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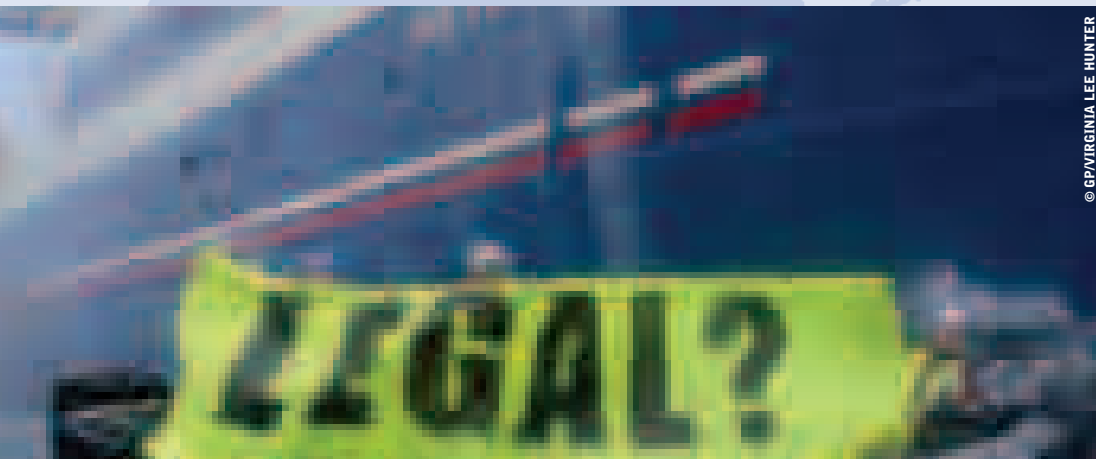
“Greenpeace is committed to defending the health of the world's oceans and the plants, animals and people that depend upon them.”

Murky Waters:

hauling in the net on Europe's high seas
bottom trawling fleet



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Executive Summary

executive summary

Deep-sea bottom trawling is one of the most damaging forms of fishing practised today. Bottom trawling outside the 200 nautical mile limit of countries' Exclusive Economic Zones (EEZs) is carried out by relatively few vessels flagged to a small number of OECD countries. The high seas bottom trawl industry is causing a disproportionately high level of destruction of deep-sea life relative to the few economic beneficiaries. Slow-maturing deep-sea species and ecosystems are particularly susceptible to the damaging impacts of bottom trawling. It is estimated that as few as 250-300 full-time fishing vessels are responsible for the long term irreversible damage to these habitats worldwide.¹ This means that the costs of a United Nations General Assembly (UNGA) moratorium on high seas bottom trawling to the global fishing industry would be negligible, while the benefits for the protection of vulnerable deep-sea biodiversity will be significant.

However, identification of European vessels and companies involved in this high seas destruction is difficult, due to the paucity of public information, poor governance and the lack of transparency in the industry. Despite this, Greenpeace has managed to collect a dossier of information from direct observation of vessels engaged in high seas bottom trawl fishing in the waters of the North Atlantic during 2004-05. A number of these vessels have had citations issued against them by Regional Fisheries Management Organisations, notably the North East Atlantic Fisheries Commission (NEAFC) or the Northwest Atlantic Fisheries Organisation (NAFO), or are associated with vessels or companies owned or operated in Europe that have been cited for breaking conservation measures and regulations in these areas. A wider review of vessel registers identified a total of 398 European vessels as being equipped to engage in high seas bottom trawling. In comparison, Lloyd's register, in 2005, identified 318 vessels equipped to engage in high seas bottom trawling as flagged in Europe, while 80 were flagged to other countries but were linked to European coastal states by nationality of their owners or operators. The vast majority (80%) of vessels were flagged in Spain, Denmark, or France

This report presents some of the available data, exposing management and ownership links to Europe for 18 vessels in more detail. It stands to reason that from this information, one could verify which companies and/or countries are principally responsible for the damage caused by bottom trawlers to deep-sea biodiversity in the North Atlantic. However, a clear picture of ownership ties and nationalities is made difficult by the fact that a number of vessels are shown to have frequently changed their flag, name and/or owner. This lack of transparency is consistent with experience in other high seas fisheries – and appears typical of 'illegal, unregulated or unreported' fisheries, also known as 'IUU fisheries'.

