.T.) of Vessels	G.T. as % of Total	Average G.T. Age	Average
1999	All Countries	19578		10,537,690		538.2	27
(Jun)	14 FOC Countries	1368	7.0%	1,043,169	9.9%	762.6	26
	Flag Unknown	1104	5.6%	392,312	3.7%	355.4	34
2001	All Countries	19527		10,363,926		566.3	26
(Oct)	14 FOC Countries	1309	6.7%	1,118,584	10.8%	854.5	26
	Flag Unknown	1227	6.3%	535,614	5.2%	436.5	32
2003	All Countries	19771		10,902,500		551.4	26
(Dec)	14 FOC Countries	1277	6.5%	1,030,631	9.5%	807.1	25
	Flag Unknown	1483	7.5%	618,212	5.7%	416.9	29
2005	All Countries	19482		10,275,073		527.4	25
(Jul)	14 FOC Countries	1267	6.5%	963,313	9.4%	760.3	25
	Flag Unknown	1656	8.5%	836,048	8.1%	504.9	28

1,650 vessels in 2005. Altogether, Lloyd's Register of Ships lists approximately 20,000 large-scale (≥ 24m) fishing vessels for each of the years 1999 – 2005.

Country of Residence of owners of FOC fishing vessels

Most FOC vessels are registered to fictitious or shell companies, often 'located' in the country that has issued the flag. Since the owners of FOC vessels often deliberately try to maintain a 'legally invisible link' between themselves – the 'beneficial owner' – and the company publicly listed as the registered owner of a vessel, the name, nationality and country of residence of the true owner is usually carefully hidden. However, this is not always the case. Many of the companies identified as the owners or managers of fishing vessels on the Lloyd's Register of Ships that are flagged to one of the 14 FOC countries on Table 1.1 are listed as residing in European Union countries, Taiwan and several other countries not generally considered to be FOC countries. Taiwan, Honduras, Panama, Spain, and Belize are the top five countries where companies that own or operate fishing vessels flagged to one of the top FOC fishing countries are based. The European Union countries as a whole top the list of countries of residence of FOC fishing vessels with Spain/Canary Islands comprising approximately one-half the EU total. Annex I lists the names of the companies (registered owners) and vessels whose owners reside in Taiwan and Spain (including the Canary Islands).

Table 1.3. Top 20 Countries Listed as Country of Residence of Owner, Operator, Fleet Manager or Group Manager of Fishing Vessels Flagged to One of the 14 FOC Countries on Table 1.1. Source: Lloyd's Register of Ships, July 2005.

Country of Residence of Owner, Manager, or Group[15]	Number of fishing vessels ≥ 24 m	Percentage of all fishing vessels ≥ 24 m flagged to 14 FOC countries in 2005
Taiwan	142	11.2
Honduras	111	8.8
Panama	96	7.6
Spain	87	6.9
Belize	74	5.8
Korea (South)	43	3.4
Singapore	34	2.7
Japan	32	2.5
Vanuatu	31	2.4
United States of America	29	2.3
Russia	29	2.3
Hong Kong	27	2.1
Georgia	25	2.0
Mauritius	22	1.7
Russia	19	1.5
Saint Vincent & Grenadines	19	1.5
Cyprus	18	1.4
Greece	16	1.3
Equatorial Guinea	15	1.2
Cambodia	15	1.2
European Union[16]	170	13.4

Summary of trends in the use of FOCs by large-scale fishing vessels 1999-2005

The information derived from Lloyd's databases cannot be considered as 100% accurate or up to date as there are often delays in registering the transfer of flag from one country to another country. Information on the flag, ownership and overall numbers of large-scale fishing vessels flagged to FOCs can change significantly during the course of a year. In addition, at least some of the vessels flagged to one or another of the 14 FOC countries were on recent lists of vessels authorized to fish in the area of one or more RFMOs – the figure could be as high as 15%, as discussed later in Section I. Nevertheless, with these caveats, a number of notable trends emerge from the information on the Lloyd's database and are described below.

i. Top four Flag of Convenience countries

The same four countries – Belize, Panama, Honduras, and St Vincent and the Grenadines – topped the list of FOC countries on Table 1.1 for fishing vessels throughout the period 1999-2005. Over the same period the

Australian Customs Service staff board the IUU boat, *Viarsa*, caught stealing Patagonian toothfish in the Southern Ocean in 2003. © Australian Customs Service

number of vessels flagged to all four countries combined fell from over 1,117 to 953, a decrease of approximately 15% (Belize declined by approximately 40%). Nevertheless, all four countries remained at the top of the list of FOC countries in terms of the numbers of large-scale fishing vessels on their registries, with over 950 large-scale fishing vessels on their registries combined in 2005.

Honduras tops the list on Table 1.1 with the highest number of fishing vessels on its registry in 2005. While the number of large-scale fishing vessels flagged to Honduras declined between 1999 and 2001, the number rose by over 100 between 2001 and 2003, with 416 vessels on the registry in July 2005 according to the Lloyd's Register of Ships. In general terms, a change of this magnitude in the numbers of fishing vessels on the Honduran registry would appear to be an ongoing indication of the relative ease with which fishing vessels are able to 'hop' from flag to flag. These changes can occur simply with the aid of a fax machine whilst the vessel is at sea, more likely than not actually fishing. Of the 406 vessels registered to Honduras in July 2005, only 106 were listed as being owned by a company registered in Honduras, with 195 vessels owned by companies registered in 25 other countries. The ownership of the remaining 106 vessels registered to Honduras is listed as 'unknown'.[17]

There have been a number of measures adopted over recent years by ICCAT, CCAMLR, IOTC and other regional fisheries management organizations, including, in some cases, trade measures and import bans directed specifically at all four countries. While these measures apparently have resulted in some deregistration of fishing vessels from the registries of one or more countries (e.g. Panama, Belize), which may explain some of the decrease in the numbers mentioned above, they have not prevented any of these States from continuing to maintain large numbers of fishing vessels on their registries, based on the information from Lloyd's. Nor have the measures adopted by the regional fisheries management organizations discouraged large numbers of fishing vessel owners interested in flying FOCs from continuing to register their ships to Panama,

Belize, Honduras, and St Vincent and the Grenadines.

ii. Up and coming FOCs

Amongst the other countries on the list, Georgia, Cambodia, Vanuatu and Bolivia appear to be 'up and coming' Flags of Convenience for fishing vessels. The numbers of fishing vessels flagged to each of these four countries rose markedly from 1999-2003, with an increase from 70 to 184 fishing vessels registered to all four countries combined. By 2005 the number had only decreased slightly to 170 vessels. Of the 47 vessels flagged to Vanuatu, 31 have been built since 2000. More recently, Togo appears to have become a flag of choice for IUU operators in the fisheries for toothfish in the Southern Ocean (see Section 2), and 15 large-scale fishing vessels are now listed on the Lloyd's Register of Ships as registered to Togo as of July 2005.

On the other hand, Cyprus in 1999 had 62 large-scale fishing vessels on its registry, with 35 listed as foreign owned or controlled. Since Cyprus entered the European Union in 2004 there has been a marked reduction in the numbers of vessels on the registry. In 2005, Cyprus had 27 large-scale fishing vessels of which 11 were foreign owned.

iii. FOC vessels as a percentage of world's industrial fishing fleet

It is worth noting from the information on Table 1.2 that the average length and tonnage of the vessels registered to the 14 countries listed are substantially higher than the averages for all fishing vessels combined (flying all flags) greater than or equal to 24 metres on the Lloyd's database. For 2005, the number of fishing vessels flying the flag of one of the 14 FOC countries is only about 6.5% of the total number of large-scale fishing vessels on the Lloyd's Register of Ships. However, this fleet represents 9.4% of the capacity of the global fleet, as measured in Gross Tonnage, of all large-scale fishing vessels on the Lloyd's database.

iv. Flags unknown

In addition to the FOC vessels, the number of large-scale fishing vessels listed as flag 'unknown' on the Lloyd's Register of Ships amounts to 8.5% of the total number of large-scale fishing vessels on the database. Adding the number of vessels of unknown flag to the number of FOC vessels brings the total to 15% of the global fleet of large-scale fishing vessels by number and 17.5% as measured by Gross Tonnage. This is an unacceptably high percentage of the world's

New Australian Southern Oceans patrol vessel *Oceanic Viking* (photo courtesy P&O Maritime Services). © Australian Customs Service

Dead Puffin found by Greenpeace in illegal driftnet. Kuril Islands, Russia. ©Greenpeace

large-scale fishing fleet to be categorized as either FOC or flag 'unknown' and potentially engaged in IUU fishing on the high seas.

Moreover, the number of vessels listed as flag 'unknown' on the database has increased significantly over the same period – by almost 50% since 1999. Even more remarkable is the fact that according to a report by the International Transport Workers' Federation, only 14 fishing vessels on the Lloyd's Register of Ships in 1994 were listed as flag 'unknown', compared to 1,656 the authors found on the Register in 2005.[18] As indicated earlier, on the basis of additional research, eight vessels of a random sample of 30 vessels listed as flag 'unknown' on the Lloyd's Register were found to be registered to FOC countries, suggesting that a substantial number of large-scale fishing vessels on the Lloyd's database currently listed as flag 'unknown' may in fact be registered to FOC countries.[19]

However, while at least some of the vessels listed as flag 'unknown' are likely to be FOC vessels, this category is also likely to include scrapped, abandoned or sunk vessels or vessels registered to countries which have not yet provided the information to Lloyd's on recent registrations or changes in flag. There are over 25,000 fishing vessels on the Lloyd's Register of Ships database (of which approximately 5,000 are under 24 metres in length) and thus variations in reporting and the quality of record keeping from country to country makes it difficult to maintain a complete, accurate and up-to-date record of all fishing vessels on the database.

v. Nationals and country of residence of FOC vessel owners

One of the most striking aspects of the information on the Lloyd's Register of Ships is the number of vessels flagged to one of the 14 FOC flags whose owners or operators are listed as residing in a country generally considered to be a 'responsible' fishing nation. Particularly high is the number of FOC flagged large-scale fishing vessels listed on Table 1.5 as owned by individuals or companies based in EU Member countries, with the majority based in Spain (including the Canary Islands). This suggests that national legislation, or its application, in many countries is either non-existent or has done little to discourage nationals or companies within their jurisdiction from owning or operating FOC fishing vessels – even to the point where

owners do not feel any need to hide their country of residence or establish fictitious vessel ownership companies in an FOC State to hide their activities. Articles 18 and 19 of the UN FAO IPOA on IUU Fishing explicitly call on States to ensure that their nationals and companies within their jurisdiction do not engage in IUU fishing, and that they discourage their citizens from flagging fishing vessels to FOC States (e.g. States that do not abide by flag State responsibilities).

v. Effectiveness of UN FAO IPOA in eliminating FOC fishing

Finally, the most obvious trend from the information contained in Tables 1.1 and 1.2 is that the number of fishing vessels on the Lloyd's Register of Ships database that were registered to the 14 FOC countries analysed has declined relatively little, by only 149 vessels, between 1999 and 2005, four years after the adoption of the UN FAO IPOA on IUU fishing.

Assuming the information on the Lloyd's database is reasonably indicative of overall trends in the FOC registries, from a global perspective the adoption of the UN FAO IPOA on IUU fishing combined with the efforts of regional fisheries management organizations and some States[20] to combat IUU fishing to date have had limited effect in discouraging the use of Flags of Convenience by large-scale fishing vessels worldwide.

New vessel construction

According to Lloyd's Register of Ships, 478 fishing vessels over 24 metres in length were built between 2001 and 2003 and flagged to one of the 14 FOC countries listed on Table 1.1 or listed as flag 'unknown' by the end of 2003. This represents a real problem in that a substantial number of new large-scale fishing vessels may have been built specifically to engage in IUU fishing.

As mentioned previously, most of the vessels registered to an FOC country or listed as flag 'unknown' were built in Taiwan. Furthermore, by the end of 2003, of the 51 vessels, ≥ 24 m built in Taiwan during this period, only one was flagged to Taiwan; the remainder were flagged in FOC countries.

Table 1.4. Summary: New Fishing Vessel Construction 2001, 2002, 2003

Fishing Vessels > 24m built in 2001, 2002, 2003	Number of Vessels Built	Total Gross Tonnage
Registered in All Countries	478	263,354
Registered to one of the 14 FOC countries or listed as Flag Unknown	58	36,985
FOC and Unknown Vessels as a Percentage of Total Tonnage	12%	
FOC		
Belize	11	3,644
Bolivia	5	4,159
Cambodia	1	2,495
Georgia	6	3,289
Marshall Islands	1	1,152
Netherlands Antilles	1	393
Panama	9	2,744
St Vincent and the Grenadines	1	635
Vanuatu	20	17,631
Unknown	3	843

Table 1.5. Vessels built by Lien Cherng Shipbuilding Co. Ltd. of Kaohsiung, Taiwan which have appeared at one time or another on COLTO's list of suspect vessels.[22]

Original Name / Flag		Past Name / Flag		Current Name / Flag		Vessel Manager	Nationality
Austin	Bolivia	Koko	Georgia	South Ocean	Belize	Kando Maritime	Taiwan
Boston	Bolivia			Jian Yuan	Georgia	Kando Maritime	Taiwan
Champion	Bolivia			Kang Yuan	Georgia	Kando Maritime	Taiwan
Darwin	Bolivia			Kiev	Georgia	Kando Maritime	Taiwan
Eva	Bolivia	Monas	Georgia	Mellas	Ukraine	Chuan-Chuan Yoo	Taiwan
Florence	Bolivia	Nantai	Georgia	Simeiz	Ukraine	Chuan-Chuan Yoo	Taiwan
Georgia	Bolivia	Zarya	Russia	Globalpesca I*	Chile	Kando Maritime	Taiwan
Hunter	Bolivia	Strela	Russia	Globalpesca II*	Chile	Kando Maritime	Taiwan
Isabel	Bolivia			Volna	Russia	Chuan-Chuan Yoo	Taiwan
Jackson	Bolivia			Yantar	Russia	Chuan-Chuan Yoo	Taiwan

* The Globalpesca I & II were sold in January 2005 to Globalpesca SA of Santiago, Chile, and may no longer be managed by Kando Maritime.

Reviewing new vessel construction in the period 2000 – 2005, the authors found that over 100 of the large-scale fishing vessels built during this period were initially flagged to one of the 14 FOC countries immediately after being launched. Approximately one-quarter of these vessels eventually reflagged to a country other than one of the 14 listed in Table 1.1 by 2005.

Eighty four large-scale fishing vessels were built in Taiwan over the past five years. Further investigation may determine whether any of the companies in Taiwan involved in building new vessels flagged to FOCs have benefited from funds for the joint Japan/ Taiwan programme designed to decommission large-scale tuna longline vessels.

Further, given the status of Taiwan as a 'Cooperating Fishing Entity' of ICCAT the government should be encouraged to ensure that no vessels built in Taiwanese shipyards are allowed to register to FOC countries. According to the Organization for Promotion of Responsible Tuna Fisheries and a number of other sources, many of the Taiwanese large-scale tuna longline vessels have recently reflagged to Taiwan, although this has not yet been fully reflected on the Lloyd's Register of Ships.

Some Taiwanese shipyards have a large percentage of the vessels they build adopt Flags of Convenience immediately when launched. The Lien Cherng Shipbuilding Co. Ltd. of Kaohsiung, for example, launched 18 vessels in the last five years, all flying FOCs when they left the shipyard. Ten of these 18 vessels have been implicated in IUU fishing for Patagonian toothfish. These include the so-called 'Alphabet' fleet of IUU toothfish vessels identified in a report published by the Coalition of Legal Toothfish Operators (COLTO) in 2002 entitled *The Alphabet Boats, A Case Study of Toothfish Poaching in the Southern Ocean.*[21]

New vessel construction under 24 metres in length

There appears to be an increase in the construction, primarily by Taiwanese companies, of vessels just under 24 metres in length to fish for tuna and other highly migratory species. There are International Maritime Organization (IMO) and national regulations dealing with crewing and safety requirements that apply differently to vessels above and below the internationally agreed definition of large-scale (≥ 24 m), which may provide a reason in some cases for why some vessels are being built just below the 24 metre limit. It is also possible that some of these vessels

Onboard the *Oceanic Viking.* © Australian Customs Service

were built to be less than 24 metres in length to avoid conservation measures applicable to 'large-scale' vessels as promulgated by ICCAT and other RFMOs.

In 2003, the U.S. Commissioner to ICCAT stated in testimony before the U.S. Congress that

> *"Taiwanese fishing companies have now deliberately built a fleet of vessels that fall just under the 24 meter minimum length for application of most ICCAT measures. These 23.9 meter vessels have operated extensively in the Caribbean decimating shark stocks and causing serious billfish bycatch problems…The government of Taiwan either lacks the means or will to control this situation."*[23]

The authors identified 46 Taiwanese owned longliners between 22.5 and 23.9 metres, mostly fishing in the Eastern Pacific and Caribbean, on the Lloyd's Register of Ships. A similar trend toward construction of longline vessels under 24 metres in length also appears to be occurring in the tuna fisheries in the Southwest Pacific. In 2003, Korean and Chinese shipyards delivered 10 longliners of 23.8 to 23.9 metres length overall to a fishing enterprise based in Papeete, Tahiti. This was the first delivery of 32 longliners in the 23.8 to 23.9 metre range ordered by the company.

FOC vessels and Regional Fisheries Management Organization vessel registries

Not all vessels flagged to the 14 countries listed above are necessarily engaged in IUU fishing. The ICCAT list of 3,638 vessels authorized by contracting or cooperating parties to fish for tunas and tuna like species in the Atlantic, Caribbean, and Mediterranean Sea in 2005 contains 10 vessels (over 24 metres in length) listed as flagged to Panama and authorized to fish in the Atlantic Ocean. The ICCAT list also contains another three vessels flagged to Honduras. In previous years significant numbers of FOC vessels were authorized by Brazil to fish in the ICCAT

area but as of July 2005 all vessels authorized by Brazil appear to be now flagged to Brazil.[24]

The Inter-American Tropical Tuna Commission (IATTC) listed three Panamanian flagged longline vessels and twenty-one purse seiners authorized by Panama to fish in the Eastern Pacific Ocean in 2005. Honduras and Vanuatu had an additional 58 vessels combined on the IATTC list of active purse seine vessels and longline vessels authorized to fish in the area. Interestingly, the IATTC identifies 45 longline vessels flagged to, and authorized by, Bolivia to fish in the IATTC area even though Bolivia is neither a contracting party, a 'Cooperating Non Party' nor a 'Cooperating Fishing Entity' of the IATTC, nor are Bolivia's vessels listed on the IATTC lists of purse seine or longline vessels authorized to fish in the area.[25]

The South Pacific Forum Fisheries Agency's Vessel Register of Vessels in Good Standing authorized to fish in the EEZs of Pacific Forum countries, which includes bunker and transshipment/fish carriers, lists 58 longliners, 31 purse seiners, and four pole and line vessels flagged to Belize, Cambodia, Marshall Islands, Panama and Vanuatu combined, in addition to 46 fish carriers, two 'mother ships' and three bunker vessels authorized to operate in the fisheries overseen by South Pacific Forum member States as of July 2005.[26] Of the 46 fish carriers, 43 are flagged to Panama and the remaining three to Belize.

The Indian Ocean Tuna Commission (IOTC) does not list any vessels flagged to these 14 countries as being amongst the 1,973 vessels authorized by contracting or cooperating parties to fish tunas and tuna-like species in the Indian Ocean.[27] Of note also is the lack of vessels flagged to Taiwan on the IOTC list of vessels authorized to fish in the IOTC area. However, a relatively large fleet of Taiwanese flagged longline vessels is likely to be fishing in the Indian Ocean area.[28] Only one vessel authorized to fish in the CCAMLR area for the 2003-2004 season flew the flag (Vanuatu) of one of the 14 FOC countries.

Altogether, the total number of fishing vessels flagged to one of the 14 countries listed in Table 1.1 and authorized to fish for tunas and other highly migratory species in either the Atlantic Ocean (including the Mediterranean and Caribbean Seas), Indian Ocean, Southwest Pacific Ocean, or the Eastern Tropical Pacific Ocean amounts to 188 vessels as of July 2005. However, there is likely to be some duplication of vessels on these lists as a number of them are likely to be authorized to fish in more than one ocean region. Moreover, the numbers of vessels, in some cases, are likely to vary over the course of the year. Even assuming that there is no duplication of vessels on the lists of vessels authorized to fish in the above mentioned RFMO areas, the figure of 188 vessels only represents approximately 15% of the total number of vessels flagged to the 14 FOC countries listed on Table 1.1.

Given that many of the vessels flagged to the 14 countries on Table 1.1 are longline vessels targeting tuna and other highly migratory species, an important question arises: aside from the relatively small percentage of vessels authorized to fish as indicated above, where do these vessels actually fish?

Honduras, for example, had 416 fishing vessels over 24 metres registered in 2005. On the ICCAT list, there were three Honduran flagged vessels authorized to fish in the ICCAT area.[29] An additional eight Honduras flagged vessels were authorized to fish for tuna in the Eastern Pacific in the IATTC area. No Honduran flagged vessels were listed as authorized to fish for tuna in the Indian Ocean or in the area of the South Pacific Forum countries. Of the remaining 405 large-scale fishing vessels on the Honduran registry in 2005, many, if not most, are likely to be tuna fishing vessels (for example, 90 Honduran flagged fishing vessels ≥ 24 metres are listed on the Lloyd's Register of Ships as owned and/or operated by companies based in Taiwan). If not the Atlantic Ocean, Indian Ocean, South Pacific, Eastern Pacific, Mediterranean or Caribbean Sea tuna fisheries, where are the remaining longline and purse seine vessels flagged to Honduras operating and authorized to fish? The website for the Honduras General Directorate of the Merchant Marine states that, as a condition for obtaining the

Bycatch of Billfish (*Treptarus audax*) and sharks. © WWF-Canon / Hélène Petit

Honduran flag, fishing vessels that intend to fish on the high seas need the "Authorization of the General Directorate of Fisheries and Aquiculture (sic); Legalized document that shows evidence of the installation of the satellite monitoring system;" and an "*Affidavit that states the non intention of fishing for tuna.*"[30]

Conclusions

While the discussion above draws on a number of sources and has been extensively cross-checked, it is by no means complete, up to date or entirely accurate. Among other things, there are numerous deficiencies and lag times associated with the information on the current flag and previous flag(s) of vessels, a large number of fishing vessels on the Lloyd's registry are listed as flag 'unknown', and the true ownership is often hidden behind fictitious companies.

The information reviewed in this section clearly demonstrates the need for far more accurate, comprehensive, centralized, and timely information on numbers of vessels capable of fishing on the high seas, their movements, changes in flag and registration over time, history of fishing including areas fished and any citations or violations for failure to abide by relevant conservation and management measures. Greater consistency in the various lists by RFMOs of vessels authorized to fish would help and, most importantly, information on the true ownership of these vessels is needed to assist in compliance and enforcement actions. All of this information is essential to the international effort to prevent, deter

and eliminate IUU fishing. Unfortunately, this information is lacking in many key respects.

Recommendations

There are numerous recommendations that follow from the information above, including the need for a much more vigorous commitment by a number of States to penalizing nationals from owning or operating IUU fishing vessels, transparency in vessel ownership information, and eliminating the FOC system. The authors recommend a permanent vessel marking system and a global database of large-scale fishing vessels along the following lines: [31]

1. A standardized global vessel marking system should be established which allows for the permanent marking and clear identification of a fishing vessel regardless of any changes in the flag or name of the vessel.

2. A global database of large-scale fishing vessels and vessels authorized to fish beyond the area of national jurisdiction of the flag State of the vessel should be established. The database should include all vessels capable of fishing on the high seas, including those under 24 metres (particularly those fishing on straddling or highly migratory stocks), along with technical information on the vessels, including type of fishing gear, flag history, and current and previous ownership history. This database could be established and managed by the new Monitoring, Control and Surveillance Network (this is similar to a preliminary recommendation of the Ministerially-led High Seas Task Force).[32]

3. As a complement to point 2 above, a global database of vessels with a history of IUU fishing should also be established to:

   - help port authorities identify and exercise greater scrutiny and inspection of these vessels during port visits,
   - allow countries to better review the previous history of fishing vessels seeking to enter their registries,
   - allow RFMOs to work together to identify the movements of IUU vessels from region to region (and amongst fisheries),
   - help identify companies and flag States consistently involved in IUU fishing, and;
   - potentially reduce the resale value of IUU fishing vessels through denial of authorization to fish to vessels previously engaged in IUU fishing.