The fact that IUU fishing and the unregulated destruction of deep sea biodiversity can take place almost systematically in the North Atlantic, is the result of insufficient implementation of existing rules, an insufficient governance structure on the high seas in general, and the North Atlantic in particular, and an apparent lack of political commitment to the protection of the marine environment and its resources. The European Union, its Member States, the European Commission as well as other European countries, notably Norway and Iceland, and NEAFC and NAFO must step up their action to protect deep-sea life. They must act now to ensure the long-term viability of vulnerable deep-sea ecosystems. The most responsible and effective measure to take is to support and encourage a UN General Assembly resolution declaring an immediate moratorium on high seas bottom trawling. In the EU, the European Commission should facilitate agreement on an EU position in favour of such a moratorium, with a view to protecting vulnerable deep sea ecosystems from destructive fishing practices. This would provide:

- * A 'time out' for a thorough, scientific assessment of deep-sea biodiversity;
- * the space for policy makers to develop the necessary legal and management regimes to effectively combat IUU fishing and ensure that future deep-sea fisheries are sustainably and equitably managed.

1. Introduction

Until the mid-1800s, the depth of the ocean was believed to be devoid of life,² a submarine desert extending below 400 metres in depth.³ One of the first scientists to get a different glimpse of the deep-sea was the Norwegian marine zoologist, Michael Sars, who documented hundreds of species in waters 1,000 m deep.⁵ Two centuries later, the deep-sea is being recognised as a global reservoir of life, comparable to that of tropical forests and coral reefs. However, the diversity, significance and vulnerability of these deep-sea ecosystems is only just beginning to emerge.

Estimates of the numbers of species inhabiting the deep-sea, range between 500,000 and 100 million. Much of the diversity appears to be concentrated on and around the continental shelf breaks, large submarine mountain ranges or isolated peaks known as seamounts. Seamounts are like underwater islands, rising 1,000 metres or higher from the seabed without breaking the sea surface. They provide oases of life and are commonly inhabited by species that are found nowhere else, with up to 30% or more of species endemic to a single seamount.⁶ Deep-sea life is typically slowgrowing (e.g. the coldwater corals that live for thousands of years), late-maturing and has a slow reproductive rate (e.g. the Orange roughy (*Hoplostethus atlanticus*), which lives up to 120 years and reproduces only at 20-30 years old). As a consequence, deep-sea creatures are particularly sensitive to disturbance and over-exploitation.

It is estimated that there may be more than 100,000 seamounts world-wide, and at least 800 of these (probably more) are thought to occur in the North Atlantic, along the Mid-Atlantic Ridge and in clusters along the European shelf break, off the Norwegian coast, south-west of Ireland and the UK, near the Rockall Bank, and west of Portugal on the Madeira-Tore Rise. The true number and distribution of seamounts and other deep-sea habitats will remain unknown until the ocean floor has been comprehensively mapped.

As coastal fish stocks are being depleted, fisheries are rapidly expanding beyond the continental shelf,⁷ with previously unfished waters of the deep-sea becoming the target of industrial/commercial fishing fleets. Over the past twenty-five years, deep-sea fisheries - commonly considered to be those that target stocks at depths greater than 400 m⁸ - have increased to such an extent that forty per cent of all trawling grounds are now in waters

beyond the continental shelves.⁹ Much of this area lies beyond the 200 nautical mile limit of the Exclusive Economic Zones (EEZs) of coastal states, and thus falls in the open-access regime of the high seas.¹⁰ The general lack of governance in these international waters makes them particularly susceptible to over-exploitation.¹¹

By far the most effective way to catch deep-sea fish is through a fishing method known as bottom trawling. This generally involves towing a large net¹² and associated gear (otter boards or trawl "doors", steel rollers, cables, etc) for up to several hours at a time at depths of 400 m to over 1,800 m along deep-sea ridges, seamounts, plateaus and on the continental slope¹³. It is also one of the most destructive fishing practices in use and has been documented by a number of studies as causing changes in ecosystem processes, altering the structure of benthic communities and reducing habitat complexity.¹⁴ The impacts of bottom trawling on biogenic structures is comparable in impact to the clear-cutting of ancient forests.¹⁵

The Advisory Committee on Ecosystems (ACE) of the International Council for the Exploration of the Sea (ICES) describes the impact of bottom trawling on coral reefs as follows:

"The impact of trawled gear will kill the coral polyps and break up the reef structure. The breakdown of this structure will alter the hydrodynamic and sedimentary processes as well as cause a loss of shelter around the reef. Organisms dependent on these features will have a much less suitable habitat and recovery may not be possible or could be seriously impaired. The scale of effects will depend on the scale and frequency of any trawling operations. Damage will range from a decrease in the size of the reef, and a consequent decrease in the abundance and diversity of associated fauna, to a complete disintegration of the reef and its replacement with a low-diversity disturbed community."¹⁶

The ACE further suggests that bottom trawling is widespread in the Northeast Atlantic, throughout areas where *Lophelia* reefs occur, and that "photographic and acoustic surveys have recently located trawl marks at 200–1,400 m depth all along the Northeast Atlantic shelf break area from Ireland, Scotland and Norway. Any trawling over *Lophelia pertusa* is likely to cause harm". Up to half of the cold-water coral reefs in Norway are thought to have been damaged.¹⁷

A recent study in the scientific journal *Nature* (January 2006), warns that population data of five species of deep sea fish from the Northwest Atlantic - caught only since the 1970s – show that these fish are now 'critically endangered', according to IUCN Red List criteria. Between 1978 and 1994, the five species lost between 87% and 98% of their initial abundance. Between 1995 and 2004, two species - roundnose and onion-eye grenadier - declined still further to 93.3% and 99.6% respectively. Their average body size also halved, showing that few fish are getting a chance to mature and breed. Three of the five species (blue hake, spiny eel and spinytail skate) are only taken as by-catch, indicating that by-catch levels are dangerously high. All the evaluated species can live to 60 years of age, grow to more than 1m in length and mature in their late teens.¹⁸

The magnitude of the high seas bottom trawling industry is difficult to assess because many deep-sea fisheries on the high seas are unregulated.¹⁹ High seas bottom trawlers are already estimated to trawl an area twice the size of the United States each year, and it continues to expand into new areas. Trawlers in the Northeast Atlantic region of the Rockall Trough are estimated to sweep an average of 33 km² of seabed during a single 15day trip. The significance of this threat is underlined in the FAO's State of the World's Fisheries Report which states:

"In spite of the adoption of several international instruments building upon the development of the international law of the sea and the international law of the environment, as well as advances in good practices in the ambit of regional fishery bodies or arrangements, numerous shortcomings remain. In fact, most of the world's deep-water fishery resources and the high seas areas where they are found could currently be considered as "unregulated". Developing and implementing new binding instruments or modifying existing agreements would probably take too much time to allow for the adoption of the urgent measures that are often required. There are other difficulties to be addressed, such as uncertainty regarding the level of acceptance of these instruments and the need to avoid undermining through this process some of the key elements contained in the existing instruments. Many fear that the conservation, and perhaps even survival, of many threatened deep-water ecosystems would be forgone."

The Report further concludes: **"A regional or fishery-by-fishery approach will probably not be sufficient. It is essential to ensure that problems are not merely exported from one marine area to another."**

Even where regulations are in place within areas managed by Regional Fisheries Management Organizations (RFMOs), catch data may be lacking, limited or inaccurate²⁰. For instance, a number of discrepancies exist in the catch data from different sources.²¹ Recent estimates,²² using a variety of data sources from governments, scientific reports and markets, put the total high seas bottom trawl catch of the Northeast Atlantic in 2001 at 31,691– 63,666 mt. This is equivalent to a value of between €35,252,450 and €78,411,996²³, or between a fifth and a third of the total value of the entire deep-water catch for the Northeast Atlantic (high seas and EEZs).²⁴ The total reported catch for the entire Northeast Atlantic in 2001 was 11,164,413 mt, of which the high seas bottom trawl catch comprised just 0.27-0.58 %.²⁵ The total high seas bottom trawl catch in the Northwest Atlantic was estimated to be 124,169 mt, accounting for an estimated 5.6 % of the total marine catch for the Northwest Atlantic.

Much of the deep-sea lies beyond areas of national jurisdiction, in the vastness of the international waters known as the high seas. Regional Fisheries Management Organisations (RFMOs) are the recognized legal mechanism for exploiting fisheries on the high seas. However, most high seas areas are entirely unregulated in so far as deep-water fisheries are concerned and most high seas bottom trawling is thus unregulated. Even where RFMOs exist, illegal, unreported and unregulated (IUU) or "pirate" fishing is thriving. The value of pirate fishing from the international waters of the high seas alone, is conservatively put at 1 billion Euro per year – equal to 20% of the total value of the global catch of oceanic species in 2002²⁶. IUU fishing is one of the primary threats now facing high seas biological diversity. The total cost of IUU fishing to the vulnerable deep-sea ecosystems destroyed in the race to catch the last fish, is priceless.