4. An accurate, comprehensive and centralized database on high seas catches and fishing effort should be established, incorporating and centralizing existing databases on vessels authorized to fish on the high seas; catch documentation information; and information on catch per unit effort (CPUE) and areas fished. It should be particularly designed to detect anomalies in reporting of catches.

5. States must adopt and enforce national legislation to prohibit nationals and companies within their jurisdictions from owning or operating vessels engaged in IUU fishing on the high seas and fishing vessels flagged to States with a history of consistent failure to comply with the conservation and management measures adopted by RFMOs.

Section Two

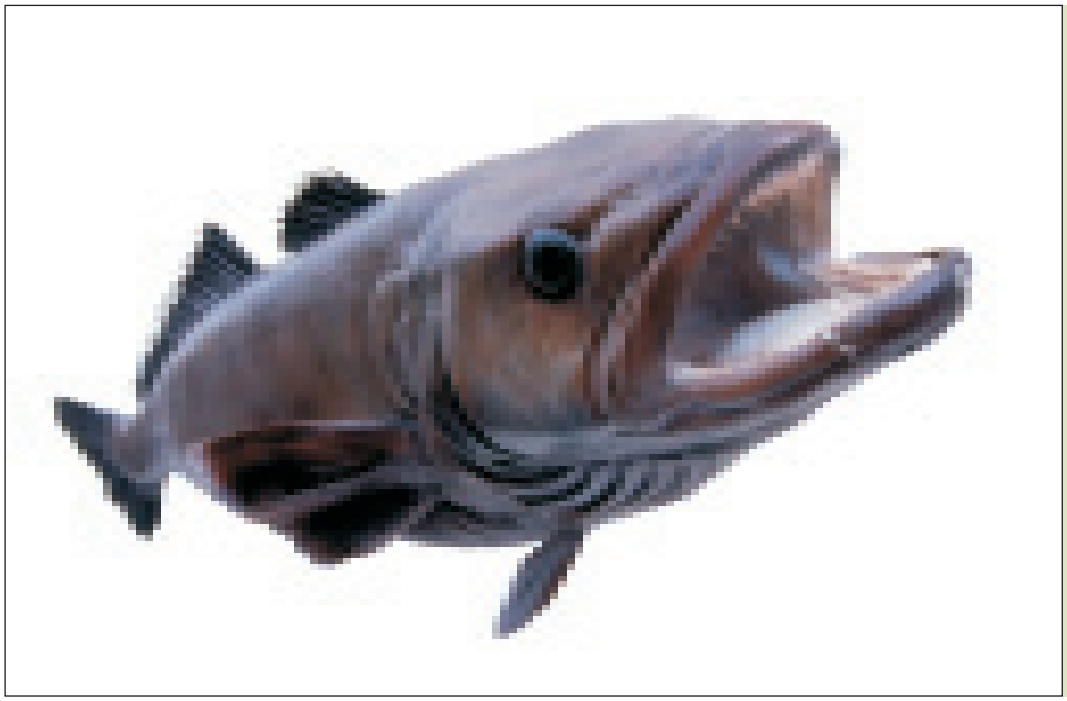
Trends in flagging and human rights abuses in the IUU fisheries for Patagonian toothfish

The Southern Ocean is one of the world's oceans worst hit by IUU fishing. Although the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) has adopted a number of measures to combat IUU fishing, the problem continues to plague the fisheries for Patagonian toothfish in the region.

Vessels engaged in IUU fishing for toothfish continue to change flags to obscure their identity, minimize costs and avoid any restrictions on their fishing activities. The latest FOC country to join the IUU flagging business for Southern Ocean fisheries is Togo. As the following table illustrates, Togo appears to be the current flag of choice for some of the

Table 2.1. Vessels with a history of IUU fishing for Patagonian toothfish recently reflagged to Togo

Vessel Name	Official Number	Flag		Country of Economic Benefit	Reported IUU Activity
Amorinn	7036345	Togo	2003	Canary Islands	
ex–Lome		Unknown	2002	Canary Islands	Spotted fishing in CCAMLR 58.4.2 [33]
ex–Noemi		Belize	1998	Canary Islands	Reported engaging in IUU Fishing [34]
Hammer	9042001	Togo	2004	Spain	Landed undocumented fish in Malaysia [35]
ex–Carran		Uruguay	2004	Spain	Landed undocumented fish in Jakarta [36]
Masai	7410216	Togo	2004	Canary Islands	
ex–Jara		Belize	1999	Canary Islands	Reported engaging in IUU Fishing [37]
ex–Satem Tuna		Honduras	1995	Canary Islands	
Lua	7208948	Togo	2000	Canary Islands	
ex–Puerto Madryn		Belize	1996	Canary Islands	Sighted in Australian EEZ [38]
Ross	7388267	Togo	2004	Spain	Sighted fishing in CCAMLR 58.7 [39]
ex–Alos		Ghana	2003	Spain	Sighted in French EEZ [40]
ex–Lena		Seychelles	2001	Spain	
Typhoon 1	6905408	Togo	2004	Spain	History of IUU fishing [41]
ex–Typhoon 1		Belize	2003	Spain	
ex – Rubin		Seychelles	2002	Spain	Sighted Fishing CCAMLR [42]
		St Vincent	1998	Spain	
Sargo	Unknown	Togo	2003	Unknown	Sighted Fishing in CCAMLR 58.4.2 [43]
ex–Lugalpesca		Uruguay		Unknown	



Patagonian toothfish (also known as Chilean Sea Bass or Miro). © Australian Fisheries Management Authority

most egregious offenders amongst the IUU operators in the Southern Ocean.

Articles 18 and 19 of the FAO Plan of Action call on States to take action to prevent their nationals from engaging in IUU as owners or operators of the vessels concerned:

> *18. In the light of relevant provisions of the 1982 UN Convention, and without prejudice to the primary responsibility of the flag State on the high seas, each State should, to the greatest extent possible, take measures or cooperate to ensure that nationals subject to their jurisdiction do not support or engage in IUU fishing. All States should cooperate to identify those nationals who are the operators or beneficial owners of vessels involved in IUU fishing.*
>
> *19. States should discourage their nationals from flagging fishing vessels under the jurisdiction of a State that does not meet its flag State responsibilities.*

In light of these provisions it is interesting to note that most of the toothfish fishing vessels recently flagged to Togo listed on Table 2.1 are owned by companies based in Spain, according to Lloyd's Register of Ships. An additional eight large-scale fishing vessels on the Register were flagged to Togo as of July 2005 and two are listed as owned or operated by Spanish companies, whilst the ownership of the remainder is unknown.

While flag hopping from one FOC to another continues to occur, there also appears be a trend of former FOC IUU fishing vessels reflagging to a country which is a member of CCAMLR, in order to obtain a CCAMLR licence to fish. Companies associated with IUU fishing have received licences from CCAMLR member States in a number of cases. Arguably the most serious problem in this regard in recent years has been with former FOC vessels reflagging to Uruguay, a CCAMLR member country, and continuing to engage in IUU fishing for toothfish and related activities with the apparent complicity of the government in many instances. It remains to be seen whether the recent change of government in Uruguay in March 2005 will result in a change of policy by the government to no longer allow vessels and companies to use the Uruguayan flag and government complicity to obtain licences to 'legally' engage in IUU fishing.[44]

Confiscated illegal catch of Patagonian toothfish (also known as Chilean Sea Bass or Miro) from *Viarsa 1*. © Australian Fisheries Management Authority

More generally, of the 42 long-line vessels licensed to fish the CCAMLR area in the 2003-2004 season, at least 14 have been identified by various government and NGO sources as having been involved in IUU fishing in the past. Another two vessels were at one time registered to FOC countries.

It is important to recall Articles 36 and 38 of the UN FAO Plan of Action on IUU fishing which state as follows:

> *36. Flag States should avoid flagging vessels with a history of non-compliance except where:*
>
> > *36.1 the ownership of the vessel has subsequently changed and the new owner has provided sufficient evidence demonstrating that the previous owner or operator has no further legal, beneficial or financial interest in, or control of, the vessel; or*
> >
> > *36.2 having taken into account all relevant facts, the flag State determines that flagging the vessel would not result in IUU fishing.*

> *38. Flag States should deter vessels from reflagging for the purposes of non-compliance with conservation and management measures or provisions adopted at a national, regional or global level.*
>
> *39. States should take all practicable steps, including denial to a vessel of an authorization to fish and the entitlement to fly that State's flag, to prevent 'flag hopping'; that is to say, the practice of repeated and rapid changes of a vessel's flag for the purposes of circumventing conservation and management measures or provisions adopted at a national, regional or global level or of facilitating non-compliance with such measures or provisions.*

In light of these provisions of the Plan of Action as well as those highlighted at the beginning of this Section, both flag States and countries within whose jurisdiction the nationals and companies engaged in fishing on the high seas reside have a clear responsibility to prevent companies and nationals from flagging their fishing vessels to FOC countries

Table 2.2. Vessels previously flagged to an FOC country and/or with a history of IUU fishing for Patagonian toothfish recently reflagged to a CCAMLR member country

Vessel Name (2003-2004)	Flag	Former Name	FOC	Past IUU Activity
America I	United States	Cristina Glacial	St Vincent	Yes [45]
American Warrior	United States	Caroline Glacial	St Vincent	Yes [46]
Globalpesca I	Chile	Zarya		Yes [47]
Isla Camila	Chile			Yes [48]
Isla Santa Clara	Chile	Arbumasa XXV	Belize	Yes [49]
Isla Sofia	Chile			Yes [50]
Jacqueline	UK	Thunnas	Belize	No [51]
Magallanes III	Chile		Panama	Yes [52]
Mellas	Ukraine	Monas	Bolivia	Yes [53]
No. 707 Bonanza	Korea	No. 707 Bonanza	Panama	Yes [54]
No. 829 Yeon Seong	Korea			Yes [55]
Piscis	Uruguay			Yes [56]
Punta Ballena	Uruguay	Kestrel	Belize	No [57]
Simeiz	Ukraine	Florens	Bolivia	Yes [58]
Volna	Russia	Isabel	Bolivia	Yes [59]
Yantar	Russia	Jackson	Bolivia	Yes [60]

or otherwise engaging in IUU fishing. In addition, countries that allow vessels onto their registries have a responsibility to ensure that vessels with a previous history of IUU fishing have actually changed owners or will no longer engage in IUU fishing.

On occasion, some CCAMLR members have challenged other member's granting licences to vessels with a past history of IUU fishing. Questions were raised at CCAMLR XXIII in 2004 by New Zealand about the vessels *Mellas* and *Simeiz*, formerly the *Florens 1* and *Eva 1*, both of which had been engaged in IUU fishing activities in the CCAMLR area. These vessels eventually reflagged to, and were licensed to fish by, Ukraine in the CCAMLR area even though they remained under control of the same operator, apparently with the knowledge of the flag State.[61]

Other individuals and companies reported to be closely associated with IUU fishing have also been able to obtain permission to fish in the CCAMLR area. The Spanish company Vidal Armadores requested and received permission from the Spanish government for its vessel *Galaecia* to fish for toothfish during the 2004/05 season.[62] Vidal Armadores has been identified by COLTO and numerous press reports from Uruguay as being a key part of the 'Galician Syndicate' of companies involved in toothfish poaching over the past decade.[63]

In addition, of the 10 toothfish vessels in Table 1.4 built at the Lien Cherng shipyard in Taiwan since 2000 originally flagged to Bolivia, six have since been reflagged to CCAMLR member countries Russia, Chile and Ukraine. All of these vessels have been engaged in IUU fishing at some point since built according to the Coalition of Legal Toothfish Operators (COLTO) and documents submitted to CCAMLR.

In addition, other former FOC vessels have reflagged to CCAMLR member States as indicated on Table 2.2. Amongst these, two former IUU vessels, the *Caroline Glacial* and

the *Cristina Glacial*, were licensed by the United States to fish the 2003/04 season under the names *America No. 1* and *American Warrior*. These vessels were purchased by the American company Seaport Management Services LLC in 2003 and reflagged to the United States. However, they were reportedly still 50% owned by Vidal Armadores of Spain while under the U.S. flag.[64]

The *Caroline Glacial* and the *Cristina Glacial* were built in 1997 and, according to the ITF, citing information from ISOFISH, were suspected of engaging in IUU fishing for toothfish.[65] In 2003, both vessels were flagged to St Vincent and the Grenadines (at that time the *Caroline Glacial* was named the *Caroline H*). In the same year they were renamed the *America No. 1* and the *American Warrior* and reflagged to the United States. In 2004, the *America no.1* was renamed the *Apache*, reflagged to Honduras and subsequently arrested by the French for IUU fishing within the French EEZ around Kerguelen Island. The *American Warrior* also reflagged to Honduras in 2004 and is now named the *Mochicano*; its whereabouts are unknown (see Box 1 – Case Study: Seaport Management Services LLC – Pac-Fish, Inc. and American No. 1).

It would seem that as CCAMLR establishes increasingly restrictive measures to combat IUU fishing, at least some IUU vessels formerly flagged to FOC countries have reflagged to CCAMLR member countries to be able to continue to fish for toothfish. Where this is done properly it can help ensure that the vessels no longer engage in IUU activities. However, amongst other things, the flag State must ensure that the vessels are no longer owned or operated by companies with a history of IUU fishing activities. In this regard, it is interesting to note that four of the toothfish vessels that have reflagged from FOCs to CCAMLR member countries – the *Volna*, the *Yantar* (both flagged to Russia), the

Box 1. Seaport Management Services LLC, Pac-Fish, Inc. and America No. 1

In 2003 the American company Seaport Management Services LLC purchased the former IUU toothfish vessels *Caroline Glacial* and the *Cristina Glacial*. According to the application for US documentation for these vessels, Seaport Management Services consisted of the California based fish trading company Pac-Fish, Inc. and New World Investments.

Several media and NGO sources have linked Pac-Fish to IUU activities and to the Vidal Armadores group.[1] The 2003 COLTO report 'Rogues Gallery', on Vidal Armadores and the 'Galician Syndicate' states: "the two newest boats in the group have yet to fish, but have been registered and flagged to the USA and have applied to fish in CCAMLR waters in 2003/04." [2] These two vessels were the Seaport Management Services LLC owned *America No. 1* and the *American Warrior*.

A 2003 article in the Boston Globe newspaper in the US mentioned that Pac-Fish Inc. was investigated by US authorities (NOAA) in Boston for importing 33 tonnes of toothfish from the IUU fishing vessel *Arvisa I* – a vessel with a well-known history of IUU fishing subsequently arrested by French authorities for illegal fishing in the Kurguelen Island EEZ.[3] At the time of the arrest, the *Arvisa I* was chartered to Navalmar SA, a Uruguayan company owned by Vidal Armadores. Vidal Armadores was also involved with the vessels *Hammer*, *Thule* and *Viarsa* I, all of which have had past involvement in IUU fishing.[4]

The *America No. 1* and the *American Warrior* were overhauled at a Vidal Armadores facility in Santa Eugenia de Riveira, Spain in the late summer of

2003.[5] The *America No. 1* left Spain in October 2003 for CCAMLR waters near the Falkland/Malvinas Islands, but was unable to fish because of delays in obtaining an authorization to fish from the US. In November 2003, the *America No. 1* met the Vidal Armadores owned toothfish vessel *Galaecia* at sea near CCAMLR area 48.1 and transferred bait and fuel.[6] The *Galaecia* was not licensed to fish CCAMLR waters in 2003 and has been closely linked with well known toothfish poaching vessels including the *Carran*, *Viarsa 1*, *Dorita*, and *Maya V*.[7]

The *America No. 1* finally received a permit from the United States to fish in the Ross Sea but was only able to fish for 21 days due to ice conditions. She sailed to Dunedin, New Zealand to offload toothfish, then sailed again for the Ross Sea. Since the Total Allowable Catch (TAC) for the Ross Sea was almost fully caught, Seaport Management Services asked the US for a permit to fish the Banzare Bank. The *America No. 1* left the Ross Sea and sailed for the Banzare Bank but permission to fish there was delayed. A decision was made to end fishing and the *America No. 1* sailed to Mauritius arriving in Port Louis on 2 April 2004. She had fished only 21 days in 6 months.

The *America No. 1* was next seen in Montevideo, Uruguay in May flying the Honduran flag, renamed *Apache*, and reportedly under new ownership. However, both Lloyd's register of Ships and Lloyd's Marine Intelligence Unit continue to list US based Seaport Management Service as the company with the controlling interest in the *Apache*.[8]

In June 2004 *Apache* was detected by the French patrol vessel Albatross fishing illegally within the EEZ of the Kurguelen Islands. She was placed under arrest and taken to Reunion where she is still being held. In September a French court convicted the captain and crew of illegal fishing.

In a response to the authors' request for comments, Mr. Lawrence Lasarow, President of Pac-Fish Inc., stated on 15 February 2005 that:

> *"We are not and never have been a part of the so-called "Galician Syndicate". "It is correct that NOAA impounded 33 tones of toothfish even though Pac – Fish Inc. was in possession of certified documents. These documents included the DCD documents of legal necessity signed by Dr H Neon of DINARA (The ministry of fisheries in Uruguay) as well as CCAMLR. This matter was resolved by negotiation with N.O.A.A. in order to clarify Pac-Fish Inc.'s situation."*
>
> *"When we were offered the opportunity to participate in a joint venture with a Spanish company, we believed that it would be a way of securing supplies on a regular basis. (Pac-Fish Inc. is a trading company that imports/exports Tooth-fish). The transaction through Seaport Management Services LLC gave the partners management control and the vessels were flagged in the USA with U.S. skippers and engineers and monitored by the U.S. coastguard by way of the vms system in conformity with the rules of CCAMLR and the U.S. Coastguard. There were U.S. and International observers on board each vessel."*

The U.S. observer onboard the *America No. 1* while the vessel was flagged to the U.S. stated that she met Antonio Vidal, head of Vidal Armadores together with Mr. Lasarow when she flew to Vigo, Spain to board the vessel.[74]

It is interesting to note that Mr. Lasarow, President and an owner of both Seaport Management Services LLC and Pac-Fish, Inc., was a member of the US delegation to CCAMLR XXII and XXIII in 2003 and 2004.[75]

Fisheries and Customs Patrol vessel Southern Supporter brings in *Viarsa 1.* © Australian Fisheries Management Authority

Mellas and the *Simeiz* (both flagged to Ukraine) – are managed by Chuan-Chuan Yoo, a company based in Taiwan. Chuan-Chuan Yoo and an associated company, Kando Maritime, also manage several other toothfish vessels, including the Ukranian flagged *Sonrisa*, the Belize flagged South Ocean, and the Georgia flagged *Jian Yuan*, *Kang Yuan* and *Kiev*. Chuan-Chuan Yoo appears to be associated with the Taiwanese company Sun Hope Investments, as well as with two other companies of the same name based in Jakarta and Hong Kong, based on information found onboard the Sonrisa when it was inspected in port by French authorities in New Caledonia in 2004.[76] Documents submitted by France at CCAMLR XXIII also indicate that Sun Hope is a subsidiary of Pacific Andes International Limited of Hong Kong.[77]

According to Lloyd's Register of Ships, the address of the company 'Sun Hope Investments' based in Taiwan is the same as the address listed for the office of Kando Maritime. Furthermore, a document submitted by New Zealand to the 23rd meeting of CCAMLR stated that information provided by the European Community confirmed that the management company for the *Simeiz* has the same address as Kando Maritime in Taiwan.[78]

According to the Australian Government, Pacific Andes, based in Hong Kong, is believed to be the parent company of Sun Hope Investments in Jakarta.[79] All of these companies appeared to be interconnected and each, at one point or another over the past several years, has been associated with vessels suspected of engaging in IUU fishing. This is consistent with the findings of the Coalition of Legal Toothfish Operators (COLTO), an international coalition of companies legally engaged in fishing for Patagonian toothfish.[80]

Pacific Andes has consistently denied direct involvement with IUU fishing. In October 2002 Pacific Andes' Managing Director, Mr. Ng Joo Siang, issued a statement saying, in part, that:

> *"Pacific Andes categorically states that:*
>
> *(a) neither Pacific Andes and its subsidiaries, nor P.T. Sun Hope Investments, owns, operates or controls any of the fishing vessels referred to by the Media Reports, or any other fishing vessels;*
>
> *(b) Pacific Andes sold all its fishing vessels in 1998. Since then Pacific Andes at no time has had any control*

over the fishing activities of any fishing vessel;

(c) every consignment of fish purchased by Pacific Andes is legal and supported by proper certification and documentations issued by the relevant governmental or appropriate authorities."

He also stated that:

"For more than 10 years, we have been providing shipping and agency services such as bunkering, provision supply and other logistics services to numerous fishing vessels in different ports in Asia, Europe, Africa and South America. We even provide such services to fishing vessels at high sea. However, in no circumstances do such shipping and agency services involve Pacific Andes in the control over the fishing activities of the vessels to which Pacific Andes provides such services."[81]

In its report on Pacific Andes activities titled *The Alphabet Boats, A Case Study of Toothfish Poaching in the Southern Ocean*, COLTO responds to Pacific Andes's denials by stating that:

"what Pacific Andes does not deny is that it does service the 'alphabet' boats and does purchase and process the fish they catch. This would appear to be just another of Pacific Andes' customarily highly leveraged arrangements with the fishing operations it sold out of in 1998 – in retaining exclusive marketing arrangements as part of the sale agreements. The 'alphabet' boats are, of course, technically operated and controlled by their Spanish skippers while being owned by dummy companies in (at various times) the British Virgin Islands, Russia, Belize, Bolivia and elsewhere"

"As for getting the right certification and documentation, it is generally regarded as a fairly simple task to get officials in agencies under inadequate central government control in flag states like Bolivia and Russia and port states like Indonesia to generate 'appropriate' paperwork. There are a number of measures under ongoing discussion among CCAMLR governments aimed at closing loopholes in their toothfish Catch Documentation Scheme and at making it easier to detect bogus documentation."[82]

The question arises as to whether some companies previously engaged in IUU fishing are attempting to gain licences from CCAMLR member States for their vessels to fish in the Southern Ocean so as to provide a 'legal' means of laundering catches by IUU vessels, similar to the practice used by tuna vessels identified by the Fisheries Agency of Japan discussed in Section 3.1. To be certain that this is the not the case, CCAMLR member flag States, as well as the flag States that are members of other regional fisheries management organizations, must be more diligent in checking the history and current ownership of fishing vessels seeking to enter their registries and obtain authorization or licences to fish on the high seas.

As indicated earlier, the clear intent of Articles 36, 38 and 39, as well as 18 and 19 of the UN FAO Plan of Action on IUU fishing is to call upon responsible flag States to prevent this from happening.

The abuse of workers' and human rights in IUU fisheries for toothfish

It is difficult to document working conditions or human rights abuses onboard IUU and FOC fishing vessels. However, there is some information available using reports from crew onboard vessels operating in the Southern Ocean. According to SINTONERS – a union of fishworkers based in Punta Arenas, Chile which represents workers onboard fishing vessels, including toothfish vessels – abuses of labor and human rights on IUU fishing vessels are a common occurrence. Amongst the most serious are the following:[83]

1. Violations of ILO conventions: The crew on IUU fishing vessels often either do not have contracts or, if they do, the

contracts are signed by fictitious companies which are impossible to find in cases where there are violations of labor or human rights, or in cases where crew are arrested or vessels sink. Often agreements regarding crew's salaries, the crew's share of the catch, working conditions, length of the time at sea, food and onboard accommodation are unilaterally changed/modified by vessel managers or officers once the ship is at sea.

2. Crew that are considered 'inefficient' or who 'cause problems' onboard IUU vessels are sometimes abandoned in foreign ports and must themselves seek help from their embassies, local fishermen's unions, churches, or aid organizations to get home.

3. Physical and/or psychological mistreatment of crew onboard IUU vessels often occurs.

4. Crew are sometimes subject to prosecution under local laws for illegal fishing activities even though they are obliged to obey, while on ship, all orders from the company, captain or ships' officers.

5. Poor safety conditions are common onboard IUU vessels. An example is the case of the fishing vessel *Amur* that sunk in the sub-Antarctic waters of Kerguelen. Problems included the fact that structural modifications had made the vessel unseaworthy which led to its sinking; the life saving equipment did not function which led to the drowning or death by hypothermia for many of the crew; there were no fire extinguishers onboard; and bunks for sleeping were located in dangerous areas of the ship or areas which made it difficult for crew to escape the ship in case of emergency. These types of working conditions and faulty equipment are not uncommon onboard IUU or FOC fishing vessels operating in the region.

6. Long working shifts with little time to rest are often demanded, which in some cases means only four hours per day to rest and sleep. This contributes to the high rate of accidents onboard IUU vessels.

7. There are often inadequate medical services, equipment or facilities onboard for treatment when accidents happen.[84]

8. In some cases, Asian crew members have been known to work onboard IUU fishing vessels as forced labor and are locked in their quarters or placed in chains from time to time while at sea or in port.

Clearly these are gross violations of labor and human rights, all the more so given the harsh and dangerous weather conditions fishing vessels are likely to meet in the Southern Ocean. Every effort should be made to prevent vessels from fishing under these conditions. Regardless of where these vessels fish, workers' and safety conditions must be respected and upheld. Earlier this year the Ukrainian flagged vessel *Simeiz* (mentioned previously) caught fire in suspicious circumstances in the port of Montevideo, Uruguay and 11 crew members, nine Chinese, one Indonesian, and the Ukrainian captain, reportedly died in the blaze. Montevideo port authorities were reported to believe that nine of the crew members who died were probably locked in their cabins at the time of the fire.[85]

Recommendation

In March 2002, the Governing Body of the International Labour Organization (ILO) took a decision to move forward on negotiating both a Convention concerning work in the fishing sector and a related Recommendation. This was on the agenda for discussion at the 92nd and 93rd sessions of the ILO Conference in 2004 and 2005, however, for various reasons the Convention was not adopted at this stage, but the Recommendation was. The draft Convention is scheduled for further discussion at the International Labour Conference in 2007, and given the interrelationship between the Convention and the Recommendation, the Recommendation will

also need to be revisited. Assuming that they are adopted, one option for enhancing international efforts to combat poor working conditions in the fisheries sector operating on the high seas would be for States and RFMOs to consider making adherence to the standards and working conditions in these instruments a criteria for vessels to receive authorization to fish within the area of competence of the RFMO.

The Australian Customs medical team transfers a sick fisherman onto the *Oceanic Viking* mid-Southern Ocean from the *Arnela,* a licensed Spanish-flagged fishing vessel operating legally in international waters approximately 200 nautical miles south of the Australian fishing zone in the Southern Ocean. © Australian Customs Service

Section Three

Refrigerated cargo vessels, the transshipment of fish at sea and IUU fishing

IUU fishing vessels operating on the high seas, like legal fishing vessels, require infrastructure and support services as well as access to market. A number of the provisions of the UN FAO International Plan of Action on IUU fishing recognize this fact. Paragraphs 73 and 74 of the IPOA call upon States to deter importers, transshippers, buyers, consumers, equipment suppliers, bankers, insurers and other services suppliers within their jurisdiction from doing business with vessels engaged in IUU fishing, including adopting laws to make such business illegal.

A major element of the supporting infrastructure for distant water fleet fishing on the high seas consists of at-sea transshipment and resupply vessels. Many high seas distant water fishing vessels stay at sea for long periods of time, transshipping their catches, refuelling, rotating crews, and resupplying bait, food, and water through transshipment and resupply vessels servicing the fishing fleets at sea. In recognition of the essential role played by at-sea transshipment and resupply vessels to the operation of IUU fleets, the IPOA states:

> *48. Flag States should ensure that their fishing, transport and support vessels do not support or engage in IUU fishing. To this end, flag States should ensure that none of their vessels re-supply fishing vessels engaged in such activities or transship fish to or from these vessels…*
>
> *49. Flag States should ensure that, to the greatest extent possible, all of their fishing, transport and support vessels involved in transshipment at sea have a prior authorization to transship issued by the flag State, and report to the national fisheries administration or other designated institution:*
>
> *49.1 the date and location of all of their transshipments of fish at sea;*
>
> *49.2 the weight by species and catch area of the catch transshipped;*
>
> *49.3 the name, registration, flag and other information related to the identification of the vessels involved in the transshipment; and*
>
> *49.4 the port of landing of the transshipped catch.*
>
> *50. Flag States should make information from catch and transshipment reports available, aggregated according to areas and species, in a full, timely and regular manner and, as appropriate, to relevant national, regional and international organizations, including FAO, taking into account applicable confidentiality requirements.*

The importance of regulating transshipment at sea was further emphasized by the UN General Assembly in its resolution on fisheries adopted in November 2004. The resolution states:

> *34. Recognizes that common means of conducting illegal, unreported and unregulated fishing involves the unreported or misreported transshipments of fish at sea and urges States, either directly or through relevant subregional and regional fisheries management organisations and arrangements, to establish comprehensive systems, where appropriate, for monitoring and control of transshipments on the high seas* [86]

Marked and labelled bluefin tunas. Tokyo fishmarket, Japan.
© WWF-Canon / Michael Sutton

Transshipment: fish transport vessels ('reefers')

At-sea transshipment of the catch in the Atlantic, Pacific and Indian Oceans is a major component of the infrastructure supporting longline fishing fleets targeting high value species of tuna operating on the high seas. These transshipment vessels are purpose built to freeze the catch to minus 40° Celsius and keep it deep-frozen to preserve the quality of the fish, which is sold as sashimi-grade tuna on the Japanese market.[87]

At least some at-sea transshipment vessels take fish from both IUU and non-IUU or legitimate tuna fishing vessels. While no published list of transshipment vessels built to ship high grade tuna appears to be available, Table 3.1 contains a list of refrigerated cargo vessels that are likely to be transshipping high-grade tuna in the Atlantic, Indian Ocean and Pacific Oceans and transporting to market in Japan. In the authors' view, this list is likely to constitute most of the high-grade tuna transshipment fleet. Table 3.1 also lists the area of operation of the vessels. The authors wish to emphasize that inclusion on this list does not imply that all or any of the vessels, other than those discussed further on in this section, listed on Table 3.1 are engaged in transshipping IUU catches at sea.

Methodology

This list was compiled on the basis of the following method and criteria: The major market for sashimi grade tuna is Japan and the major ports of entry for transshipment vessels bringing sashimi grade tuna into Japan are Shimizu and Yokosuka. Using the Lloyd's Marine Intelligence Unit database, a list of reefers regularly unloading in these ports was compiled. The voyages of each of these reefers were then analyzed for evidence of frequent transits through known tuna fishing areas, to ports known to be transshipment points for tuna, and for ships that spent significantly longer at sea in the tuna fishing areas than would normally be required for a typical transit. Once a match was made, other vessels owned or managed by the same company were identified to determine whether any followed a similar trading pattern.

This research yielded a list of over 150 reefers. Each vessel was then investigated using the internet and various databases held by government and commercial organizations and the list was narrowed to those most likely to be transshipping tuna at sea. Using this procedure resulted in a list of 77 reefers likely to be regularly carrying tuna from fishing vessels at sea and delivering it to market in Japan being found.

Table 3.1. List of refrigerated cargo vessels likely to be transshipping at sea and delivering sashimi grade tuna to Japan.

	Vessel Name	Flag	Owner or Manager	Nationality of Owner/Manager	Principle Areas of Operation
1	Akashia	Panama	Daewoo Marine	Korea	Western Pacific
2	Amagi	Panama	Âkyoei Kaiun Kaisha	Japan	Pacific- Indian
3	Asian Rex	Panama	Azia Sekki	Japan	Atlantic- Indian
4	Astraea 102	Panama	Tokyo Seafoods	Japan	Med.- Indian
5	Aurora 2	Korea	Dongwong Industries	S. Korea	Atlantic- Pacific
6	Chan Han 6	Panama	Â Zhoushan Yueda	China	Atlantic- Pacific
7	Chikuma	Panama	Hakko Marine	Japan	Med- Indian-Atlantic
8	Corona Reefer	Japan	Tachibana Kaiun	Japan	Med- Indian-Atlantic
9	Eita Maru	Panama	Toei Reefer Line	Japan	Atlantic
10	Fortuna Reefer	St Vincent	Habitat International	Taiwan	Pacific
11	Fresh South	Panama	Nisshin Kisen	Japan	Atlantic
12	Fuji	Bahamas	Kasuga Kaiun	Japan	Atlantic- Indian
13	Futagami	Panama	Kobe Shipping	Japan	Atlantic- Pacific
14	Golden Express	Panama	Dongwon Industries	Korea	Pacific- Indian
15	Gouta	Panama	Chin Fu Fishery	Taiwan	Atlantic
16	Harima 2	Panama	Hakko Marine	Japan	Atlantic- Indian
17	Haru	Panama	Chuo Kisen	Japan	Atlantic- Indian
18	Hatsukari	Panama	Atlas Marine	Japan	Atlantic- Pacific
19	Hekifu	Liberia	Korea Marine	Korea	Atlantic- Pacific
20	Honai Maru	Panama	Kyoei Kaiun Kaisha	Japan	Atlantic- Pacific
21	Houta Maru	Panama	Toei Reefer Line	Japan	S. Atlantic-Pacific
22	Hozan Maru	Panama	Hayama Senpaku	Japan	Indian- Pacific
23	Shinryuta Maru	Panama	Toei Reefer Line	Japan	Indian- Atlantic-Pacific
24	Ji Sung	Korea	Ji Sung	Korea	W. Pacific

Table 3.1, continued

	Vessel Name	Flag	Owner or Manager	Nationality of	Principle Areas
25	Kaiho Maru	Panama	Hayama Senpaku	Japan	Indian- Pacific
26	Katah	Panama	Ji Sung	Korea	W. Pacific-S. Atlantic
27	Kurikoma	Panama	Toei Reefer Line	Japan	Atlantic- E. Pacific
28	Kyung Il Ace	Korea	Shin Han Leasing	Korea	Pacific
29	Kyungil Reefer	Korea	Shin Han Leasing	Korea	Pacific
30	Lung Soon No. 128	Panama	Siong Soon Shipping	Taiwan	Pacific
31	Lung Yuin	Panama	Chang Soon Shipping	Taiwan	Pacific
32	Luo Hua	St Vincent	Luoda Shipping	China	Pacific- Indian
33	Magellanic	Panama	Commercial Sa	Greece	Indian- Atlantic- Pacific
34	Meita Maru	Panama	Toei Reefer Line	Japan	Atlantic- Pacific
35	Miyabi	Panama	Kyoei Kaiun Kaisha	Japan	Pacific- Indian
36	Musashi 3	Panama	Wakoh Kisen	Japan	Pacific- Atlantic
37	New Prosperity	Panama	Nisshin Kisen	Japan	Indian- Atlantic- Pacific
38	New Satsuki	Panama	Kyoei Kaiun Kaisha	Japan	Indian- Atlantic- Pacific
38	Orion	Japan	Shinsei Kaiun	Japan	Indian-west Pacific
40	Reifu	Liberia	Korea Marine	Korea	Indian- Atlantic- Pacific
41	Reina Cristina	Panama	Tokyo Seafoods	Japan	Indian- Atlantic- Pacific
42	Ryoma	Panama	Chuo Kisen	Japan	Atlantic- Indian
43	Sagami 1	Panama	Wakoh Kisen	Japan	Indian- Pacific- Atlantic
44	Sakae Maru	Japan	Kyoei Kaiun Kaisha	Japan	Western Pacific
45	Sanwa Fontaine	Panama	Donwong Industries	Korea	Western Pacific
46	Satsuma 1	Panama	Tachibana Kaiun	Japan	Pacific- Indian- Atlantic
47	Savanah	Korea	Ji Sung	Korea	Western Pacific
48	Sea Mansion	Panama	Sea Tower	Taiwan	Pacific - Indian

Table 3.1, continued

	Vessel Name	Flag	Owner or Manager	Nationality of Owner/Manager	Principle Areas of Operation
49	Seiko Maru No. 16	Panama	Toei Suisan	Japan	Pacific- Indian- Med.
50	Seishin Maru	Panama	Seiwa Kosan	Japan	Indian- Pacific
51	Seita Maru	Panama	Toei Reefer Line	Japan	Indian- Pacific
52	Senta	Panama	Chin Fu Fishery	Taiwan	Atlantic- Pacific
53	Shin Fuji	Panama	Kyoei Kaiun Kaisha	Japan	Atlantic- Pacific
54	Shin Izu	Panama	Kyoei Kaiun Kaisha	Japan	Indian- Pacific
55	Shofu	Liberia	Korea Marine	Korea	Atlantic- Pacific
56	Sun Big No.9	Panama	Sun Big Shipping	Taiwan	Atlantic- Indian- Med
57	Suruga 1	Panama	Tachibana Kaiun	Japan	Pacific- Indian- Med.
58	Tai Fu No. 1	Panama	Sun Big Shipping	Taiwan	Pacific- Indian- Atlantic
59	Tai Yu	China	China National Fisheries	China	Western Pacific
60	Tai Zhong	St Vincent	China National Fisheries	China	Western Pacific
61	Taisei Maru No. 15	Japan	Taiseimaru Kaiun	Japan	Atlantic
62	Taisei Maru No. 24	Japan	Taiseimaru Kaiun	Japan	Atlantic
63	Taisei Maru No. 3	Japan	Taiseimaru Kaiun	Japan	Pacific- Atlantic
64	Tenho Maru	Panama	Hayama Senpaku	Japan	Indian- Atlantic- Pacific
65	Tomoe	Panama	Kyoei Kaiun Kaisha	Japan	Indian- Atlantic- Pacific
66	Tuna Queen	Panama	Alavanca	Japan	Mediterranean
67	Tunabridge	Japan	Shinko Senpaku	Japan	Indian- Atlantic Pacific
68	Tunastates	Panama	Shinko Senpaku	Japan	Indian- Atlantic
69	Victoria	Panama	Kobe Shipping	Japan	Western Pacific
70	Win Dar	Panama	Win Far	Taiwan	Indian- Atlantic
71	Win E.	Panama	Win Far Fishery	Taiwan	Indian

Table 3.1, continued

	Vessel Name	Flag	Owner or Manager	Nationality of Owner/Manager	Principle Areas of Operation
72	Xiangfan	Panama	Xiangfan Marine	Taiwan	Indian- Pacific
73	Yakushima	Panama	Alavanca	Japan	Indian- Pacific
74	Yamato 2	Panama	Wakoh Kisen	Japan	Atlantic- Indian
75	Yu Hsiang Maru	Panama	Toei Reefer Line	Japan	Indian
76	Yurishima	Panama	Alavanca	Japan	Pacific
77	Zuifu	Liberia	Korea Marine	Korea	Indian- Atlantic- Pacific

At-sea transshipment is an essential service provided to tuna fishing vessels operating on the high seas. It allows these vessels to continue fishing on the high seas for long periods of time without costly runs into port to offload fish when their holds are full. Transshipment vessels also often provide other services to the high seas fishing fleets, such as bringing food, water, new crews, and spare fishing gear and engine parts.

Unfortunately, some transshipment vessels operating in the high-grade tuna reefer fleet may be taking fish from both legal and IUU vessels at sea. This is most directly illustrated by a paper submitted by the government of Japan to the December 2004 Preparatory Conference for the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific on the recent inspections of the tuna transshipment vessels *Lung Yuin* and the *Suruga No. 1* in port in Japan in 2004.[88] Both vessels are listed on Table 3.1.

Regulating at-sea transshipment through observers and documentation schemes

One way that could be effective in preventing the laundering of IUU caught tunas and other species would be to require vessels to have an authorization to transship at sea in an area managed by an RFMO and to establish observer programmes onboard transshipment vessels together with transshipment documentation schemes similar to the catch documentation scheme established by CCAMLR.

In considering the practicalities of establishing such a scheme, taking the ICCAT area as an example, all but eight of the 77 vessels on the list of reefers on Table 3.1 are flagged to contracting parties of ICCAT, with most flagged to Panama and Japan. All are owned and managed by companies based in countries that are members of ICCAT, with most based in Japan and Korea. Most of the high-grade tuna is imported by Japan. The cooperation of the flag States and countries of beneficial ownership of the transshipment fleet should be relatively straightforward – all are contracting parties to ICCAT and have committed to the UN FAO IPOA on IUU fishing and the resolutions related to transshipment adopted by ICCAT.[92]

A similar situation applies for the fisheries in the IATTC area. Most of the transshipment vessels are flagged to IATTC member States or 'Cooperating Non Parties' or 'Cooperating Fishing Entities' of IATTC.[93] All of the transshipment vessels are owned and managed by companies based in countries that are either members of IATTC or are 'Cooperating Non Parties' or 'Cooperating Fishing Entities' of IATTC. Again, politically this should be feasible, especially with the cooperation of the principal market State – Japan.

Box 2. Transshipment of IUU caught tuna at sea: the Lung Yuin and the Suruga No. 1

In 2004, two of the reefers on Table 3.1 – the Lung Yuin and the Suruga No. 1 – were inspected in port by Japanese authorities and discovered to be offloading laundered IUU high-grade tuna. The fish were falsely reported as being caught in different ocean areas and/or by vessels that were 'legally' authorized to fish for tuna in the area where the tuna were transshipped.

The Lung Yuin

The Lung Yuin was arrested by Japanese authorities on 6 July 2004 in Shimizu. According to Japanese authorities, 28 tuna longline vessels owned by Taiwanese companies – 25 flagged to Taiwan and three to Vanuatu – transshipped their catches to the Lung Yuin while it was in the Pacific prior to its return to Japan. The reefer and all 28 vessels provided false records to the Japanese authorities concerning areas fished, vessel names (IUU vessels' catch which had been transshipped to the Lung Yuin was falsely listed as catch by non-IUU vessels) and transshipment positions and dates. The reefer kept two sets of books, one with the false information for the authorities and the other a true record of transactions.

According to data available from Lloyd's Marine Intelligence Unit, the Lung Yuin is a Panamanian flagged reefer owned by Tachibana Kaiun, based in Taiwan. It left Shimizu harbour on 12 March 2004 and headed for Kaohsiung, Taiwan. It appears to have spent several weeks in port, sailing from Taiwan on 8 April 2004. The reefer spent the next 72 days at sea in the Pacific with a one-day stop in Papeete, Tahiti. The Lung Yuin returned to Shimizu, Japan on 19 June. Altogether, the Lung Yuin spent approximately 38 days at sea above and beyond the time needed to transit from Kaohsiung, Taiwan to Papeete, Tahiti and back to Japan.

It is interesting to note that the Lung Yuin was previously known as the Toyou and owned by Kasuga Shipping Co. Limited (Kasuga Kaiun) based in Hakata, Japan. In May 2000, the M/V Greenpeace documented the Toyou taking transshipment of tuna at sea from a Belize flagged longline vessel (the Hau Shen nr. 202) in the international waters of the South Atlantic off the coast of Angola. The presence of the Toyou in the region is confirmed by Lloyd's Marine Intelligence Unit which has the Lung Yuin (under its previous name Toyou) leaving Las Palmas in the Canary Islands on 15 March, 2000 and arriving 18 May, 2000 in Capetown, South Africa. In 2002, the ownership of the Toyou was transferred to Chang Soon Shipping Corporation based in Kaohsiung, Taiwan and the vessel was subsequently renamed the Lung Yuin. Kasuga Shipping Co. Limited remains in the tuna shipping business; it currently owns the reefer Fuji.

The Suruga No. 1

Authorities from the Fisheries Agency of Japan inspected another tuna reefer, the Suruga No. 1 in September 2004. The inspection disclosed that the Suruga No. 1 had engaged in organized IUU tuna laundering activities similar to the Lung Yuin. In addition, the Suruga No. 1 was found to be falsely reporting catches of big eye tuna in the Atlantic Ocean as originating in the Pacific Ocean. Also, the names of non-IUU fishing vessels registered in China were used to cover up the catch by IUU longliners.

According to information available from Lloyd's Marine Intelligence Unit, the Suruga No. 1 left Shimizu on 15 March, 2004 and returned to Shimizu on 22

September, 2004. Based on dates of port visits listed by Lloyd's Marine Intelligence Unit, in the intervening period the vessel made a straight transit through the Indian Ocean and the Mediterranean Sea into the Atlantic Ocean where it spent 53 days, apparently engaged in transshipment operations, before returning to the Mediterranean Sea. It spent three weeks in the Mediterranean, then sailed back into the Atlantic where it spent 39 days before reaching the Panama Canal. A straight trip to the Panama Canal from Gibraltar would be expected to take approximately 14 days (sailing at 13 knots – the standard transit speed for the Suraga No. 1), thus meaning that the Suraga No. 1 would have spent an extra 25 days engaged in transshipping (including transiting to and from transshipment rendezvous points). From the Panama Canal, the vessel spent 42 days sailing to Shimizu, a voyage that would take only between 24 and 25 days at 13 knots, indicating the vessel is likely to have spent an extra 17 days engaged in transshipment activities. Altogether it appears that the Suraga No. I spent approximately 78 days in the Atlantic and 17 days in the Pacific above and beyond transit times engaged in transshipment operations. In addition, it seems to have spent up to an extra two weeks in the Mediterranean Sea, possibly to pick up 'farmed' bluefin tuna in the region.

According to Lloyd's Register of Ships, Tachibana Kaiun based in Imabari, Japan currently manages the Suruga No. 1. Tachibana Kaiun also manages the Corona Reefer and Satsuma 1. The former appears to be engaged primarily in transshipping farmed tuna from the Mediterranean and Australia to Japan while over the past couple of years the latter has done the same run into the South Pacific from Shimizu to Papeete and back as the Lung Yuin. Neither the Suraga No. I nor the Satsuma I are on the South Pacific Forum Fisheries Agency's Regional Register of Fishing Vessels. The company Tachibana Kaiun is identified as the operator of seven ships altogether.

Tuna laundering by transshipment vessels a widespread practice

According to the Fisheries Agency of Japan, the tuna laundering activities of the Lung Yuin and the Suruga No. 1 are not isolated incidents. Rather, the Fisheries Agency states that "the concerned parties informed FAJ on this case that this sort of organized laundering activity is not limited to this case but widely conducted not only in the Pacific but also in the Atlantic and Indian Oceans." The Fisheries Agency concluded that the scale of the laundering of sashimi-grade big eye tuna caught in the Atlantic and Indian Ocean – IUU caught tuna falsely reported as caught by a 'legal' vessel and/or falsely reported as being caught in the Pacific Ocean – could be as much as 18,000 tons in total.

Assuming that both ICCAT and the IATTC were to establish an observer programme programme and transshipment documentation scheme, it should not be difficult to do the same for the Western and Central Pacific and Indian Ocean tuna fisheries through the relevant RFMOs.

Other relevant RFMOS could establish similar schemes for at-sea transshipment of other species such as toothfish, consistent with the need to prevent, deter and eliminate all types of IUU fishing on the high seas.

Other fish transshipment vessels

Many other fish products are transshipped at sea aside from high-grade tuna. As such, at-sea transshipment vessels provide a vital service to distant water fishing vessels

Box 3. Transshipping IUU caught tuna at sea: the tuna reefer M/V Hatsukari

The case of the M/V Hatsukari, a vessel documented by Greenpeace International transshipping sashimi grade tuna in the South Atlantic from both IUU and legal longline vessels in May 2000 in the international waters in the South Atlantic, provides another practical illustration of the typical operation of a vessel involved in at-sea transshipment of high grade tuna destined for market in Japan.

On the 3rd of March, 2000, the M/V Hatsukari sailed from her homeport of Shimizu in Japan. The Hatsukari is a Japanese owned and Panamanian flagged refrigerated cargo ship, 94 metres long, displacing 3,029 tons, with a crew of Japanese officers and Philippine sailors. After stopping in Busan, South Korea on the 12th and 13th of March and in Kaohsiung, Taiwan on the 16th and 17th of March where she most likely took on supplies for Korean and Taiwanese fishing vessels to add to those already on board for the Japanese fleet, she sailed to Singapore to take on fuel.

The Hatsukari departed Singapore on the 24th of March for the 5,700 mile voyage to Cape Town. This voyage would normally take about 18 days, but the Hatsukari arrived in Cape Town on the 26th of April, 33 days after leaving Singapore. Given this passage time, it is likely that she made several rendezvous with vessels fishing in the western Indian Ocean to collect their catch of frozen tuna. After servicing this fleet, the Hatsukari proceeded to Cape Town where more supplies and spare parts were loaded for the long line fleets fishing for bigeye tuna in the Atlantic Ocean off West Africa.

Companies that own or manage the long line tuna fishing vessels working the Eastern Atlantic Ocean had prearranged with the owners of the Hatsukari to have their catch picked up at sea and delivered to markets in Japan. Contact by radio was made between the Hatsukari and the fishing vessels, and a position and time for the rendezvous was arranged. As the Hatsukari entered the area, the long line fishing vessels pulled up their fishing gear and one by one came along side the Hatsukari to discharge their cargo of frozen tuna and collected their supplies and spare parts.