In 2001, the United Nations Food and Agriculture Organisation (FAO) adopted an international plan of action to combat illegal, unreported and unregulated fishing (IPOA-IUU). It is a voluntary agreement that asks states to tackle this important issue. At the World Summit on Sustainable Development in 2002, world leaders committed to implement the FAO IPOA-IUU and eliminate IUU fishing by 2004. In 2003, the Group of 8 most developed countries committed to urgently develop and implement the IPOA-IUU. In March 2005, Fisheries Ministers reaffirmed their commitment to eliminate IUU fishing in the context of the Committee on Fisheries of the FAO.²⁷ Despite all these commitments, Greenpeace observed and documented pirate fishers flouting international rules where they exist, and fishing with impunity where they do not, throughout 2004 and 2005.

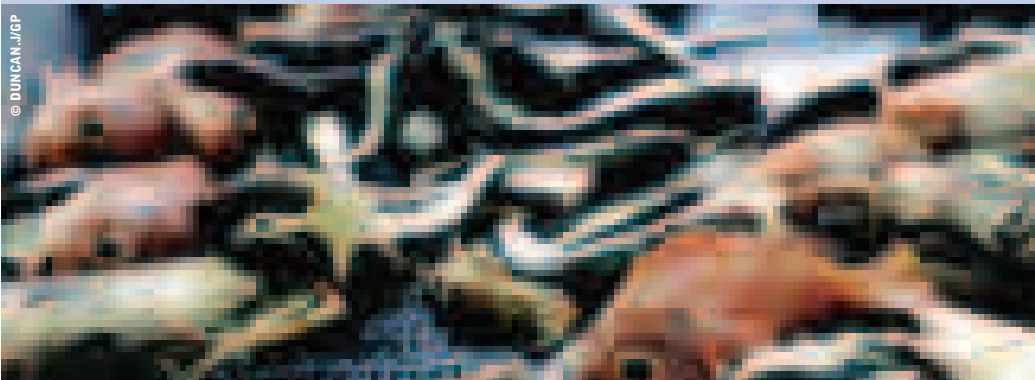
Eliminating IUU fishing is not simply an issue of fisheries management. It requires attention from all the international agencies and agreements that either have competence over or an interest in managing the biological diversity of the High Seas. As such, while the true economic costs of high seas bottom trawling are unclear, what is clear is that the environmental costs of these fisheries are extremely high. This report reviews the deep-sea fisheries and governance of the international waters of the north Atlantic, describes catches and quotas from bottom trawled species and exposes European-owned vessels and companies involved in high seas bottom trawling. The lack of transparency in the high seas bottom trawling industry, difficulties involved in identifying high seas bottom trawling vessels and issues of regulation and enforcements are discussed.²⁸

1. Introduction

BOX 1: DEEP-SEA FISH COMMONLY HARVESTED BY DEEP-SEA BOTTOM TRAWLERS

Of the 340 or more deep-sea species recorded in the North Atlantic,²⁹ only ten make up the bulk of the commercial bottom trawl harvest:³⁰

- * **Argentines** (*Argentina spp.*)
- * **Black Scabbardfish** (*Aphanopus carbo*)
- * **Blackspot Bream (seabream)** (*Pagellus bogaraveo*)
- * **Blue Ling** (*Molva dypterygia*)
- * **Greenland Halibut** (*Reinhardtius hippoglossoides*)
- * **Ling** (*Molva molva*)
- * **Northern Prawn**
- * **Orange Roughy** (*Hoplostethus atlanticus*)
- * **Roundnose Grenadier** (*Coryphooides rupestris*)
- * **Tusk** (*Cusk, Lump*).