On the 6th of May near position 9° 00 S - 5° 00 W, several hundred kilometres off the coast of Angola, the Greenpeace vessel M/V Greenpeace encountered the Hatsukari. The Hatsukari was observed meeting the Chien Chun No. 8, a Belize flagged longliner, and transferring bait and receiving frozen tuna from the longline vessel. Soon afterward two more Belize flagged vessels, the Jeffrey nr. 816 and the Jackie nr. 11 came alongside the Hatsukari. Later the same day, the Cambodian flagged Benny nr. 87 and two Taiwanese vessels, Yu I Hsiang and Jiln Horng 206, also offloaded their catch.

Almost a month after leaving Cape Town, on the 25th of May, the Hatsukari made a brief stop at St Vincents in the Cape Verde Islands. The Hatsukari arrived back in Cape Town on the 20th of June where it reportedly offloaded 72 tons of tuna of indeterminate species. She departed Cape Town on the 21st of June for the return voyage to Japan via Singapore. Again, this voyage, which would normally take approximately 18 days, took over a month due most likely to stops to service and transship from fishing vessels at-sea in the Indian Ocean. The Hatsukari arrived in Singapore on the 26th of July, departing the 29th to sail back to Japan. The Hatsukari arrived in Shimuzu on the 8th August where the transshipped cargo of high grade tuna was offloaded for market.

The M/V Hatsukari is one of a fleet of refrigerated cargo vessels or 'reefers' that regularly travel from the ports of Shimuzu and Yokosuka in Japan, stopping at Busan, South Korea, Kaohsiung, Taiwan and Singapore, then continuing to the Indian and Atlantic Oceans, with stops in Cape Town, South Africa, Las Palmas in the Canary Islands and occasionally other Atlantic or Indian Ocean ports. These vessels spend relatively long periods of time at sea, transshipping sashimi grade tuna and resupplying high seas tuna longline fleets.

Close view of the crew aboard vessel in poor condition with visible evidence of rust and decay. ©Greenpeace/ Kate Davison

operating both on the high seas and within other countries' EEZs.

The following is a representative sample of vessels that are likely to be transshipping other fish at sea. This is by no means a complete or exhaustive list of vessels involved in transshipping fish at sea. However, the authors believe that the vessels on the list represent a substantial portion of vessels involved in the at-sea transshipment of fish, together with the vessels on Table 3.1. Again, it must be emphasized that not all or any of the vessels listed on Table 3.2 are necessarily engaged in transshipping IUU catches at sea. However, given the widespread nature of IUU fishing on the high seas, it is important to ensure that refrigerated cargo vessels are not transshipping IUU catches at sea and the companies listed as owners of the vessels listed on Table 3.2 should be encouraged to verify that their vessels are not engaged in supporting IUU fishing activities.

Methodology

The methodology used to compile the list of vessels on the following Table was similar to that used for Table 3.1 (see '*Methodology*' Section 3.1) except that instead of checking reefers going into Shimizu, the authors searched for reefers going to other major fish ports such as Dutch Harbor, Berkeley Sound, Pago Pago, etc. Once reefer vessels regularly stopping in these ports were identified, the list was compiled by identifying the vessels most likely engaged in transshipping fish at sea by reviewing their schedules and transit times, how long they stayed at sea, the ocean areas in which they operated over recent

Table 3.2. List of refrigerated cargo vessels that may transship fish (other than Sashimi grade tuna) at sea from time to time: flag, company names, nationalities and areas of operation.

	Vessel Name	Flag	Owner or Manager	Nationality of Owner/Manager	Principle Areas of Operation
1	Albacora Frigo Dos	Spain	Albafriho	Spain	Atlantic-Indian
2	Albacora Quince	Spain	Pesquerias Hispano	Spain	Atlantic-Indian
3	Amada	Panama	Ph Express Reefers	Belize	Atlantic
4	Andra	Panama	Laskaridis	Greece	Pacific
5	Arkadija	Panama	Laskaridis	Greece	Atlantic-Pacific
6	Asian Cherry	Panama	Hisamoto Kisen	Japan	Pacific
7	Atmoda	Panama	Laskaridas	Greece	Atlantic-Indian
8	Aurora 2	Korea	Dongwon Industries	S. Korea	Atlantic
9	Baltijas Cels	Panama	Laskaridas	Greece	Pacific-Atlantic
10	Baroasaa	Maldives	Maldive Fisheries	Maldives	Indian
11	Baron	Panama	Boyang Ltd	S. Korea	Pacific
12	Bereg Mechty	Russia	Vostoktransflot	Russia	Pacific-Atlantic
13	Blissful Reefer	Panama	Chainavee Storage	Thailand	Indian
14	Brilliant Reefer	Panama	Wanchai Sangsukiam Â	Thailand	Indian
15	Cherry Star	Panama	Jinyu Shipping	Thailand	W.Pacific
16	Chi Hao	Panama	Song Maw Fishery	Japan	Atlantic-Pacific
17	Cool Girl	Panama	Laskaridas	Greece	Pacific-Atlantic
18	Crystal Hope	St Vincent	Roswell Navigation	Greece	Atlantic
19	Da Ping 1	Panama	Dalian Container Shipping	China	Pacific
20	Dinok	Panama	Boyang Ltd	Korea	Pacific
21	Dolly 888	Philippines	Rd Tuna Ventures	Philippines	Pacific
22	Dolly 889	Philippines	Rd Tuna Ventures	Philippines	Pacific
23	Dong Yih	Taiwan	Dong Shuenn Yih Fishery	Taiwan	Pacific-Indian
24	Eastern Star	Korea	Dong Sung	S. Korea	Pacific
25	Eguzkia	Panama	Impesca	Spain	Atlantic-Indian
26	Eurofrost	Panama	Laskaridas	Greece	Pacific
27	Flower Garden	Panama	Kyoei Kaiun Kaisha	Japan	W.Pacific
28	Fong Kuono. 807	Taiwan	Fong Bau Fishery	Taiwan	Pacific
29	Forgea 302	Cambodia	Hyo Myung	S. Korea	W.Pacific
30	Frio Canarias	Panama	Laskaridas	Greece	Pacific
31	Frio Caribic	Panama	Laskaridas	Greece	Atlantic
32	Frio Las Palmas	Panama	Laskaridas	Greece	Atlantic
33	Frio Nikolayev	Panama	Laskaridas	Greece	Atlantic-Indian
34	Frio Pacific	Panama	Laskaridas	Greece	Atlantic
35	Frio Pusan	Panama	Laskaridas	Greece	Pacific
36	Frio Sevasterpolis	Panama	Laskaridis	Greece	Pacific-Atlantic
37	Glacier	Malta	Eastwind Ship Management	Greece	Atlantic
38	Gloucester	Russia	Well Hope Ltd.	Hong Kong	Pacific
39	Golden Shower 888	Philippines	Frabelle Fishing	Philippines	Pacific
40	Grand	Korea	Hyo Myung Co. Ltd.	Korea	Pacific
41	Hai Feng 301	China	China National Fisheries	China	Atlantic

Table 3.2, continued

	Vessel Name	Flag	Owner or Manager	Nationality of Owner/Manager	Principle Areas of Operation
42	Hai Kun	China	China National Fisheries	China	Atlantic
43	Hai Shun	St Vincent	China National Fisheries	China	Pacific
44	Hai Yu	China	China National Fisheries	China	Pacific
45	Haifeng 823	Panama	Yun Feng Sa	Canary Islands/ China	Atlantic
46	Haifeng 896	Panama	Toei Reefer Lines	Japan/ China	Atlantic
47	Hemao	Belize	Hong Kong Tonghe	China	Pacific
48	Heung Duck 77	Korea	Heung Duck Shipping	Korea	Pacific
49	Hua Fu 101	Panama	Hua Fi I.	Taiwan	Pacific
50	Hua Fu 102	Panama	Hua Fu International	Taiwan	Pacific
51	Ishikari	Panama	Kantoh Kaiun	Japan	Pacific
52	Jacha	Panama	Boyang Ltd	S.Korea-Norway	Pacific
53	Ji Sung	Korea	Ji Sung Shipping	S. Korea	Pacific
54	Jochoh	Panama	Boyang Ltd	S. Korea	Pacific
55	Kao Shen No. 6	Panama	Kao Fong Marine	Panama	Atlantic
56	Kao Shuen No. 6	Panama	Wu Pioneers Sea Foods	Taiwan	Atlantic-Pacific
57	Katah	Panama	Ji Sung Shipping	S. Korea	Atlantic-Pacific
58	Khana	Panama	Rederiet Harald Saetre	Norway	Pacific
59	Kin Ping Hai	Panama	Fenix Ocean Systems	Japan	W. Pacific
60	Kin Ping Hai	Panama	Fenix Oceans Systems	Japan	Pacific
61	Kommunary Nikolayeva	Russia	Vostoktransflot	Russia	Pacific
62	Lafayette	Russia	Pacific Basin Ship Mgt.	Hong Kong	W. Pacific
63	Lake Glory	Korea	Ji Sung Shipping Co.	Korea	Pacific
64	Lake Hill	Panama	Sheng Yuan Marine Co.	Belize	Pacific
65	Luo Jia	Belize	Zhoushan Distant Fishery	China	Pacific
66	Mabah	Panama	Boyang Ltd	S. Korea	Atlantic-Pacific
67	Mazara	Mauritius	Southern Seas Shipping	Mauritius	Indian
68	Min Wai Leng 3 Hao	China	China National Fisheries	China	Pacific
69	Miyabi	Panama	Kyoei Kaiun Kaisha	Japan	Pacific
70	Mononok	Panama	Boyang Ltd	Korea	Pacific
71	New Hayatsuki	Panama	Kyoei Kaiun Kaisha	Japan	Pacific-Atlantic
72	New Hirotsuki	Panama	Kyoei Kaiun Kaisha	Japan	Pacific
73	New Takatsuki	Panama	Kyoei Kaiun Kaisha	Japan	Atlantic-Pacific
74	Ocean Express	Korea	Dongwon Industries	S. Korea	Indian-Pacific
75	Omega Bay	Panama	Laskaridas	Greece	Atlantic-Pacific
76	Oriental Chilan	Panama	Wu Pioneers Sea Foods	Taiwan	Atlantic-Pacific
77	Ostrov Beringa	Panama	Laskaridas	Greece	Atlantic-Indian
78	Pelamis	Mauritius	Ireland Blythe	Mauritius	Indian
79	Pentland Phoenix	Panama	Fukujin Kisen	Japan	Atlantic-Pacific
80	Pohah No. 1	Panama	Ambition Navigation	Panama	Pacific
81	Rizhskiy Zaliv	Panama	Laskaridas	Greece	Pacific
82	Saltlake	Korea	Ji Sung Shipping	S. Korea	Pacific

Table 3.2, continued

	Vessel Name	Flag	Owner or Manager	Nationality of Owner/Manager	Principle Areas of Operation
83	Sanwa Fontaine	Panama	Dongwon Industries	S. Korea	Pacific
84	Saramati	Singapore	Eastwind Ship Management	Japan	Pacific
85	Saronic Pride	Panama	Laskaridas	Greece	Pacific
86	Savannah	Korea	Ji Sung Shipping	S. Korea	Pacific
87	Sea Frost	Panama	Laskaridas	Greece	Atlantic-Pacific
88	Sea Mansion	Panama	Sea Phoenix Ocean	Taiwan	Pacific-Atlantic
89	Sea Mark	Panama	Sea Mark	Taiwan	Pacific
90	Sea Tower	Panama	Sea Tower Ocean	Taiwan	Indian-Pacific
91	Seasafico	Belize	Myeong Sung Shipping	S. Korea	Atlantic
92	Shin Chun No. 106	Panama	Fu Chun Shipping	Taiwan	Pacific
93	Shota Maru	Panama	Toei Reefer Line	Japan	Pacific
94	Sierra Grana	Panama	Del Norte	Spain	Atlantic
95	Sierra Guadalupe	Panama	Del Norte	Spain	Atlantic-Pacific
96	Sierra Guardarrama	Panama	Del Norte	Spain	Atlantic
97	Sierra Nafria	Panama	Del Norte	Spain	Atlantic
98	Sierra Nava	Panama	Del Norte	Spain	Atlantic
99	Sierra Nieves	Panama	Del Norte	Spain	Atlantic
100	Snowmass	Panama	Eastwind Ship Management	Japan	Atlantic
101	Sohoh	Panama	Boyang Ltd	S. Korea	Pacific
102	Sun Big No.3	Panama	Sun Victory Shipping	Taiwan	Atlantic-Pacific
103	Sun Big No.9	Panama	Sun Big Shipping	Taiwan	Pacific-Indian
104	Swan	Panama	Kyoei Kaiun Kaisha	Japan	Pacific
105	Tae Yang No.21	Korea	Nasung Shipping	S. Korea	Pacific
106	Tai Fu No. 1	Panama	Sun Big Shipping	Taiwan	Pacific
107	Tai Fu No. 3	Panama	Sun Victory Shipping	Taiwan	Pacific
108	Tai Lu	St Vincent	Shandong Zhonglu	China	Pacific
109	Tai Ning	China	Shandong Zhonglu	China	Pacific
110	Tai Sheng	China	China National Fisheries	China	Pacific
111	Tai Xiang	China	China National Fisheries	China	Pacific
112	Tai Xing	China	China National Fisheries	China	Pacific
113	Tai Yu	China	Shandong Zhonglu	China	Pacific
114	Tai Zhong	China	China National Fisheries	China	Pacific
115	Taisei No.98	Panama	Wu Pioneers Sea Foods	Taiwan	Atlantic-Pacific
116	Taisetsu	Panama	Fairport Shipping	Greece	Atlantic
117	Torah	Panama	Stavangerske Int.	Norway	Pacific
118	Vanda 888	Philippines	Frabelle Fishing	Philippines	Pacific
119	Vanilla	Philippines	Frabelle Fishing	Philippines	Pacific
120	Vinson	Liberia	Eastwind Ship Management	Japan	Atlantic-Pacific
121	Wan Shun	Panama	Wan Shun Shipping	China	Pacific
122	Wei Fong	Belize	Wei Fong Shipping	China	Pacific
123	Win	Panama	Golden Gnosis Shipping	Taiwan	Pacific

Table 3.2, continued

	Vessel Name	Flag	Owner or Manager	Nationality of Owner/Manager	Principle Areas of Operation
124	Win Far No.101	Panama	Win Far Fishery	Taiwan	Pacific
125	Win King	Panama	Win Far Fishery	Taiwan	Pacific
126	Win Master	Panama	Win Far Fishery	Taiwan	Pacific
127	Win Sheng	Panama	Win Far Fishery	Taiwan	Atlantic-Pacific
128	Win Shing 1	Panama	Win Far Fishery	Taiwan	Pacific
129	Win Shun Shing	Taiwan	Win Shu Fishery	Taiwan	Pacific
130	Win Terng Far	Taiwan	Shin Ho Sing Ocean Ent.	Taiwan	Pacific
131	Yuan Da 1	China	China National Fisheries	China	Pacific
132	Yuh Fa 302	Panama	Yuh Fa Marine	Panama	Pacific

years, their owners, and other vessels owned or managed by the same companies.

These vessels appear to be general fish haulers, which on some voyages transship at sea, working in a variety of regions and fisheries, transshipping fish or fish products such as whitefish, squid and lower grade tuna for use by canneries. Unlike the vessels used to transship high-grade tuna, none of them appear to have been built to transship/transport only one type of fish product.

It is worth noting on Table 3.2 that only twelve companies account for over half of the vessels on the list. These are Laskaridas (Greece), China National Fisheries (China), Boyang LTD (S. Korea), Del Norte (Spain), Kyoei Kaiun Kaisha (Japan), Ji Sung Shipping (S. Korea), Win Far Fisheries (Taiwan), Eastwind Ship Management (Japan), Shandong Zhonglu (China), Dongwan Industries (S. Korea), Frabelle Fishing (Philippines), and Wu Pioneers Sea Foods (Taiwan).

Although listed as a Japanese company on the Lloyd's Register of Ships, Eastwind is based in the United States (headquartered in New York) with subsidiaries or branches in Brazil, Argentina, Uruguay, UK, Japan, Korea, Singapore and Greece.[94] The company states on its website that "Eastwind has become very active in carrying fish from high seas locations to West Africa and the Far East" and that the company owns around 30 refrigerated cargo ships which carry fish, meat, poultry and frozen fruit juice. The site also states that Eastwind Transport charters or operates through joint venture arrangements another 40 reefer or freezer ships.

Dongwon Industries, with three reefers on Table 3.2 claims to also own 43 fishing vessels, most of which either purse seine ('round haul netters') for tunas in the South Pacific or longline in the Atlantic, Pacific and Indian Oceans.[95] Another one of the twelve companies – Laskaridas, with 18 vessels on Table 3.2 – also runs a fleet of bunkering and resupply vessels servicing distant water fishing fleets (discussed in Section 4).

Assuming that all of these companies operate transshipment vessels in areas and fisheries where IUU fishing is a problem and/or where RFMOs have established conservation measures for fisheries on the high seas, engaging just these twelve companies could result in substantial progress in the effort to combat IUU fishing and ensuring effective compliance with high seas conservation measures.

Recommendations

In the same way that ICCAT, IOTC, the IATTC and the South Pacific Forum have developed lists of vessels authorized to fish in their respective areas of competence, the authors would argue that these and other

Tunas in seine net. © WWF-Canon / Hélène Petit

RFMOs with competence over fisheries for straddling and highly migratory fish stocks and fisheries for discrete stocks on the high seas should apply similar measures to all vessels transshipping at sea. Such measures should include:

1. Requiring all transshipment vessels operating in the area of competence of the organization to have an authorization to transship in the RFMO area whether at sea or in port (as is currently the case in the FFA).

2. Requiring all transshipment vessels be beneficially owned and controlled in a country that is a member of the RFMO, and fly that country's flag, as a condition of receiving an authorization to transship fish within the area of competence of the RFMO, and that a list be compiled of such vessels. This will ensure that a genuine link exists between the flag State and the vessel, that transshipment vessels are bound by the measures adopted by the RFMO, and that these measures can be effectively enforced.

3. Establishing an observer programme programme on all authorized transshipment vessels to monitor and report on all at-sea transshipments in fisheries regulated by the RFMO. The observer programme programme should be operated under the authority or auspices of the RFMO, in cooperation with, but independent of, the flag States of the transshipment vessels (similar to the observer programme on fishing vessels run by the IATTC and CCAMLR).

4. Requiring Vessel Monitoring Systems to be used on all transshipment vessels authorized to operate in the area of the RFMO. The failure of a transshipment vessel to cooperate in the programme should be made grounds for the exercise of port State controls. Port State measures could include an investigation of the activities of the vessel, denying the landing or importation of fish transshipped at sea by the vessel and, where appropriate, detention of the vessel.

5. Establishing transshipment documentation schemes to be used by market States as the basis for allowing (or prohibiting) the import of fish transhipped at sea, including both market States that are parties to RFMOs concerned as well as other cooperating countries.

Section Four

Tankers and resupply vessels servicing high seas and distant water fishing fleets

Fleets of vessels that refuel and resupply high seas fishing vessels are also an essential element of the infrastructure that allows fishing vessels, both legitimate and IUU, to operate for long periods of time on the high seas. A sample list of vessels most likely to be servicing distant water fishing vessels operating on the high seas and, in some cases within other countries' EEZs, is contained in Table 4.1. The authors wish to emphasize that we have found no evidence to suggest that any of the companies or vessels listed on Table 4.1. are engaged in resupplying IUU fishing vessels operating on the high seas. Rather, this list was compiled to identify the structure and means by which the at-sea resupply and bunkering industry could be enlisted to support efforts to combat IUU fishing.

Methodology

The methodology used to produce the list of vessels on Table 4.1 included:

- an internet search yielding several companies that specialize in refuelling (bunkering) vessels at sea,
- investigating tankers belonging to these companies and producing a profile of the vessels engaged in this type of work,

The *Arnela,* a licensed Spanish-flagged fishing vessel operating legally in international waters approximately 200 nautical miles south of the Australian fishing zone in the Southern Ocean. © Australian Customs Service

finding tankers fitting this profile using the Lloyd's Register database,

- reviewing the voyage history of each tanker to find those making regular voyages into areas known to be frequented by distant water fishing vessels and spending significantly longer time at sea than would have been required for a routine transit.

This research produced a list of over 100 tankers that was narrowed down to approximately 60 vessels that, for at least part of the year, are likely to be engaged in refuelling and resupplying fishing vessels at sea. This list is by no means complete, and it may be that some of the vessels listed are not currently engaged in servicing fishing vessels operating on the high seas.

At least some the companies that own or manage vessels listed in Table 4.1 are involved in a variety of at-sea services supporting the operations of distant water fishing fleets. For example, Sekwang (SK) Shipping, a Korean multinational, operates a fleet of over 20 bunkering tankers that "provides a comprehensive, high-quality, low-cost service to fishing vessels, throughout the world's major fishing areas…supplying fuel and supplies to fishing fleets, worldwide" accord-

Table 4.1. Tankers and resupply vessels servicing fishing vessels at sea; flag, company names, nationalities and principal areas of operation. Sample list.

	Vessel Name	Flag	Owner or Manager	Nationality of Owner/Manager	Principle Areas of Operation
1	Abakan	Russia	Paco Delta	Hong Kong	Indian
2	Alfa	Panama	Enea Management	Greece	Atlantic
3	Amursk	Singapore	Primorsk Shipping	Russia	Atlantic
4	Aquarius	Belize	Laskaridis	Greece	Atlantic
5	Archangel	Malta	Enea Management	Greece	Atlantic
6	Arsenyev	Russia	Primorsk Shipping	Russia	Atlantic
7	Atom 7	Panama	Sekwang Shipping	Korea	Pacific
8	B.Cupid	Singapore	Is Ship Management	Singapore	Atlantic
9	Baltic Pride	Panama	Laskaridis	Greece	Atlantic
10	Centaurus	Panama	Laskaridis	Greece	Atlantic
11	Conakry	St Vincent	Vip Marine Ltd	Greece	Atlantic
12	Copemar 1	Uraguay	Eslamar	Uruguay	Atlantic
13	Dae Yong	Korea	Cosmos Shipping	Korea	Pacific
14	Dalnerechensk	Cyprus	Primorsk Shipping	Russia	Atlantic
15	Hai Gong You 302	China	China National Fisheries	China	Atlantic
16	Hai Soon 16	Singapore	Hai Soon Diesel	Singapore	Indian
17	Hai Soon 18	Singapore	Hai Soon Diesel	Singapore	Indian
18	Hai Soon 22	Singapore	Hai Soon Diesel	Singapore	Pacific
19	Hai Soon 23	Singapore	Hai Soon Diesel	Singapore	Pacific
20	Hai Soon 26	Singapore	Hai Soon Diesel	Singapore	Pacific
21	Hai Soon II	Singapore	Hai Soon Diesel	Singapore	Indian
22	Hai Soon IX	Singapore	Hai Soon Diesel	Singapore	Pacific
23	Hai Soon VIII	Singapore	Hai Soon Diesel	Singapore	Pacific
24	Hai Soon XII	Singapore	Hai Soon Diesel	Singapore	Indian

Table 4.1, continued

	Vessel Name	Flag	Owner or Manager	Nationality of Owner/Manager	Principle Areas of Operation
25	Hai Soon XV	Singapore	Hai Soon Diesel	Singapore	Atlantic
26	HI Moogal	Singapore	Hong Lam Marine	Singapore	Pacific
27	HI Tauras	Singapore	Hong Lam Marine	Singapore	Pacific
28	Hobi Maru	Ecuador	Toko Kaiun	Japan	Pacific
29	Hosei Maru	Japan	Toko Kaiun	Japan	Indian
30	Hozen Maru	Japan	Toko Kaiun	Japan	Pacific
31	Iballa G.	Panama	Penn World	Panama	Atlantic
32	Japan Tuna No.2	Panama	Kyokko Tanker	Japan	Pacific
33	Japan Tuna No.3	Panama	Kyokko Tanker	Japan	Pacific-Indian
34	Kamensk-Uralskiy	Russia	Primorsk Shipping Corp.	Russia	W.Pacific
35	Kansa Tanker	Singapore	Sm Lito Ship Mngt.	Singapore	Atlantic-Indian
36	Katie	Liberia	Aquasips	Latvia	Atlantic
37	Kosiam	Singapore	Kosiam Trading	Singapore	Pacific
38	Kosiam	Singapore	Kosiam Trading Ltd.	Singapore	Pacific
39	L. Star	Singapore	Sekwang Shipping	Singapore	Indian
40	Libra	Panama	Laskaridis	Greece	Atlantic
41	Linsa	Singapore	Sm Lito Ship Mngt.	Singapore	Pacific
42	Luchegorsk	Russia	Primorsk Shipping	Russia	Atlantic-Indian
43	Mighty 7	Panama	Sekwang Shipping	Korea	Pacific-Indian
44	Minsa	Singapore	Sm Lito Ship Mngt.	Singapore	Pacific
45	Miri	Bolivia	Ocean Tankers	Singapore	Pacific-Indian
46	Nagayevo	Cyprus	Primorsk Shipping Corp.	Russia	Atlantic
47	Nansa	Singapore	Sm Lito Ship Mngt.	Singapore	Pacific
48	New Kopex	Korea	Sekwang Shipping	Korea	Pacific
49	Nipayia	Panama	Lotus Shipping	Greece	Indian
50	Onyx	Bolivia	Ocean Tankers	Singapore	Pacific-Indian
51	Oriental Bluebird	Panama	New Shipping Kaisha	Japan	Pacific
52	Orion	Singapore	Sk Shipping	Korea	Pacific
53	Pacific Trader	Panama	Laskaridis	Greece	Atlantic-Indian
54	Sea Angel	Panama	Prime Tankers	UAE	Indian
55	Sea Pearl	Seychelles	Al Dawood Shipping	Nigeria	Atlantic
56	Shin Co-Op Maru	Panama	Kumazawa	Japan	Pacific
57	Smile No.3	Korea	Sekwang Shipping	Korea	Pacific
58	Soyang	Korea	Sekwang Shipping	Korea	Pacific
59	Star Tuna	Panama	Korea Ship Managers	Korea	Pacific
60	Starry	Singapore	Honglam Shipping	Singapore	Pacific-Indian
61	Tetauu	Singapore	Kosiam Trading	Singapore	Pacific
62	Toyotaka Maru	Japan	Toko Kaiun	Japan	Pacific
63	Vanino	Cyprus	Primorsk Shipping Corp	Russia	Atlantic
64	Vesta 7	Panama	Sekwang Shipping	Korea	Pacific
65	Zalgiris	Panama	Laskaridis	Greece	Atlantic

Tokyo fish market where Bluefin and Yellowfin tuna are being processed for sale. Tokyo, Japan. © WWF-Canon / Jason Dewey

ing to its website. SK specifically provides "…port bunkering and bunker-trading services in the North and South Pacific, the Atlantic Ocean, the Indian Ocean, PNG, Guam, and the Arafura Sea. We have also diversified our business to offer comprehensive fishing-vessel services that include crew repatriation, spare parts, and bait. In addition, we bring integrated logistics services to the fishing industry, including reefer service and fish trading". SK has offices in Japan, Korea, China, the UK, Australia, Singapore and Brazil. Ocean bunkering (refuelling) accounted for approximately 16% of SK's revenue of $924 million USD in 2002. SK is a subsidiary of SK Group, the 3rd largest conglomerate in Korea.[96]

In addition to the six vessels on the list, Laskaridas, a Greek owned company operates in total a fleet of some 58 vessels, including fish carriers, refrigerated cargo vessels (a number of which transport fish as discussed in the previous Section), as well as refuelling ships ("oil products tankers"). Many of these vessels appear to operate in the South Atlantic Ocean providing multiple services to distant water fishing operations in the region.[97] At least one of the vessels belonging to Laskaridas, the *Seafrost*, was reported to have been involved at one point in transshipping toothfish at sea.[98]

At least two additional companies not listed in Table 4.1 also operate fleets of vessels servicing distant water fishing vessels at sea.[99] One, ADDAX Bunkering Services, owns or charters a fleet of 10-12 tankers that resupply fishing vessels off both the Atlantic and Indian Ocean coasts of Africa. This fleet also supplies offshore mining operations, oil platforms and seismic survey vessels. Amongst the services it provides are fuelling, provisions and fresh water. ADDAX is a subsidiary of the Geneva based transnational, ADDAX & ORYX group.[100] The other company, Sunmar Shipping, is based in the U.S. and services distant water fishing fleets operating in the Russian Far East. According to its website, the company operates 20 vessels which trans-ship "frozen fish and fish meal products" at sea from vessels fishing in Russia's Far East zone and deliver the fish to markets in Europe, the United States, China, Korea, Japan and elsewhere. Sunmar also delivers provisions and supplies directly to the fishing fleets.[101]

The ownership and registered flags of the vessels involved in bunkering and resupplying

fishing vessels at sea involves a greater number of countries than does the fleet of vessels transshipping high value tuna (See Table 3.1). Furthermore, many of these vessels are likely to be servicing distant-water vessels involved in a variety of fisheries, both within EEZs and/or on the high seas, as well as other vessels operating at sea. Nonetheless, altogether, only five companies in Table 4.1 – Laskaridas, Sekwang Shipping, Primorsk Shipping, Toko Kaiun, and Hai Soon Diesel – own or manage over one-half of the bunker vessels on the list. Furthermore, several of these companies own additional vessels (not on the list) that are likely to be servicing fishing vessels at sea. Even engaging just these five companies plus ADDAX Bunkering Services and Sunmar in the international effort to prevent, deter and eliminate IUU fishing would likely prove very beneficial in combating IUU fishing in a wide variety of fisheries worldwide, including fisheries conducted by distant water fleets operating in a number of countries' EEZs as well as fisheries on the high seas.

Recommendations

It is difficult to overstate the importance of tankers and resupply vessels to the operations of high seas fishing fleets, including IUU vessels. Given the size, scope, visibility and the diversity of the operations of major companies involved in the business, individual States within whose jurisdiction the owners or managers of these vessels reside, as well as RFMOs within whose areas these vessels operate, should directly engage the companies involved. They may well be amenable to cooperating in international efforts to prevent, deter and eliminate IUU fishing, whether through observer programs, bringing company policies and business practices into line with RFMO recommendations, and/or by other means. Integrating tankers and resupply vessels and the companies that own, manage or charter these vessels into regional efforts to ensure effective compliance with RFMO measures is a necessary and potentially very effective means of combating IUU fishing.

Australian Customs Service staff board the IUU boat *Viarsa*, caught stealing Patagonian toothfish in the Southern Ocean in 2003. © Australian Customs Service

Section Five

Other support businesses

At-sea transshipment, refuelling and resupply operations are not the only services central to the operation of FOC/IUU fishing vessels. In addition many other services are required to support IUU fishing vessels and companies, not the least being able to sell their catch.

The UN FAO IPOA on IUU fishing also acknowledges the role that a number of industries play and addresses this particular issue in paragraphs 73 and 74:

> *73. States should take measures to ensure that their importers, transshippers, buyers, consumers, equipment suppliers, bankers, insurers, other services suppliers and the public are aware of the detrimental effects of doing business with vessels identified as engaged in IUU fishing, whether by the State under whose jurisdiction the vessel is operating or by the relevant regional fisheries management organizations in accordance with its agreed procedures, and should consider measures to deter such business. Such measures could include, to the extent possible under national law, legislation that makes it a violation to conduct such business or to trade in fish or fish products derived from IUU fishing. All identifications of vessels engaged in IUU fishing should be made in a fair, transparent and non-discriminatory manner.*
>
> *74. States should take measures to ensure that their fishers are aware of the detrimental effects of doing business with importers, transshippers, buyers, consumers, equipment suppliers, bankers, insurers and other services suppliers identified as doing business with vessels identified as engaged in IUU fishing, whether by the State under whose jurisdiction the vessel is operating or by the relevant regional fisheries management organization in accordance with its agreed procedures, and should consider measures to deter such business. Such measures could include, to the extent possible under national law, legislation that makes it a violation to conduct such business or to trade in fish or fish products derived from IUU fishing. All identifications of vessels engaged in IUU fishing should be made in a fair, transparent and non-discriminatory manner.*

Investment and financial services companies

As indicated in Section 2, Pacific Andes is a multinational company with extensive interests in fishing, processing and trading fish products worldwide. Of note is the fact that amongst the twenty largest shareholders of Pacific Andes are: HSBC (Singapore) Nominees Pte Ltd, Morgan Stanley Asia (Singapore) Securities Pte Ltd, Merrill Lynch (Singapore) Pte Ltd, and Citibank Consumer Nominees Pte Ltd.[102]

These and other companies in the investment and financial services fields should be approached to consider reviewing and possibly refraining from investing in companies known or likely to be engaged in high seas fisheries and/or related support services until they are provided with clear guarantees by the fishing businesses they wish to invest in that such companies are not involved in IUU fishing, trading in IUU caught fish or otherwise providing support services to IUU fleets.[103] Again, this would be entirely consistent with the UN FAO Plan of Action on IUU fishing.

Ice on the Southern Ocean. © Australian Customs Service

Telecommunications

FOC vessels operating on the high seas, like legal fishing vessels and for that matter any vessels operating on the high seas, rely heavily on access to telecommunications services. Virtually all distant water fleets, including both legal and IUU vessels fishing on the high seas and/or in remote areas of the oceans require reliable and cost efficient means to communicate with the owners or managers of the vessels to arrange for delivery of supplies and crew in port or at sea, refuelling and transshipment of fish catch at sea, to make arrangements to offload in port and other such necessities.

The vast majority of these vessels rely on the INMARSAT system for voice, fax, telex and data communications. Another worldwide system that is steadily gaining market share is the Iridium system. Both of these offer communications throughout the world's oceans. The only alternative to satellite communications currently available to vessels operating far offshore is High Frequency (HF) radio. However, this system is being rapidly phased out.

INMARSAT, based in the UK, Iridium, based in the US, and other companies providing telecommunications services to large-scale vessels at sea could be enlisted in the effort

to provide information on IUU fishing vessels. These companies could be approached to determine their ability and willingness to assist with providing information on the whereabouts of IUU vessels, the beneficial owners of such vessels, and other information that could be of use in the effort to identify and prevent IUU fishing.[104]

Seafood trading and retailing industries

The seafood trade globally amounts to some $60 billion USD per year (export value).[105] Over the past decade a number of market based initiatives involving the seafood industry, in some cases together with environmental organizations and producer organizations, have been established to promote sustainable fisheries. Ultimately it is the market that sustains IUU fishing (if IUU vessels could not sell their fish they would soon be out of business) and companies involved in such initiatives should be actively engaged in the effort to combat IUU fishing, wherever possible engaging wholesalers and retailers and consumers in the process.

Initiatives such as the Seafood Choices Alliance, Marine Stewardship Council and campaigns by environmental organizations such as the US based National Environment Trust's campaign "Take a pass on Chilean sea bass" raise awareness and enlist the help of the seafood industry to collectively combat IUU fishing. Industry initiatives such as the campaigns by the All Japan Seamen's Union and the Federation of Japan Tuna Fisheries Cooperative Associations to persuade tuna importers and retailers not to buy FOC caught tuna are also positive private sector and trade union initiatives to combat IUU fishing.

More importantly, for the future ability of the seafood industry as a whole to stay in business, it needs to take far more responsibility in ensuring that the products it buys, sells and trades are not IUU caught and therefore do not undermine international efforts to conserve and manage fisheries for sustainability and to protect other species in the marine environment.

Far more stringent accountability in the seafood industry should be established together with a rigorous chain of custody requirements by all seafood dealers in the European Union, Japan, the United States, China, and other major markets for high value seafood products (as are already in place for health reasons). National Associations of seafood importers, wholesalers and retailers should be enlisted. The largest fishing industry association in the world – the International Coalition of Fisheries Associations (ICFA) – adopted a resolution on IUU fishing several years ago calling on governments and the private sector to prevent FOC fishing vessels from gaining access to international markets. They further called on freighter companies to refrain from transporting any fish caught by FOC fishing vessels and trading and distribution companies to refrain from dealing in fish caught by FOC fishing vessels.[106] ICFA could work more closely with governments and its members to establish national legislation and market pressure in key countries to prohibit the import of IUU caught fish and promote seafood industry initiatives to deny market access to IUU caught fish.

Greenpeace checks Japanese vessel *Unitaka* 15 for illegal fish and bycatches off Etorofu-to Island, Russia. Inflatable coming alongside; Rainbow Warrior in background. Fisherman on board *Unitaka 15* hauling nets.
© Greenpeace/Vadim Kantor

Conclusion

There is a wide range of businesses that provide support services to large-scale fishing vessels and this section is not meant to provide an exhaustive list. In addition to the abovementioned industries, it is worth mentioning the important role of equipment manufacturers and retailers selling engines, machinery, fishing gear (nets, lines etc), communications and navigation equipment. Insurance companies as well provide essential services, as do banks and lending institutions, particularly in the case of new vessel construction. Port agents and ship's chandlers are also important providers of services to high seas fleets by arranging to supply food, equipment and other services needed by fishing vessels whether resupplying in port or at sea. National and international associations of these businesses, and individual companies involved, should be approached and encouraged to join the effort to combat IUU fishing.

The seafood industry, including importers, wholesalers and retailers, has a special responsibility to take action to prevent, deter and eliminate IUU fishing by denying market access to IUU caught fish. Seafood industry associations in key market countries such as Japan, EU, the US and China should work with governments to adopt and enforce legislation to make it illegal to trade in IUU caught fish and fish products.

Section Six

Financial and legal considerations related to Flag of Convenience fishing

Given the large number of IUU fishing vessels flying Flags of Convenience and the ease with which vessels 'hop' from one flag to another, it seems obvious that one of the most effective means of eliminating the problem of IUU fishing on the high seas would be to eliminate the Flag of Convenience system. Countries which cannot or will not exercise control over fishing vessels operating outside of their EEZs should be discouraged from registering large-scale fishing vessels except under strictly defined circumstances or criteria. Similar consideration should apply to merchant ships involved in fisheries related activities.

Ultimately, what is required is the imposition of a system to ensure that flag States give full and complete effect to their duties and obligations. The absence of an enforcement and oversight system in terms of flag State compliance is a major weakness under the UNCLOS regime. There is a clear need to balance flag State sovereignty with flag State responsibility – the exercise of effective oversight over vessels which fly its flag, meaning compliance with the duties, obligations and responsibilities established by international law and the treaties to which the flag State is party to. It is hard to see how a flag State can exercise effective oversight over the vessels that fly its flag and, where necessary, impose sanctions to discourage violations in the absence of a genuine link between the vessel and the flag it flies. This genuine link requires that the vessel be beneficially owned and controlled in the flag State and that there is a substantial economic entity and assets with the territory of the flag State.

Work deck of a Russian trawler. © WWF-Canon / Terry Domico

Legal considerations: genuine link = real interest?

However legal issues are addressed, it is important to consider the risks involved in maintaining the status quo. Aside from the threat posed to the conservation and sustainable management of fisheries in international waters, the FOC system in fisheries fundamentally distorts international efforts to address the issue of equitable access to fisheries on the high seas and results in human rights abuses continuing behind a veil of secrecy.

For example, the 1995 UN Fish Stocks Agreement, in Article 8.3, requires regional fisheries management organizations (RFMOs) to allow States with a 'real interest' in the fisheries of the region to become parties to the RFMO. If 'genuine link' is defined as a de facto link created by virtue of the registration by a flag State of a fishing vessel to fly its flag, then does this mean that an FOC country with several hundred large-scale fishing vessels on its registry has a legally recognized "real interest" in the fisheries of a region, regardless of the economic link between the vessels and the flag State, or the nationalities of the owners of the vessels? Is there a risk that 'real interest' could be defined as loosely as 'genuine link' is currently defined? If so, what implications does this have for the constitution of the membership of RFMOs and the allocation of access and quota to the fisheries they govern? Should an FOC State be given access to the fisheries in a region commensurate with the capacity of its fleet? A resolution of the definition of the genuine link by the international community would go a long way to bringing legal clarity to the term 'real interest' in the fisheries of a particular region, and clarify the obligations of parties to an RFMO in relation to new entrants into the fisheries under the competence of the RFMO.

The widespread and pervasive failure of so many States to uphold their fundamental duties as flag States arguably makes a mockery of the notion of flag State sovereignty. It risks undermining the integrity of the United Nations Convention on the Law of the Sea and numerous related agreements and upsetting the balance established between the interests of coastal States and high seas fishing States. Amongst other things, the systematic failure to eliminate FOC fishing on the high seas may ultimately serve as a rationale for some coastal States to seek to extend their jurisdiction further into high seas areas.

A clear set of internationally agreed criteria for the effective exercise of flag State jurisdiction and responsibility – criteria such as those contained in the UN Fish Stocks Agreement, the FAO Code of Conduct for Responsible Fisheries, the FAO Compliance Agreement and the IPOA on IUU Fishing – could serve as a means of designating the systematic failure of a flag State to exercise control over the fishing vessels on its registry as an absence of flag State jurisdiction, potentially rendering the legal status of any high seas fishing vessels flying the State's flag as effectively stateless.

While a number of FOC fishing countries have to some extent responded to international pressure, the proliferation of FOC States and the ease with which a fishing vessel can 'hop' or move from flag to flag urgently require a new and comprehensive approach to the FOC system in fisheries as a whole.

One option worth exploring is the possibility of bringing a case or cases before the International Tribunal for the Law of the Sea designed to further strengthen the definition of flag State responsibility under international law with respect to fishing vessels operating on the high seas. A creative but judicious approach to using the International Tribunal for the Law of the Sea as a means to establish clear definitions, obligations, and courses of legal action with respect to flag State failure to exercise jurisdiction over high fishing vessels may well be an expeditious and/or complementary means to continue to strengthen international efforts to combat IUU fishing.

It is evident that the measures taken to date have not effectively addressed IUU and FOC fishing activities. Many of the measures

adopted thus far fall within the realm of "soft law" and it is clear that the international community must find the political will necessary to fully address the fundamental aspects of the problem and institutional weakness of the UNCLOS regime. The international community should consider adopting an implementing agreement to UNCLOS which would, in practice, ensure that flag States meet their duties and responsibilities. In the absence of an effective mechanism to ensure compliance, the concept of flag State sovereignty can be used to sanction non-compliance and evasion. Such an agreement needs to include a transparent oversight system and to permit the use of a range of measures which will ensure that flag States comply with all of their duties, obligations and responsibilities.

Compensation for flag State failure?

In the meantime, until the FOC 'loophole' in international law is closed, another option available to responsible flag States may be to explore the possibility of seeking compensation from free riding FOC States for the costs incurred as a result of IUU/FOC fishing by vessels flying their flag. Many of the measures implemented to date have centred on taking action to deter individual vessels from engaging in IUU fishing through, for example, raising the cost of doing business to IUU operators. However, given the enormous economic advantage that IUU fishing vessels gain through the use of FOCs, it would be worth exploring whether there are opportunities to raise the cost of flagging fishing vessels to FOC countries themselves.

First of all, it is worth asking the question – how much do FOC States actually benefit from flagging fishing vessels? Clearly unscrupulous operators themselves benefit financially from the freedom to engage in IUU fishing on the high seas with the impunity conferred by the FOC system. But are there financial benefits to FOC States themselves, particularly to small developing countries that might at least provide an economic argument for some degree of legitimacy of the FOC system?

A UN FAO report on countries operating open registries (FOCs) and registering fishing vessels, published in 2002, suggests that the benefits derived by FOC States in flagging large-scale fishing vessels are relatively insignificant.[107] Based on information in the report, the total revenue derived from registering fishing vessels by 20 countries operating open registries was slightly more than 3 million USD per year in recent years. The report states that the top four FOC countries – Belize, Honduras, Panama, and St Vincent and the Grenadines – had a combined total of 1,148 large-scale fishing vessels registered to fly their flags. These same four countries generated approximately $2,625,000 USD in revenue from registration fees and related charges from the fishing vessels on their registries. They earned, on average, less than $2,500 USD per year for each fishing vessel registered to fly their flag.[108]

The report states that the figures are almost certainly underestimates of the total revenue derived from registering fishing vessels, although it is not clear whether this refers to all income (both private and public sector) or State revenue only. Regardless, even if the figures are off by 100% or more of gross revenue to the State, it is clear that the income derived by FOC countries from flagging fishing vessels is still quite small compared with the value of the catch. More recently, the Head of the Maritime Administration of Mongolia – a relatively new entrant in the FOC business – was quoted in the New York Times as stating that the Mongolian ship registry earned the country approximately $200,000 USD in 2003. The registry, which opened for business in February 2003, already had 260 ships registered to fly the flag of Mongolia by mid-2004.[109] Most of these were merchant shipping vessels; the income derived by Mongolia for registering fishing vessels is likely to be a small fraction of total revenue.

By contrast the cost, to a responsible flag State, of effective regulation of large-scale fishing vessels registered to fly its flag and operating beyond its EEZ, including costs associated with ensuring proper safety

By-catch entangled in the net of a tuna purse-seiner. © WWF-Canon / Hélène Petit

standards and working conditions on board the vessels, are certain to be far higher than the revenue generated by the FOC system. Beyond this, the systematic failure of an FOC State to prevent its vessels from fishing in a region substantially increases the costs to responsible States of conservation and management of the fisheries of the region.

The actual costs could be measured in a number of ways, including the annual costs to legal operators in the fishing industry such as lost revenue as a result of lower quotas, higher catch per unit effort costs (brought on by overfishing caused by IUU operators), and lower prices as a result of the supply of IUU caught fish on the market. The costs incurred by governments could be calculated on the

basis of factors such as the additional cost of research resulting from scientific uncertainties arising from lack of good information on the catch and data on the species caught in IUU fisheries, the increased cost of monitoring, surveillance and enforcement at sea, and the extra cost of port and market based inspection schemes needed to combat IUU fishing. Longer-term costs could include the loss of long-term benefits to the economy due to the lower productivity of overfished stocks as a result of IUU fishing, and the loss of tax revenue or income to the State.

Clearly, States that operate Flags of Convenience in the fisheries sector externalize the costs of the failure to regulate 'their' fishing fleets. Other countries must pay these costs, as measured in terms of scientific uncertainty in stock assessments, reduced quotas and lost revenue for legitimate operators, the additional costs of enforcement, and the depletion of fish stocks and supporting ecosystems associated with FOC fishing. The costs to legitimate operators and responsible flag States are certain to far outweigh the revenue derived by FOC States in fisheries for high value species such as toothfish, bluefin and big eye tuna.

An important legal question arises: Does a State have the right to enjoy the privileges of being a flag State, however little these privileges may confer to the State in terms of economic benefits, while evading most, if not all, of the responsibilities associated with being a flag State, no matter how costly this evasion of flag State responsibility may be to other States and the international community as a whole?

One could argue that flag States that are members of, participate in, and contribute to the activities of a regional fisheries management organization, should have the right to derive long-term benefit from sustainably managed fishing in the region, commensurate with the effectiveness of conservation measures agreed by the organization, provided they ensure that vessels under their jurisdiction abide by the rules. The conservation and management of the fisheries and the measures undertaken by a State with respect to monitoring, compliance and enforcement entail substantial financial costs in relation to meeting the State's treaty obligations.

Conversely, a State whose vessels consistently operate in a region in contravention of the rules adopted by the relevant regional fisheries management organization should be liable for 'damages' to responsible parties of the RFMO. While an FOC State may not be compelled to join a regional management organization, it does have a clear duty under UNCLOS Part VII to cooperate with other states in the conservation and management of the fisheries in the region. Should it fail to do so while consistently allowing, either wilfully or by clear negligence, its vessels to fish in the region, then the FOC/IUU State should be subject to legal action, including some degree of liability for the additional costs incurred by responsible fishing States associated with the failure of the FOC State to exercise control over the activities of its fishing fleets operating in the area of competence of the organization.

The flag State bears responsibility for the activities of the vessels. If an FOC State is faced with prospect of paying substantial compensation to other States for its failure to regulate its fishing fleets, this could act as a disincentive to the registration of fishing vessels by the FOC State. The prospect of paying potentially large sums in compensation for the failure to exercise control over fishing vessels could serve as a significant disincentive to countries to get into the FOC/IUU fishing business in ways that could complement port State controls, market restrictions, enhanced monitoring, control and surveillance and other measures adopted thus far by States and regional fisheries management organizations.

There are currently no international mechanisms that would appear to allow States to either seek compensation or be held liable for such damages; nonetheless, the huge disparity between the costs to the international community from FOC/IUU fishing and the gains derived by FOC States from registering fishing vessels suggest that this may be an avenue worth exploring.

Section Seven

Recommendations

There has been a concerted international political effort over recent years to identify and address the problem of IUU fisheries on the high seas but this effort has not yet been fully translated into effective action in practice to combat IUU fishing on the high seas.

Flag States must establish more effective control over vessels flying their flag to ensure compliance with conservation and management measures for high seas fisheries. A genuine link needs to exist between the flag State and the vessel registered to fly its flag to ensure that the flag State is capable of exercising effective control. Flag States must also be much more vigilant in ensuring that vessels seeking to enter their registries are not affiliated with or operated by companies with a history of IUU fishing.

Market States must make it illegal for importers, wholesalers and retailers to buy and sell IUU caught fish

This is absolutely critical – the ease with which IUU caught fish finds its way into the marketplace severely undermines the effectiveness and enforceability of regulations established for the conservation and management of fisheries on the high seas.

It is essential that countries take all measures necessary to prevent their nationals or companies residing within their jurisdiction from engaging in IUU fishing or related activities on the high seas. The situation which currently exists whereby 'responsible' countries allow citizens or companies within their jurisdiction to own and operate FOC fishing vessels should no longer be considered acceptable.

Within the context of the actions outlined above plus the need for port States to more vigorously inspect, identify and take action against IUU fishing vessels, and for the reform of the system of regional fisheries management as briefly discussed in the introduction, the key recommendations of this report based are as follows:

Global fishing vessel identification scheme

1. A standardized global vessel marking system should be established which allows for the permanent marking and clear identification of a fishing vessel regardless of any changes in the flag or name of the vessel.

2. A global database of large-scale fishing vessels and vessels authorized to fish beyond the area of national jurisdiction of the flag State of the vessel should be established. The database should include all vessels capable of fishing on the high seas, including those under 24 metres (particularly those fishing on straddling or highly migratory stocks), along with technical information on the vessels, including type of fishing gear, flag history, current and previous ownership history.

3. A global database of vessels with a history of IUU fishing should also be established to help port authorities identify and exercise greater scrutiny and inspection of these vessels during port visits, allow countries to better review the previous history of fishing vessels seeking to enter their registries, allow RFMOs to work together to identify the movements of IUU vessels from region to region (and amongst fisheries), help identify companies and flag States consistently involved in IUU fishing, and potentially reduce the resale value of IUU fishing vessels through denial of

authorization to fish to vessels previously engaged in IUU fishing.

4. An accurate, comprehensive and centralized database on high seas catches and fishing effort should be established, incorporating and centralizing existing databases on vessels authorized to fish on the high seas; catch documentation information; and information on CPUE and areas fished. It should be particularly designed to detect anomalies in reporting of catches.

5. States must adopt and enforce national legislation to prohibit nationals and companies within their jurisdictions from owning or operating vessels engaged in IUU fishing on the high seas and fishing vessels flagged to States with a history of consistent failure to comply with the conservation and management measures adopted by Regional Fisheries Management Organizations.

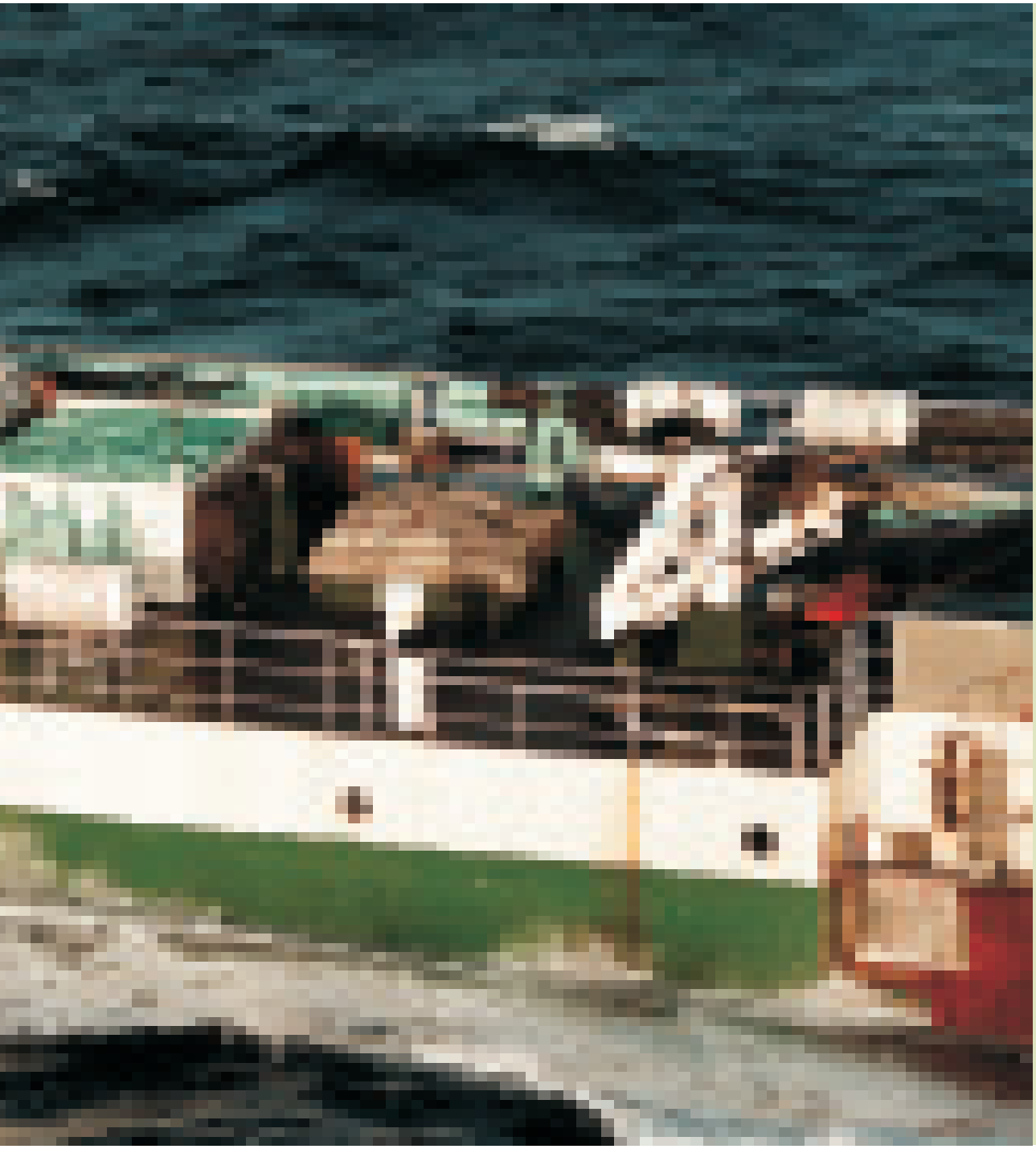
At-sea transshipment

RFMOs with competence over fisheries on the high seas should:

1. Require all transshipment vessels operating in the area of competence of the organization to have an authorization to transship in the RFMO area whether at sea or in port (as is currently the case in the FFA).

2. Require that all transshipment vessels be beneficially owned and controlled in a country that is a member of the RFMO, and fly that country's flag, as a condition of receiving an authorization to transship fish within the area of competence of the RFMO, and that a list be compiled of such vessels. This will ensure that a genuine link exists between the flag State and the vessel, that transshipment vessels are bound by the measures adopted by the RFMO, and that these measures can be effectively enforced.

3. Establish an observer programme on all authorized transshipment vessels to monitor and report on all at-sea transshipments in fisheries regulated by the RFMO. The observer programme should be operated under the authority or auspices of the RFMO, in cooperation with, but independent of, the flag States of the transshipment vessels (similar to the observer programme on fishing vessels run by the IATTC and CCAMLR).



Illegal toothfish longliner *Grand Prince* from Belize, Indian Ocean. ©Greenpeace/ Daniel Beltra

4. Require Vessel Monitoring Systems be used on all transshipment vessels authorized to operate in the area of the RFMO. The failure of a transshipment vessel to cooperate in the programme should be made grounds for the exercise of port State controls. Port State measures could include an investigation of the activities of the vessel, denying the landing or importation of fish transshipped at sea by the vessel and, where appropriate, detention of the vessel.

5. Establish transshipment documentation schemes to be used by market States as the basis for allowing (or prohibiting) the import of fish transshipped at sea, including both market States that are

parties to relevant RFMOs and other cooperating countries.

At-sea resupply vessels and tankers

6. States within whose jurisdiction the owners or managers of at-sea resupply and tankers reside, as well as RFMOs within whose areas these vessels operate, should directly engage the companies in international efforts to prevent, deter and eliminate IUU fishing, whether through observer programs, bringing company policies and business practices into line with RFMO recommendations, and/or by other means.

Working conditions at sea

7. Assuming that a 'Work in Fishing' Convention and a set of 'Work in Fishing' Recommendations are adopted at the International Labour Conference in 2007, States and RFMOs should consider making adherence to the standards and working conditions in these instruments a criterion for vessels to receive authorization to fish and transship fish within the area of competence of the RFMO.

Financial and legal issues

8. States should explore all possible mechanisms to ensure that flag States meet their responsibilities including the use of the International Tribunal for the Law of the Sea and the possibility of a new instrument (implementing agreement) under UNCLOS which would ultimately prevent the operation of vessels which fly the flag of States which do not effectively discharge their obligations.

9. Responsible flag States should explore means of addressing the fact that FOC States whose fishing vessels consistently undermine conservation and management measures do so at a cost to responsible States and industry operators.

10. Companies in the investment and financial services fields should be approached and persuaded to refrain from investing in companies engaged in high seas fisheries and related services until they are provided clear guarantees that such companies are not involved in IUU fishing, trading in IUU caught fish or otherwise providing support services to IUU fleets.

The seafood industry, including importers, wholesalers and retailers, has a special responsibility to take action to prevent, deter and eliminate IUU fishing by working to deny market access to IUU caught fish. Seafood industry associations in key market countries such as Japan, EU, the USA and China should work with governments to adopt and enforce legislation to make it illegal to trade in IUU caught fish and fish products.

Footnotes

[1] Garibaldi, L.; Limongelli, L. Trends in Oceanic Captures and Clustering of Large Marine Ecosystems:Two Studies Based on the FAO Capture Database. FAO Fisheries Technical Paper. No. 435. Rome, FAO. 2002. 71p.

[2] See for example Pauly, D. et al. Fishing Down Marine Food Webs. Science 279, 860-863 (1998) and Pauly, D. et al. Towards Sustainability in World Fisheries. Nature 418, 689-695 (2002); Myers, R.A. and Worm, B.. Rapid Worldwide Depletion of Predatory Fish Communities. Nature 423, 280-283 (2003); Gianni, M. High Seas Bottom Trawl Fisheries and Their Impacts on the Biodiversity of Vulnerable Deep-Sea Ecosystems: Options for International Action. IUCN Gland, Switzerland (2004). For a good general read of the current status of fisheries in many parts of the world including open ocean and high seas fisheries see Clover, Charles The End of the Line: How Overfishing is Changing the World and What We Eat. Ebury Press, London. 2004.

[3] The State of World Fisheries and Aquaculture 2002. UN FAO, Rome 2002. Page 13, Box 3.

[4] Review of Impacts of Illegal, Unreported and Unregulated Fishing on Developing Countries. FINAL REPORT. Marine Resources Assessment Group Ltd. London, United Kingdom. June 2005

[5] EJF, 2005, Pirates and Profiteers: How Pirate Fishing Fleets are Robbing People and Oceans. Environmental Justice Foundation, London, UK).

[6] Action Taken by FAO Members and FAO to Implement the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU). Document TC IUU-CAP/2004/2 prepared for the UN FAO Technical Consultation on the Implementation of the IPOA to Prevent, Deter and Eliminate IUU Fishing and the IPOA for the Management of Fishing Capacity. FAO Rome 24-29 June 2004. This document provides a very good overview of the implementation of the FAO Plan of Action based on information collected from 64 countries which responded to a questionnaire sent to FAO Member Countries.

[7] This definition of IUU fishing is taken verbatim from the UN FAO International Plan of Action on IUU fishing and applies to fishing in all areas. Using the UN FAO definition, the High Seas Task Force defines IUU fishing on the high seas as:

1. Fishing in violation of international laws and obligations; 2. Fishing of high seas fish stocks where there are no formal management arrangements in place but which remains in contravention of the broader responsibilities of States under the law of the sea to conserve and manage the marine living resources of the high seas; 3. Fishing conducted by vessels without nationality, or by those flying the flag of a State not party to a relevant regional fishery management organization (RFMO), or by a fishing entity, in a manner inconsistent with, or which contravenes, the conservation and management measures adopted by the RFMO or broader international obligations; 4. Fishing conducted by nationals of or vessels flying the flag of States that are parties to a relevant RFMO in contravention of the conservation and management measures adopted by that organization or relevant provisions of the applicable international law; 5. Fishing, including fishing within the area of an RFMO, which has not been reported, or has been misreported, to the relevant national/international authorities, in contravention of international laws and regulations.

www.high-seas.org/

[8] op cit footnote 6. Action taken by FAO Members and FAO to implement the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU). Paragraphs 13-18.

[9] Database from Lloyd's Register of Ships: June 1999, October 2001, December 2003, July 2005

[10] Swann, J. Fishing Vessels Operating Under Open Registers And The Exercise Of Flag State Responsibilities: Information And Options. FAO Fisheries Circular No. 980, Rome 2002.

[11] Consultative Group on Flag State Implementation. Advance, unedited text. Oceans and the Law of the Sea. United Nations, 5 March 2004

[12] Antigua and Barbuda, Bahamas, Barbados, Belize, Bermuda, Bolivia, Burma/Myanmar, Cambodia, Cayman Islands, Comoros, Cyprus, Equatorial Guinea, France (French International Ship Register), Germany (second register), Georgia, Gibraltar, Honduras, Jamaica, Lebanon, Liberia, Malta, Marshall Islands, Mauritius, Mongolia, Netherlands Antilles, North Korea, Panama, Sao Tome e Principe, Sri Lanka, St Vincent and the Grenadines, Tonga, Vanuatu. The primary criteria the ITF uses in making such a designation is the extent to which there is a genuine link between the flag State and the owners of the vessels on its registry; that is, the extent to which vessels on the registry are foreign-owned. In classifying States as FOC countries, the ITF also takes into consideration a State's ability and/or willingness to enforce international minimum social standards on its vessels, including respect for basic human and trade union rights, freedom of association and the right to collective bargaining with bona fide trade unions; its social record as determined by the degree of ratification and enforcement of ILO Conventions and Recommendations; and safety and environmental record as revealed by the ratification and enforcement of IMO Conventions and revealed by port State control inspections, deficiencies and detentions. Source: International Transport Workers' Federation, Steering the Right Course: Towards an Era of Responsible Flag States and Effective International Governance of Oceans and Seas. June 2003. http://www.itf.org.uk/english/fisheries/pdfs/steeringrightcourse.pdf

[13] http://www.flagsofconvenience.com/ List of countries under the heading 'International Ship Registrations': Belize, Cambodia, Cyprus, Dominica, Georgia, Honduras, Jamaica, Malta, Mongolia, Panama, Slovak Republic, St Vincent and the Grenadines, Union of Comoros, Vanuatu. (accessed August 2005)

[14] Swann, J. Fishing Vessels Operating Under Open Registers And The Exercise Of Flag State Responsibilities: Information And Options. FAO Fisheries Circular No. 980, Rome 2002. Appendix I

[15] 'Group' is defined by Lloyd's to mean the owner of a group of maritime companies or fleets, and responsible for major financial or organizational decisions regarding the group, i.e. the controlling interest (Parent Company) behind a fleet.

[16] European Union: Belgium (3), Cyprus (18), Denmark (3), Estonia (1), France (4), Germany (1), Gibraltar (3), Greece (16), Irish Republic (2), Lithuania

(5), Malta (2), Netherlands (10), Portugal (5), Spain (46)/ Canary Islands (41), Sweden (2), United Kingdom (8). This number does not include vessels whose owners are listed as residing in overseas territories (or countries) of EU member States or British Crown Dependencies. In the case of the latter, the country of residence of the Owner, Manager or Group (owner) of 15 vessels flagged to the list of FOC countries on Table 1.1 are listed as either the British Virgin Islands (10), Isle of Man (1), Turks and Caicos Islands (2), or Channel Islands (2).

[17] Belize (1), British Virgin Islands (1), Canary Islands (16), China (4), Taiwan (90), Ecuador (1), Egypt (1), Eritrea (1), Gibraltar (1), Greece (2), Haiti (2), Hong Kong (5), Japan (15), South Korea (11), Liberia (1), Maldives (1), Mauritius (1), Panama (11), Russia (1), Singapore (16), Spain (3), Thailand (3) , Turks and Caicos Islands (1), United Kingdom (1), United States (4), Unknown (115).

[18] More Troubled Waters: Fishing, Pollution and FOCs. International Confederation of Free Trade Unions, Trade Union Advisory Committee to the OECD, International Transport Workers' Federation, Greenpeace International. August 2002.

[19] Further investigation into the vessels registered to Flags of Convenience in the 'unknown' category, and the reasons why these and others vessels are listed as such on the Lloyd's database, is necessary to provide a clearer picture of trends in the flagging of fishing vessels over recent years.

[20] A number of positive measures have been taken by States individually to discourage nationals and companies within their jurisdiction from engaging in IUU fishing. Amongst the most effective are measures adopted by Norway which preclude any vessel with a previous history of IUU fishing from obtaining a licence to fish in Norwegian waters. This appears, for example, to have been an effective means of deterring Norwegian owned vessels from engaging in IUU fishing in the Southern Ocean See: http://www.fiskeridir.no/fiskeridir/ressursforvaltning/blacklisted_vessels/

[21] COLTO Report – The Alphabet Boats, A case study of Toothfish Poaching in the Southern Ocean http://www.colto.org/Case_Study.htm

[22] Vessels known or suspected of having been engaged in IUU fishing for Patagonian toothfish according to the Coalition of Legal Toothfish Operators (Colto). http://www.colto.org/vessels.htm (accessed 17 July 2005)

[23] Statement of Glenn Roger Delaney, U.S. Commissioner to ICCAT before the Committee on Resources, Subcommittee on Fisheries Conservation, Wildlife and Oceans, U.S House of Representatives, October 30, 2003. Washington, DC. http://resourcescommittee.house.gov/108cong/fish/2003oct30/delaney.htm

[24] ICCAT record of vessels as per the 2002 Recommendation by ICCAT Concerning the Establishment of an ICCAT Record of Vessels over 24 m Authorized to Operate in the Convention Area. Updated 7 July 2005. http://www.iccat.org/vessel2/vessels.aspx (accessed 18 July 2005). Altogether there are 30 vessels flagged to Panama on the ICCAT list but 20 are less than 24 metres in length and therefore would not appear on Table 1.1. Earlier in the year, (3 February 2005), there were a total of 36 vessels authorized to fish in the ICCAT area flagged to one of the 14 FOC countries listed on Table 1 - 31 vessels flagged to Panama, 3 to Honduras, and 2 flagged to Cyprus.

[25] Source: IATTC Vessel databases: 'Regional Vessel Register List', 'Authorized Large Longline Vessels List', and 'Active purse-seine capacity list'. http://www.iattc.org/VesselListsENG.htm Inter-American Tropical Tuna Commission. Updated 11 July 2005. (accessed 18 July 2005). The numbers of vessels can change significantly in a relatively short period of time, adding to the difficulties in tracking authorized and IUU vessels. For example, when the authors accessed the same databases in February 200552 Panamanianflagged longline vessels and 19 purse seiners were on the list of vessels authorized by Panama to fish in the Eastern Pacific Ocean. Honduras, Belize, Bolivia, and Vanuatu had an additional 18 vessels combined on the IATTC list of active purse seine vessels.

[26] Forum Fisheries Agency Vessel Register of vessels in Good Standing. Updated 2 July 2005. http://www.ffa.int/ffa_rreg (accessed 18 July 2005).

[27] IOTC Record of vessels over 24 metres authorized to operate in the IOTC area. Updated 2005-07-11. http://www.iotc.org/English/record/search.php?PHPSESSID=2588d4a776929c3d505f9b6a5cb300c0 (accessed 18 July 2005).

[28] According to P.M. Miyake, in 2003 there were 173 large-scale longline vessels registered to Taiwan 'authorized' to fish in the Indian Ocean. Source: Miyake, P.M. Abstract from "Review of longline fleet capacity of the world" SCTB17 Working Paper INF-FTWG-1b, 17th Meeting of the Standing Committee on Tuna and Billfish, Majuro, Marshall Islands 9-18 August 2004.

[29] ICCAT record of vessels over 24m LOA authorized to operate in the ICCAT Convention Area. http://www.iccat.org/vessel2/vessels.aspx (accessed 25 July 2005)

[30] General Directorate of the Merchant Marine of Honduras http://www.marinamercante.hn/Services.html (accessed 27 July 2005)

[31] A number of these recommendations are similar to those contained in the UN FAO IPOA on IUU Fishing and put forward by the High Seas Task Force. For example, the first of the recommendations mirrors paragraph 47.10 of the UN FAO IPOA which calls for all large-scale fishing vessels to have a unique, internationally recognized identification number, wherever possible, that enables it to be identified regardless of changes in registration or name over time.

[32] First Meeting of the High Seas Task Force: Summary Outcomes. Meeting of the High Seas Task Force, Paris, 9 March 2005. HTSF/10. 14 March 2005. www.high-seas.org

[33] CCAMLR XXIII-40 13 September 2004 Draft List of IUU Vessels

[34] http://www.colto.org/PDFs/RoguesGallery.pdf

[35] CCAMLR XXIII-40 13 September 2004 Draft List of IUU Vessels

[36] http://www.colto.org/Vessels/vess_Carran.htm

[37] http://www.colto.org/PDFs/RoguesGallery.pdf

[38] http://archive.greenpeace.org/oceans/southernoceans/expedition2000/gallery/pirates.html#lua

[39] CCAMLR XXIII-40 13 September 2004 Draft List of IUU Vessels

[40] http://www.colto.org/PDFs/RoguesGallery.pdf

[41] http://www.colto.org/PDFs/RoguesGallery.pdf

[42] CCAMLR XXIII-40 13 September 2004 Draft List of IUU Vessels

[43] CCAMLR XXIII-40 13 September 2004 Draft List of IUU Vessels

[44] The delegation of Uruguay made a clear statement to the 26th Session of the UN FAO Committee on Fisheries signaling the new government's break

with the policies of the previous government and committing Uruguay to forcefully tackling the problem of IUU fishing.

[45] http://www.colto.org/Vessels/vess_ChristinaGlacial.htm

[46] http://www.colto.org/Vessels/vess_ChristinaGlacial.htm

[47] http://www.colto.org/Vessels/vess_Zarya.htm

[48] http://archive.greenpeace.org/majordomo/index-press-releases/1996/msg00050.html

[49] http://www.asoc.org/Documents/XXCCAMLR_2001/CDS_Analysis_2001_FINAL.doc

[50] http://archive.greenpeace.org/majordomo/index-press-releases/1996/msg00050.html

[51] Lloyd's Register of Ships – October 2004

[52] http://archive.greenpeace.org/majordomo/index-press-releases/1996/msg00050.html

[53] http://www.colto.org/Vessels/vess_Mellas.htm

[54] http://www.colto.org/PDFs/RoguesGallery.pdf

[55] http://www.colto.org/PDFs/RoguesGallery.pdf

[56] http://www.colto.org/Vessels/vess_Piscis.htm

[57] Lloyd's Register of Ships – October 2004

[58] http://www.colto.org/Vessels/vess_Simiez.htm

[59] http://www.colto.org/Vessels/vess_Volna.htm

[60] http://www.colto.org/Vessels/vess_Jackson.htm

[61] Report On The Vessels Florens 1(Simeiz) and Eva 1 (Mellas) CCAMLR-XXIII/BG/30 22 October 2004 by the Delegation of New Zealand

[62] Notification of Spain's Proposal to Conduct Exploratory Fisheries for Toothfish in CCAMLR Sub Area 88.1 and Divisions 54.4.1, 58.4.2, 58.4.3a and 58.4.3b in the 2004/05 Season. CCAMLR XXIII 17 July 2004

[63] http://www.colto.org/PDFs/RoguesGallery.pdf

[64] La Republica Newspaper, Uruguay 22 April, 2004. http://www.diariolarepublica.com/2004/auto/plantillas/4/22/plantilla_a.mv?registro=87

[65] Troubled Waters: Fishing, Pollution and FOCs. International Confederation of Free Trade Unions, Trade Union Advisory Committee to the OECD, International Transport Workers' Federation, Greenpeace International. March 1999.

[66] The 'Galician Syndicate' associated with illegal fishing of toothfish forms an economic group in Uruguay – La Republica April 2004 http://www.colto.org/LaRepublica_Galician_Syndicate_Apr04_SPA.htm

[67] Rogues Gallery, Coalition of Legal Toothfish Operators, 2003.

http://www.falkland-malvinas.com/Detalle.asp?NUM=2790

[68] Boston Globe, May 18, 2003. "With Fish Piracy on Rise, Agents Cast Worldwide Net", By Beth Daley http://www.asoc.org/Press/Fisheries/Pirates/Piracy-agents.htm

[69] COLTO http://www.colto.org/Vessels/vess_Viarsa1.htm

[70] COLTO http://www.colto.org/Vessels/vess_Apache.htm

[71] COLTO http://www.colto.org/Vessels/vess_Apache.htm

[72] COLTO http://www.colto.org/Vessels/vess_Carran.htm

[73] Lloyd's Register of Ships CD July 2005. Lloyd's Marine Intelligence – http://www.seasearcher.com/

[74] Elizabeth Mitchell, personal communication. Ms. Mitchell was the NOAA observer aboard the America No. 1 and described her experience leading up to and during her time as an observer onboard the America No. 1 in a letter posted on the ObserverNet Forums on 18 February 2005. see www.observernet.org/obsforum/showthread.php?p=1786 (accessed 26 July 2005)

[75] Report of the Twenty-Second Meeting of the Commission, CCAMLR XXII, Annex I, List of Participants, 2003; and Report of the Twenty-Third Meeting of the Commission, CCAMLR XXII, Annex I, List of Participants, 2004.

[76] Evaluation de la Peche Illicite Dans le Eaux Francaises Adjacentes Aux Iles Kerguelen et Crozet Pour la Saison 2003/2004 (1er Julliet 2003 – 30 Juin 2004). Informations Generales sur la Zone 58 de la CCAMLR. CCAMLR-XXIII/BG/19, 27 septembre 2004

[77] COMMISSION POUR LA CONSERVATION DE LA FAUNE ET LA FLORE MARINES DE L'ANTARCTIQUE

RAPPORT DE LA VINGT-TROISIÈME RÉUNION DE LA COMMISSION, HOBART, AUSTRALIE, 25 OCTOBRE – 5 NOVEMBRE 2004 CCAMLR-XXIII, Page 37.

[78] Report on the vessels Florens (Simeiz) and Eva I (Mellas). Delegation of New Zealand. CCAMLR XXIII-BG-30. 22 October 2004.

[79] Statement in Response of Australia in the Volga Case, Russian Federation v. Australia, International Tribunal for the Law of the Sea. 7 December 2002.

[80] Rogues Gallery: the new face of IUU fishing for toothfish. COLTO October 2003. http://www.colto.org/PDFs/RoguesGallery.pdf

[81] http://www.quamnet.com.cn/eng/readnews.jsp?nid=10530

[82]COLTO Report – The Alphabet Boats, A case study of Toothfish Poaching in the Southern Ocean http://www.colto.org/Case_Study.htm

[83] Source: Jorge Cofré, President of the Sindicato de Tripulantes de Naves Pesqueras y Especiales, SITONERS. Punta Arenas, Chile. Personal Communication.

[84] In addition to this point, in late 2004 Australia had to divert a patrol vessel to provide emergency medical assistance to a crew member on board a Spanish flagged vessel fishing on the high seas in the Southern Ocean. (Sachi Wimmer, Manager, IUU Fishing & Policy Review Section, Fisheries and Aquaculture, Department of Agriculture, Fisheries and Forestry, Australia – personal communication). While Spain is not an FOC flag country, this nonetheless highlights the issue of adequate medical services on board and the issue of proper medical checks of crew members before they commence long fishing trips. It also raises the issue of significant costs being incurred by non-flag States responding to SOLAS requests.

[85] "11 dead in fishing vessel fire in Uruguay" Agence France Presse, 24 June 2005.

www.quepasa.com/english/news/latinamerica/339974.html. "Longliner catches fire in Montevideo; 11 feared dead" Mercosur Wednesday, 22 June, 2005. MercoPress News Agency www.falkland-malvinas.com/Detalle.asp?NUM=5892 (accessed 21 September 2005)

[86] Paragraph 34 of UN General Assembly resolution A/RES/59/25 on "Sustainable fisheries, including

through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments".

[87] Tuna: the Political Fish Japanese Love. Japan International Cooperation Agency newsletter Network/ No Escape – July 2001. http://www.jica.go.jp/english/publication/network/2001/net_vol12/food01.html

[88] INFORMATION PAPER ON FISH LAUNDERING ACTIVITIES BY LARGE-SCALE TUNA LONGLINE VESSELS Submitted by the delegation of Japan to the Seventh session of the Preparatory Conference for the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific; WCPFC/PrepCon/DP.34, 29 November 2004.

[89] Bours H., Gianni M., Mather D., Pirate Fishing Plundering the Oceans. Greenpeace International February 2001.

[90] Op cit. 82, Fisheries Agency of Japan

[91] Op cit. 83, Pirate Fishing Plundering the Oceans. Greenpeace International.

[92] For example Recommendation 02-23 adopted by ICCAT in 2002: Recommendation By ICCAT To Establish A List Of Vessels Presumed To Have Carried Out Illegal, Unreported And Unregulated Fishing Activities In The ICCAT Convention Area – Paragraph 9 "Contracting Parties and Cooperating non-Contracting Parties, Entities or Fishing Entities shall take all necessary measures, under their applicable legislation: e) To prohibit the imports, or landing and/or transshiptrans-shipment, of tuna and tuna-like species from vessels included in the IUU list". See also ICCAT Resolution 01-18: Scope of IUU Fishing. Adopted by ICCAT in 2001.

[93] IATTC website: www.iattc.org

[94] http://www.eastwindgroup.com/Eastwind.htm (accessed 24 July 2005). Other companies affiliated with refrigerated cargo services provided by Eastwind include Eastwind Ship Management based in Singapore, Norbulk Shipping UK Ltd of Glasgow, Korea Marine Ltd of Pusan, and Norbulk (Hellas) S.A. of Piraeus.

[95] http://fishery.dw.co.kr/english/fleet_intro/ships.htm (accessed 24 July 2005)

[96] http://www.skshipping.com/jsp/eng/company/overview.jsp

[97] Sources: Lloyd's Register of Ships and Lloyd's Marine Intelligence Unit

[98] CCAMLR document SCIC 04/4, Agenda Item No. 2, Provisional And Proposed IUU Vessel List, Page 5.

[99] ADDAX and Sunmar are both management companies and whereas Table 4.1 consists of companies identified as owners of the vessels on the Lloyd's database

[100] http://www.addax-oryx.com/media/pdf/bunkers.pdf

[101] http://www.sunmar.com/ssi/default.htm

[102] Pacific Andes (Holdings) Limited, Annual Report 2004. Page 66.

[103] Citigroup, for example, in 2003, adopted what it calls the Global Corporate and Investment Banking group's (GCIB) Environmental and Social Policy. Among other things, this policy commits Citigroup to refrain from investing in illegal logging operations. Citigroup and other investors could be convinced to apply a similar policy to investments in companies involved in fishing or fish trading industries. http://www.citigroup.com/citigroup/environment/gcibpolicy.htm

[104] Inmarsat Ltd: 99 City Road, London EC1Y 1AX, United Kingdom, Tel: +44 (0)20 7728 1000 Fax: +44 (0)20 7728 1044; Iridium: Corporate Headquarters, 6701 Democracy Boulevard Suite 500, Bethesda, MD 20817 USA, Phone: +1.301.571.6200, Fax: +1.301.571.6250

[105] UN FAO State of World Fisheries and Aquaculture 2004. UN FAO Rome 2005. The report provides the figure of $58.2 billion USD as the 'export value' of the world trade in fisheries products in 2002.

[106] "ICFA Calls for Elimination of Flag-of-Convenience (FOC) Fishing Vessels". Press Release, International Coalition of Fisheries Associations, 5 January 2000. "ICFA Resolution in Support of OPRT's Initiative to Eliminate IUU/FOC Fishing"; Resolution adopted by International Coalition of Fisheries Associations 2001 Annual Meeting. Tokyo, Japan. http://www.icfa.net/ ICFA Members include the Asian Fisheries Federation, Australia Seafood Industry Council, China Fisheries Association of the Republic of China in Taiwan, Federation of Japan Tuna Fisheries Co-Operative Associations, Fisheries Council of Canada, Fisheries Association of Iceland, Japan Fisheries Association, Korea Deep Sea Fisheries Association, National Fisheries Institute (USA), New Zealand Fishing Industry Association, The Norwegian Fisherman's Association and the All Russia Association of Fisheries Enterprises, Entrepreneurs, and Exporters (VARPE).

[107] Swann, J. Fishing Vessels Operating Under Open Registers And The Exercise Of Flag State Responsibilities: Information And Options. FAO Fisheries Circular No. 980, Rome 2002.

[108] It is interesting to note, in the FAO report footnoted above, the frequency and type of enforcement actions taken by the government of Belize against fishing vessels flying its flag operating outside of Belize waters. From the period 1997 through 2001, Belize reported that it took enforcement action 17 times against fishing vessels on its registry. In only five instances were the fishing vessels actually fined. Most of the fines levied were in the vicinity of $20,000 USD but only one of these vessels was actually reported to have paid the fine. Belize reported that the most common means of penalizing an offending vessel was to delete (deflag) the vessel from the Belize registry. This, however, would have been at best a minor inconvenience for the vessels concerned. A fishing vessel can obtain a FOC easily, with provisional registration being granted by some flag States within 24 hours of application. Belize's history of enforcement is remarkably limited and virtually ineffective considering that several hundred large-scale fishing vessels flew the flag of Belize during the same period of time. According to the FAO report, Belize flagged vessels were reported by RFMOs to be engaged in IUU fishing in the Atlantic, Pacific, Indian and Southern Oceans. To its credit, the government of Belize at least provided information on enforcement actions to the author of the FAO report – most of the other countries identified as operating open registries did not, suggesting that they took little if any enforcement action whatsoever.

[109] James Brooke "Landlocked Mongolia's Seafaring Tradition". New York Times, July 2, 2004. http://www.globalpolicy.org/nations/flags/2004/0702landlocked.htm

Annexes

ANNEX I

FOC vessels listed as owned by companies based in Taiwan and Spain/ Canary Islands. Source: Lloyd's Register of Ships (July 2005)

Taiwan

	Name	Flag	Registered Owner	Shiptype
1	Belgie 101	Belize	Lubmain International	Fishing Vessel
2	Chen Chia No. 1	Honduras	Chen Chia Fishery	Fishing Vessel
3	Chen Chieh No. 31	Georgia	Pi Ching Fishery	Trawler
4	Chen Chieh No. 32	Georgia	Pi Ching Fishery	Trawler
5	Chen Chieh No. 66	Belize	Chen Chieh Fishery	Fishing Vessel
6	Chen Chieh No. 666	Belize	Chen Chieh Fishery	Fishing Vessel
7	Chen Chieh No. 878	Cambodia	Chen Chin Cheng Fishery	Fishing Vessel
8	Cherng Yuan No. 12	Honduras	Cherng Yuan Fishery	Fishing Vessel
9	Cherng Yuang No. 11	Honduras	Cherng Yuan Fishery	Fishing Vessel
10	Chi Hao No. 36	Panama	Song Maw Fishery	Fishing Vessel
11	Chi Hao No. 66	Belize	Song Maw Fishery	Fishing Vessel
12	Chiao Chun No. 1	Honduras	Chiao Chun Fishery	Fishing Vessel
13	Chieh Hsiang No. 302	Honduras	Chieh Wei Fishery	Fishing Vessel
14	Chieh Hsiang No. 303	Honduras	Chieh Fong Fishery	Fishing Vessel
15	Chien Chin No. 112	Honduras	Chang Wc	Fishing Vessel
16	Chien Huei No. 221	Honduras	Chang Wc	Fishing Vessel
17	Chien Yu No. 7	Honduras	Chien Yu Fishery	Fishing Vessel
18	Chin Cheng Wen	Equatorial Guinea	Chin Cheng Wen Fishery	Fishing Vessel
19	Chin Chi Horng	Equatorial Guinea	Chin Fu Fishery	Fishing Vessel
20	Chin Chih Horng	Equatorial Guinea	Chin Fu Fishery	Fishing Vessel
21	Chin Ching No. 1	Honduras	Chin Ching Fishery	Fishing Vessel
22	Chin Fa No. 1	Honduras	Wong Hs	Fishing Vessel
23	Chin Heng Horng	Equatorial Guinea	Chin Fu Fishery	Fishing Vessel
24	Chin Hui	Honduras	Chin Hui Fishery	Fishing Vessel
25	Chin Lung Yun No. 27	Honduras	Chyi Yun Fishery	Fishing Vessel
26	Chin You Horng	Equatorial Guinea	Chin Fu Fishery	Fishing Vessel
27	Chin You Ming	Equatorial Guinea	Chin Fu Fishery	Fishing Vessel
28	Chin You Wen	Equatorial Guinea	Chin You Wen Fishery	Fishing Vessel
29	Chuan Shun No. 8	Honduras	Sheng C S	Fishing Vessel
30	Chun Fa	Belize	Ying Shun Hsiang	Fishing Vessel
31	Der Horng 569	Belize	Der Wei Fishery	Fishing Vessel
32	Der Wei No. 686	Belize	Der Wei Fishery	Fishing Vessel
33	Fu Hsiang No. 1	Honduras	Ming Yy	Fishing Vessel

Taiwan, continued

	Name	Flag	Registered Owner	Shiptype
34	Fu Hsiang No. 2	Honduras	Ming Yy	Fishing Vessel
35	Fu Lien No. 1	Georgia	Fu Lien Fishery	Fishing Vessel
36	Fu Yuan No. 11	Belize	Lubmain International	Fishing Vessel
37	Fu Yuan No. 16	Honduras	Lubmain International	Fishing Vessel
38	Fung Yue No. 102	Honduras	Shin Chun Fishery	Fishing Vessel
39	Georgia	Bolivia	Kando Maritime	Fishing Vessel
40	Golden Diamond	Belize	Ying Tsi Shiang Fishery	Trawler
41	Hai Fa No. 21	Honduras	Hai Fa Fishery	Fishing Vessel
42	Hai Fa No. 31	Honduras	Hai Hao Fishery	Fishing Vessel
43	Hai Fa No. 62	Honduras	Hai Fa Fishery	Fishing Vessel
44	Her Hsiang	Honduras	Her Man Fishery	Fishing Vessel
45	Hong Reefer	Honduras	Lubmain International	Fishing Vessel
46	Horng Yuan No. 1	Honduras	Horng Rong Fishery	Fishing Vessel
47	Horng Yuan No. 2	Honduras	Horng Rong Fishery	Fishing Vessel
48	Hsiang Fa	Panama	Kwo Jeng Marine Service	Fishing Vessel
49	Hsiang Pao No. 632	Panama	Panama Fresh Fisheries	Fishing Vessel
50	Hsieh Chan No. 101	Honduras	Lubmain International	Fishing Vessel
51	Hsien An No. 16	Honduras	Hsien An Fishery	Fishing Vessel
52	Hsin Cheng Shiang101	Honduras	Hsin Cheng	Fishing Vessel
53	Hsin Hung No. 101	Honduras	Hsing Hung Fishery	Fishing Vessel
54	Hsin I Hsiang No. 11	Honduras	Hsing Ying Hsiang Fishery	Fishing Vessel
55	Hsin Ling Po No. 326	Honduras	Lee Bau Chu	Fishing Vessel
56	Hsin Yuan No. 202	Honduras	Hsing Yuan Fishery	Fishing Vessel
57	Hsing Hung No. 32	Honduras	Lubmain International	Fishing Vessel
58	Hsing Lung No. 31	Honduras	Hsing Lung Fishery	Fishing Vessel
59	Hsing Ming No. 1	Honduras	Hsing Ming Fishery	Fishing Vessel
60	Hsiung Yang	Equatorial Guinea	Chin Fu Fishery	Fishing Vessel
61	Hua Cheng No. 707	Cambodia	Hua I Fishery	Fishing Vessel
62	Hung Chin No. 212	Belize	Hung Chin Fishery	Fishing Vessel
63	Hung Fu I No. 212	Honduras	Hung Fu I Fishery	Fishing Vessel
64	Hung Hsing No. 11	Honduras	Yeng Sheng Oceanic	Fishing Vessel
65	Hung Huei 112	Honduras	Hung Huei Fishery	Fishing Vessel
66	Hung I No. 178	Honduras	Hung I Fishery	Fishing Vessel
67	Hung Ming No. 231	Honduras	Hung Huei Fishery	Fishing Vessel
68	Hung Yeng No. 11	Honduras	Hung Yiu Fishery	Fishing Vessel
69	Hung Yeng No. 12	Honduras	Hung Yiu Fishery	Fishing Vessel
70	Hung Yo No. 112	Honduras	Hung Woei Fishery	Fishing Vessel
71	Hung Yu 606	Belize	Hung Yu Fishery	Fishing Vessel
72	Hung Yu No. 122	Honduras	Hung Yu Fishery	Fishing Vessel
73	Hunter	Bolivia	Kando Maritime	Fishing Vessel
74	Hwa Kun No. 232	Honduras	Hwa Kun Fishery	Fishing Vessel
75	Hwa Ren No. 16	Honduras	Hwa Shin Shang Marine	Fishing Vessel

Taiwan, continued

	Name	Flag	Registered Owner	Shiptype
76	Hwang Shun No. 101	Honduras	Kwang Yuan Fishery	Fishing Vessel
77	I Ching Ye No. 217	Honduras	Lubmain International	Fishing Vessel
78	I Chun No. 3	Honduras	Luxuriant Fishery	Fishing Vessel
79	I Fa No. 3	Honduras	Wu Ms	Fishing Vessel
80	I Man Hung	Honduras	Tai Far Fishery	Fishing Vessel
81	Jef Fa No. 2	Honduras	Jef Fa Fishing	Fishing Vessel
82	Jet Fa No. 1	Honduras	Jef Fa Fishing	Fishing Vessel
83	Jian Yuan	Georgia	Kando Maritime	Fishing Vessel
84	Kang Yuan	Georgia	Kando Maritime	Fishing Vessel
85	Kiev	Georgia	Kando Maritime	Fishing Vessel
86	Kuang Hui No. 212	Honduras	Kuang Hui Fishery	Fishing Vessel
87	Lien Ching Yu	Honduras	Ching Yow Fishery	Fishing Vessel
88	Lien Ching Yu No. 112	Honduras	Ching Harng Fishery	Fishing Vessel
89	Long Der Yih No. 32	Honduras	Maan Kheng Fishery	Trawler
90	Lung Theng	Equatorial Guinea	Chin Fu Fishery	Fishing Vessel
91	Marine 303	Panama	Kando Maritime	Fishing Vessel
92	Meng Fa No. 316	Cambodia	Meng Fa Fishery	Fishing Vessel
93	Meng Fa No. 368	Belize	Meng Fa Fishery	Fishing Vessel
94	Meng Wen Fa No. 168	Honduras	Meng Wen Fa Fishery	Fishing Vessel
95	Meng Wen Fa No. 666	Belize	Meng Fa Fishery	Fishing Vessel
96	Ming Chich	Cambodia	Ming Chich Fishery	Fishing Vessel
97	Neptune	Georgia	Space Energy Ent.	Trawler
98	Ocean Fresh	Georgia	Ocean Fresh Fishery	Fishing Vessel
99	Pesca Rica No. 2	Panama	Grande	Fishing Vessel
100	Pesca Rica No. 6	Panama	Grande	Fishing Vessel
101	Ruey No. 3	Honduras	Min Yu Fishing	Fishing Vessel
102	Sea Dragon No. 168	Panama	Jeng Her Fishery	Fishing Vessel
103	Shang Dar	Georgia	Kando Maritime	Fishing Vessel
104	Sheng Feng No. 6	Honduras	Hu Kung Fishery	Fishing Vessel
105	Sheng Yang	Equatorial Guinea	Chin Fu Fishery	Fishing Vessel
106	Shin Huan No. 201	Honduras	Lubmain International	Fishing Vessel
107	Shin Reefer	Honduras	Lubmain International	Fishing Vessel
108	Shun Chao	Equatorial Guinea	Chin Fu Fishery	Fishing Vessel
109	Shun Lien	Equatorial Guinea	Chin Fu Fishery	Fishing Vessel
110	Shye Jin No. 1	Honduras	Lubmain International	Fishing Vessel
111	Si Hong No. 128	Belize	Si-tai Fishery	Fishing Vessel
112	South Ocean	Belize	Kando Maritime	Fishing Vessel
113	Southern Star No. 888	Bolivia	Grace Marine	Fishing Vessel
114	Sung Hui	Vanuatu	Sung Hui Fishery	Fishing Vessel
115	Sunny	Equatorial Guinea	Fa Chun Ocean Fishery	Fishing Vessel
116	Ta Ming No. 113	Honduras	Chun Ti	Fishing Vessel
117	Tai Cheng No. 6	Honduras	Lubmain International	Fishing Vessel

Taiwan, continued

	Name	Flag	Registered Owner	Shiptype
118	Tai Fa Sheng No. 21	Honduras	Tai Fa Sheng Fishery	Fishing Vessel
119	Tai Fan No. 1	Honduras	Tai Fan Fishery	Fishing Vessel
120	Tai Shun No. 1	Honduras	Chao K	Fishing Vessel
121	Tai Yuan Hung	Honduras	Tai Shyun Fishery	Fishing Vessel
122	Tai-yu 8	Honduras	Desarrollo Pesquero	Fishing Vessel
123	Tching Ye No. 236	Honduras	Lubmain International	Fishing Vessel
124	Tung Lung No. 6	Honduras	Lu Fa Fishery	Fishing Vessel
125	Tung Zhan No. 6	Honduras	Tung Zhan Fishery	Fishing Vessel
126	Victory	Belize	Shin Lung Fishery	Fishing Vessel
127	Victory Ii	Panama	Hon Le Fishery	Trawler
128	Wei Li No. 7	Honduras	Wei Li Fishery	Fishing Vessel
129	Win Far No. 868	Belize	Win Far Fishery	Fishing Vessel
130	Ying Chin Hsiang	Honduras	Ying Tsi Shiang Fishery	Fishing Vessel
131	Yu Chiang No. 122	Honduras	Yuh Kao Fishery	Fishing Vessel
132	Yu Feng No. 116	Honduras	Yung Chang Fishery	Fishing Vessel
133	Yu Feng No. 68	Honduras	Hung Chang Fishery	Fishing Vessel
134	Yu Hsiang No. 216	Honduras	Lubmain International	Fishing Vessel
135	Yu I Hsiang No. 132	Honduras	Yu Hung Fishery	Fishing Vessel
136	Yu I Hsiang No. 227	Honduras	Yu Hung Fishery	Fishing Vessel
137	Yu I Hsiang No. 617	Honduras	Lubmain International	Fishing Vessel
138	Yu Ta No. 62	Honduras	Pai Hsing Fishery	Fishing Vessel
139	Yu Ter Hsiang No. 711	Honduras	Lubmain International	Fishing Vessel
140	Yuh Yow No. 102	Honduras	Yu Chang Marine	Fishing Vessel
141	Yuh Yow No. 127	Honduras	Yu Pao Fishery	Fishing Vessel
142	Yuh Yow No. 201	Honduras	Yuh Yih Fishery	Fishing Vessel
143	Yuh Yow No. 202	Honduras	Yu Tsang Fishery	Fishing Vessel
144	Yuh Yow No. 8	Honduras	Yu Pao Fishery	Fishing Vessel
145	Yung Chun No. 17	Belize	Yong Chun Fishery	Fishing Vessel
146	Yung Hsu No. 101	Honduras	Yung Hsu Fishery	Fishing Vessel
147	Yung Man Chun	Belize	Yong Man Fishery	Fishing Vessel

Spain

	Name	Flag	Registered Owner	Shiptype
1	ALBACORA CARIBE	Panama	Albafrigo	Fishing Vessel
2	ALBACORA DIEZ	Panama	Albafrigo	Trawler
3	ALBACORA NUEVE	Panama	Albafrigo	Trawler
4	ALMIKE	St Vincent	Copesca	Trawler
5	ANTARES PRIMA	Equatorial Guinea	Capensis	Trawler
6	APACHE	Honduras	Staplefield Invest	Fishing Vessel
7	ARWYN	Belize	Pesca Industrial	Trawler
8	AUSTER	Honduras	Stonar Trading	Fishing Vessel
9	BISMARK	Panama	Nao Pesca	Fishing Vessel
10	BLUE AGAIN	Panama	Blue Fishing	Trawler
11	BLUE AGAIN II	Panama	Blue Fishing	Trawler
12	BLUE PLANET	Panama	Campopesca	Trawler
13	CAPENSIS	Equatorial Guinea	Capensis	Trawler
14	CASTOR	Saint Vincent	Beiramar	Fishing Vessel
15	COLOMBO VII	Panama	PEBSA	Trawler
16	COLOMBO VIII	Panama	PEBSA	Trawler
17	CONDOR	Belize	Manuel Salgueiro J	Trawler
18	EOLO	Panama	Vidal Armadores	Fishing Vessel
19	ERROXAPE	Belize	Echebastar Pesqueras	Fishing Vessel
20	ESMERALDA C	Panama	Garavilla Conservas	Fishing Vessel
21	EXPLORER II	Netherlands Antilles	Albafrigo	Fishing Vessel
22	EXPLORER III	Netherlands Antilles	Albacora	Fishing Vessel
23	FARO VILLANO	Netherlands Antilles	Albafrigo	Fishing Vessel
24	FATIMA	Netherlands Antilles	Albafrigo	Trawler
25	GRAN SOL	Panama	Segade Grupo	Trawler
26	ISLA GORRITI	Mauritius	Sermarpesca	Fishing Vessel
27	LIO I	Netherlands Antilles	Transgoa	Trawler
28	MAR DE LOS SARGAZOS	Panama	Marol Shipping	Trawler
29	MARMOUSET	Panama	Marmouset Trading	Trawler
30	MAYA V	Panama	Rainbow Fisheries	Fishing Vessel
31	MOHICANO	Honduras	Staplefield Invest	Fishing Vessel
32	MONTECARMELO	Panama	CalvoPesca	Trawler
33	MONTECLARO	Panama	CalvoPesca	Fishing Vessel
34	NATA	Panama	Fishguard Shipping	Trawler
35	NEUTRON	Panama	Nao Pesca	Trawler
36	NI	Saint Vincent	Moseley	Trawler
37	NOTRE DAME	Honduras	Capensis	Trawler
38	ODIN	Cambodia	Manuel Salgueiro J	Fishing Vessel
39	PANAMA TUNA	Panama	Albafrigo	Fishing Vessel
40	PATUDO	Netherlands Antilles	Albafrigo	Fishing Vessel
41	PESCATUN	Panama	Pescatun	Fishing Vessel
42	SOUTH BOY	Equatorial Guinea	Insuabela	Fishing Vessel

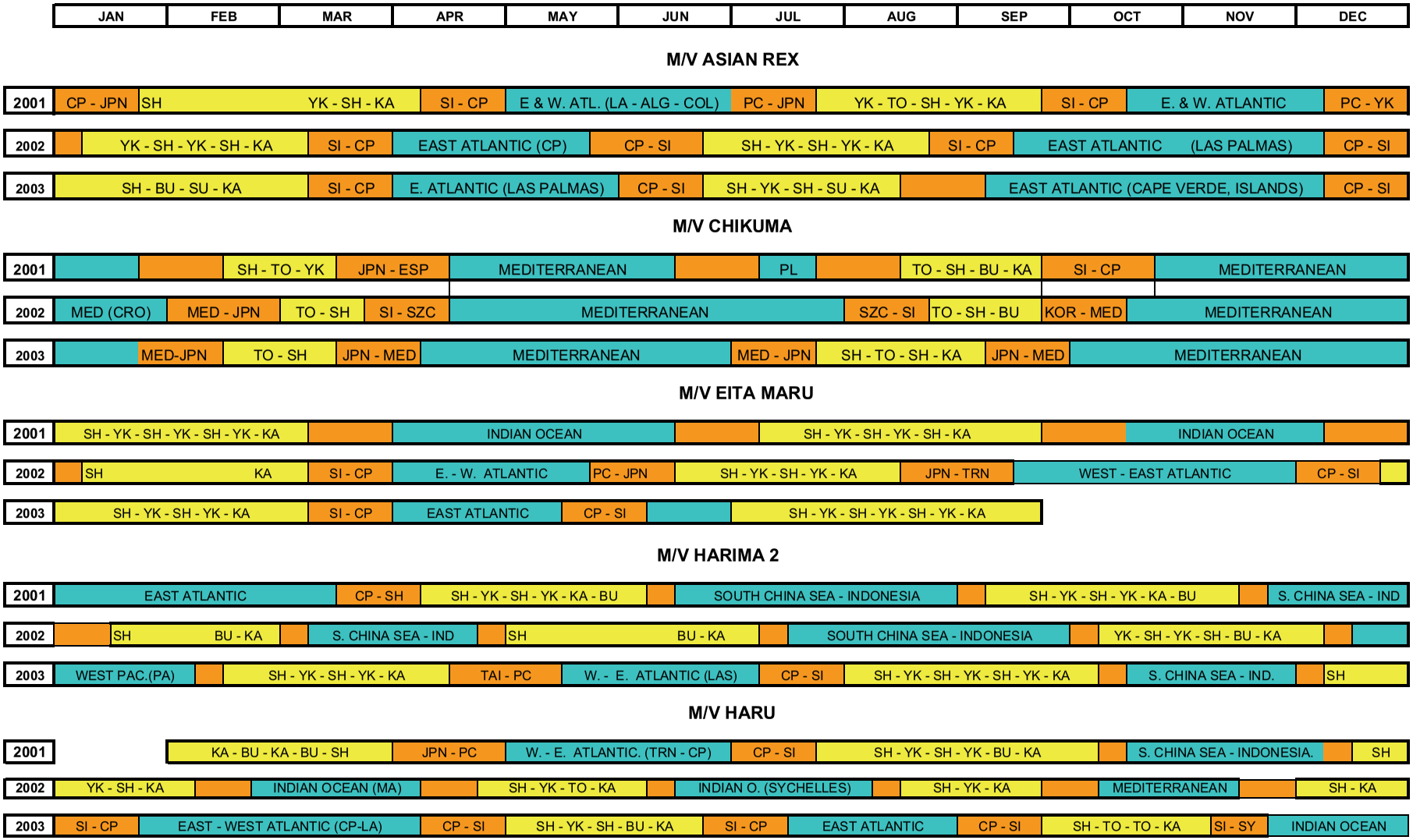
Canary Islands

	Name	Flag	Registered Owner	Shiptype
1	0101 MARINE	Belize	Sunfish Marine	Trawler
2	ALBA No. 8	Honduras	Oriental Pesca	Fishing Vessel
3	ATLANTIS 2	Georgia	Bowling Maritime	Trawler
4	BELLESOL III	Honduras	Belle Solar	Trawler
5	BIKIN	Georgia	Bowling Maritime	Trawler
6	DU RIN No. 5	Sierra Leone	Penaranda	Trawler
7	ESPERANZA	Honduras	Continente Marina	Fishing Vessel
8	FAZARA 1	Sierra Leone	Escotra	Fishing Vessel
9	FAZARA No. 2	Sierra Leone	Penaranda	Trawler
10	GABU	Sierra Leone	Forsban Trading	Trawler
11	GEORGE B. No. 1	St Vincent	Esco Fisheries	Fishing Vessel
12	GIOCONDA	Honduras	Intermiso	Trawler
13	GRANMAR No. 2	Honduras	Young Bok Fisheries	Fishing Vessel
14	HAE WOO No. 6	Sierra Leone	Hae Woo	Trawler
15	HANNAM No. 7	Honduras	Han Nam Fishery	Fishing Vessel
16	INTESORO NO. 25	Sierra Leone	Taerim	Trawler
17	ISLA I	Sierra Leone	Liberiana	Fishing Vessel
18	KASCO No. 101	Panama	Komako	Fishing Vessel
19	LIAO FICO No. 1	Honduras	Liaoning International	Fishing Vessel
20	LIAO FICO No. 2	Honduras	Liaoning International	Fishing Vessel
21	LIAO FICO No. 5	Honduras	Liaoning International	Fishing Vessel
22	MAHI No. 1	Belize	Mahi Fisheries	Fishing Vessel
23	MAME AMY	Sierra Leone	Hae Woo	Trawler
24	MARVEN No. 2	Sierra Leone	Marven Fisheries	Trawler
25	MEDRA	Honduras	Intermiso	Fishing Vessel
26	MICHELLE No. 7	Honduras	Comercial	Fishing Vessel
27	MOREAH 5	Sierra Leone	Delta Navigation	Trawler
28	NEPTUNE 503	Honduras	Brito G	Fishing Vessel
29	NIGATA MARU	Panama	Magucasa Agencia	Trawler
30	NOVA II	Panama	Trans Oceans Maritime	Fishing Vessel
31	NOVA III	Panama	Trans Oceans Maritime	Fishing Vessel
32	NOVA V	Panama	Trans Oceans Maritime	Fishing Vessel
33	NOVA VI	Panama	Trans Oceans Maritime	Fishing Vessel
34	SAFRA	Panama	Espama Fishing	Fishing Vessel
35	SAINT LOUIS	St Vincent	Esco Fisheries	Fishing Vessel
36	SAINT LOUIS II	St Vincent	Esco Fisheries	Trawler
37	SALKHINO	Georgia	Bowling Maritime	Trawler
38	SETA No. 2	Honduras	Inter-Burgo	Trawler
39	SETA No. 23	Honduras	Inter-Burgo	Fishing Vessel
40	SETA No. 3	Honduras	Inter-Burgo	Trawler
41	ZION II	Honduras	Yoido Trading	Fishing Vessel

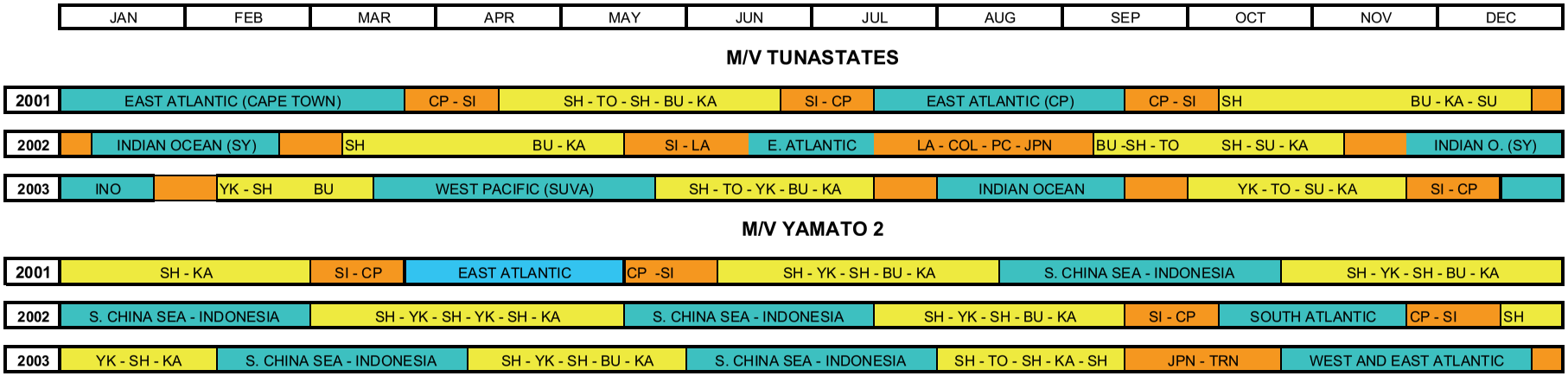
ANNEX II

Sample of port visits and itineraries of refrigerated cargo vessels transshipping high value tuna at sea for delivery to Japan. 2001-2003

Annex III. Sample itineraries of tankers refueling fishing vessels at sea. 2001-2003



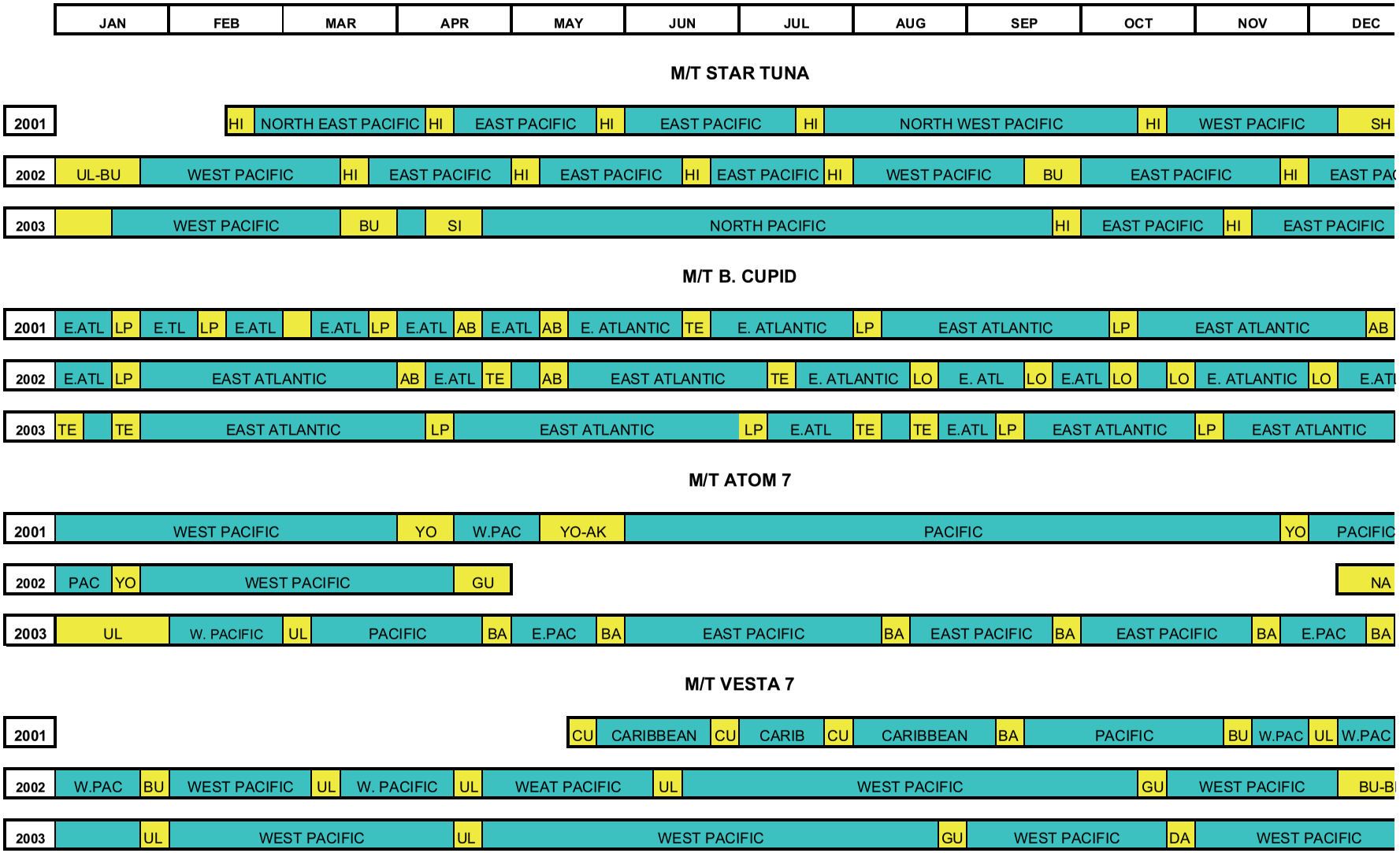
Annex II. Sample of port visits and itineraries of refrigerated cargo vessels transshipping high value tuna at sea for delivery to Japan. 2001-2003

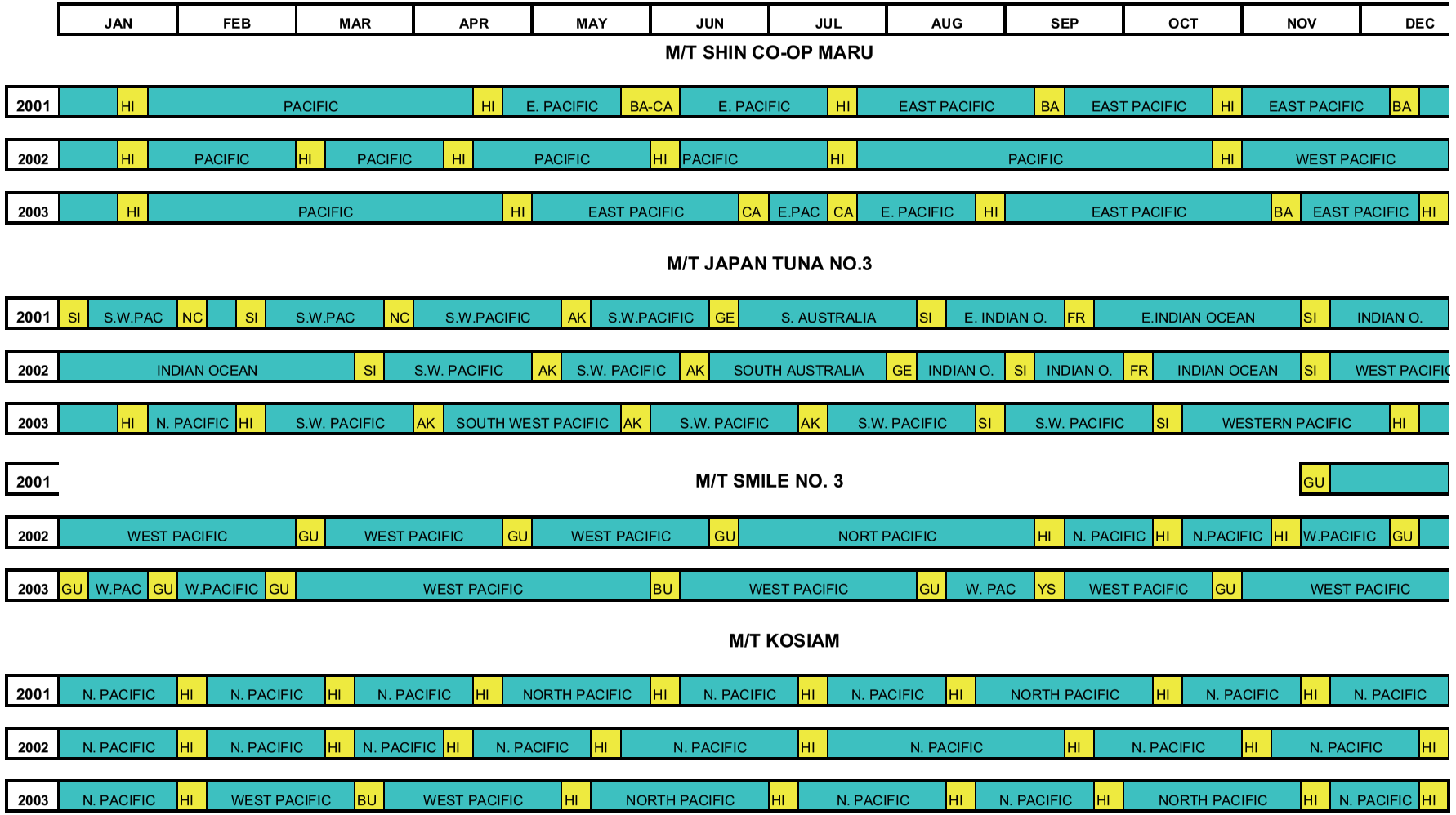


= LOADING FISH AT SEA OR IN PORT = VESSEL IN TRANSIT = VESSEL IN PORT DISCHARGING CATCH OR STANDING BY

ALG	ALGERIA
ATL	ATLANTIC OCEAN
BU	BUSAN, S. KOREA
CA	CALLAO, PERU
CO	COLUMBIA
CP	CAPE TOWN, SOUTH AFRICA
CRO	CROATIA
CVI	CAPE VERDE ISLANDS
DU	DURBAN, SOUTH AFRICA
ESP	SPAIN
FR	FREMANTLE, AUSTRALIA
HA	HAHINOHE, JAPAN
IN	INDONESIA
INO	INDIAN OCEAN
JPN	JAPAN
KA	KAOSHUING, TAIWAN
KE	KESENNUMA, JAPAN
KOR	KOREA
LA	LAS PALMAS, CANARY ISLANDS
MA	MAURITIUS
MAL	MALTA
MED	MEDITERRANEAN
MN	MANTA, ECUADOR
PA	PAPEETE, TAHITI
PAC	PACIFIC OCEAN
PC	PANAMA CANAL
PER	PERU
PL	PORT LINCOLN, AUSTRALIA
TRN	TRINIDAD
SH	SHIMUZU, JAPAN
SI	SINGAPORE
SU	SUAO, TAIWAN
SV	SUVA, FIJI
SY	SEYCHELLES
SZC	SUEZ CANAL
TAI	TAIWAN
TO	TOKYO, JAPAN
TUN	TUNESIA
WB	WALVIS BAY, NAMIBIA
YK	YOKOSUKA, JAPAN

Annex III. Sample itineraries of tankers refueling fishing vessels at sea. 2001-2003




JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
M/T SHIN CO-OP MARU
2001 HI PACIFIC HI E. PACIFIC BA-CA E. PACIFIC HI EAST PACIFIC BA EAST PACIFIC HI EAST PACIFIC BA
2002 HI PACIFIC HI PACIFIC HI PACIFIC HI PACIFIC HI PACIFIC HI WEST PACIFIC
2003 HI PACIFIC HI EAST PACIFIC CA E.PAC CA E. PACIFIC HI EAST PACIFIC BA EAST PACIFIC HI
M/T JAPAN TUNA NO.3
2001 SI S.W.PAC NC SI S.W.PAC NC S.W.PACIFIC AK S.W.PACIFIC GE S. AUSTRALIA SI E. INDIAN O. FR E.INDIAN OCEAN SI INDIAN O.
2002 INDIAN OCEAN SI S.W. PACIFIC AK S.W. PACIFIC AK SOUTH AUSTRALIA GE INDIAN O. SI INDIAN O. FR INDIAN OCEAN SI WEST PACIFIC
2003 HI N. PACIFIC HI S.W. PACIFIC AK SOUTH WEST PACIFIC AK S.W. PACIFIC AK S.W. PACIFIC SI S.W. PACIFIC SI WESTERN PACIFIC HI
2001 M/T SMILE NO. 3 GU
2002 WEST PACIFIC GU WEST PACIFIC GU WEST PACIFIC GU NORT PACIFIC HI N. PACIFIC HI N.PACIFIC HI W.PACIFIC GU
2003 GU W.PAC GU W.PACIFIC GU WEST PACIFIC BU WEST PACIFIC GU W. PAC YS WEST PACIFIC GU WEST PACIFIC
M/T KOSIAM
2001 N. PACIFIC HI N. PACIFIC HI N. PACIFIC HI NORTH PACIFIC HI N. PACIFIC HI N. PACIFIC HI NORTH PACIFIC HI N. PACIFIC HI N. PACIFIC
2002 N. PACIFIC HI N. PACIFIC HI N. PACIFIC HI N. PACIFIC HI N. PACIFIC HI N. PACIFIC HI N. PACIFIC HI N. PACIFIC HI
2003 N. PACIFIC HI WEST PACIFIC BU WEST PACIFIC HI NORTH PACIFIC HI N. PACIFIC HI N. PACIFIC HI NORTH PACIFIC HI N. PACIFIC HI
= TANKERS AT SEA - IN TRANSIT TO, OR SERVICING FISHING VESSELS.
= TANKERS IN PORT REFUELING AND LOADING SUPPLIES
AB ABIDJAN
AK ALASKA
BA BALBOA
BU BUSAN
CU CURACAO
GU GUAM
HI HAWAII
LO LOME
LP LAS PALMAS
NA NAGOYA
SI SIAPAN
TE TEMA
UL ULSAN
YO YOKOHAMA
M/T MOTOR TANKER

ANNEX III

WWF's contribution to this report was funded by Wallenius Wilhelmsen,
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Australian Government
Department of Agriculture, Fisheries and Forestry

The mission of the Australian Government Department of Agriculture, Fisheries and Forestry is:

Increasing the profitability, competitiveness and sustainability of Australian agricultural, fisheries, food and forestry industries and enhancing the natural resource base to achieve greater national wealth and stronger rural and regional communities.

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The ITF (International Transport Workers' Federation) represents transport workers in over 600 trade unions in 137 countries. It is dedicated to the advancement of independent and democratic trade unionism, and to the defence of fundamental rights.

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- conserving the world's biological diversity
- ensuring that the use of renewable natural resources is sustainable
- promoting the reduction of pollution and wasteful consumption

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