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Argentines are normally found on the upper slope and continental shelf,³¹ between 200m and 900m in depth.³² They are thought to only sustain low fishing pressure.³³ **Black Scabbardfish** are found in waters 300-500m deep and are caught in the Northeast Atlantic, between Iceland and Madeira.³⁴ **Blackspot Bream** is caught in the entire East Atlantic, from Norway to Mauritania.³⁵ They are considered particularly vulnerable to over-exploitation.³⁶ **Blue Ling** is caught in the Northwest Atlantic, and southeast of Greenland,³⁷ in waters 350-500m in depth.³⁸ They are a late-maturing and long-lived species that is considered over-fished, with stocks now in danger of collapse.³⁹ The 2005 EU quota for Blue Ling in ICES sub-areas VI and VII was 3137 metric tonnes (mt).⁴⁰ **Greenland Halibut** occurs in the Northwest Atlantic, where trawling has already significantly reduced the stock. Fishing levels are considered unsustainable.⁴¹ The EU quota for 2005 in NAFO areas 3LMNO for 2005 was 8254mt, of which the majority was held by Spain (5208 mt).⁴² **Ling** is fished along the Irish continental slope, as well as the East Atlantic,⁴³ at depths of 200-600m.⁴⁴ Ling has a low resilience to over-fishing.⁴⁵ The 2005 EU quota for ICES sub-areas VI, VII, VIII, IX, X, XII, and XIV was 14966 mt.⁴⁶ **Northern Prawns** are trawled in the international waters of the Grand Banks and Flemish Cap region of the Northwest Atlantic at depths of 200-700 m.⁴⁷ The NAFO division 3M allocation for this fishery in 2005 allowed 33 EU vessels to fish in the area for a total of 3293 fishing days.⁴⁸ **Orange Roughy** can be found in waters deeper than 1000m,⁴⁹ on the continental slopes, seamounts and ocean ridges in the Atlantic, South Pacific and Southern Indian Ocean.⁵⁰ It is late-maturing and can live to the age of 100-plus years.⁵¹ Bottom trawling has had severe impacts on many of the stocks. **Roundnose Grenadier** is fished around Iceland, Norway, Greenland and along the North-eastern coast of Africa.⁵² It is mainly found at depths of 750-2000m,⁵³ and has a low rate of reproduction.⁵⁴ As a consequence, it too is considered vulnerable to exploitation. The [EU] TAC for 2005 in ICES areas was 12443 mt. Finally, **Tusk** can be found at a depth of 200-600m,⁵⁵ occupying the outer continental shelf, and upper slopes off the coasts of Norway, the Faroes, Rockall and Greenland.⁵⁶ Tusk has a low reproductive capacity and matures at a slow rate.⁵⁷ The EU quota for Tusk in 2005 in ICES sub-areas V, VI and VII was 604 mt.⁵⁸

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2. European interests in high seas bottom trawling

2.1 The challenges in obtaining data

Even though the European Community's Common Fisheries Policy requires EU Member States to supply detailed information about their fishing vessels and other aspects of fisheries management, this information is often supplied late or not supplied at all.⁵⁹ According to the European Commission, 'some progress has been made [since 2003]'.⁶⁰ Encouragingly, almost all new EU Member States are in full compliance with their obligations to provide information. Information submitted by a number of "old" Member States, in particular - Greece, Spain, France, Italy and Portugal - however, was considered 'once again incomplete in various degrees [and] in the case of Spain, France and Italy, the missing information concerned a large number of vessels'⁶¹. Ireland and the UK, which had failed to provide a complete data set in 2003, apparently were complying with their fleet register obligations in 2005.

As regards obligations to monitor and report catches, the Commission summarises that only 'three Member States - Denmark, Sweden and the UK - complied fully with the rules by submitting all the required catch reports on time, while three others - Cyprus, Malta and Slovenia - failed to submit any reports at all'.⁶² Moreover, only 10 of the 20 coastal EU Member States transmitted their regular monthly reports on catches within the established deadlines, and the submission of quarterly reports continued to be unsatisfactory in terms of overall response. In particular, reports on catches from non-EU waters were lacking. Spain, Italy, Cyprus, Lithuania, Malta and Slovenia failed to submit any quarterly reports.⁶³

As regards fishing effort declarations, the situation in 2004 regressed compared to 2003, according to the European Commission. Only two EU Member States - Belgium and Sweden - met their obligations on fishing effort declarations in 2004. France, Ireland and Portugal failed, for the third consecutive year, to transmit any data about their fishing effort.

The Commission further summarises that '[t]he number of serious infringements detected and reported to the Commission rose to 9,502 in 2003, compared to 6,756 in 2002. As in previous years, the commonest form of serious infringement was unauthorised fishing. In addition, the level of fines being applied across the Community for wrong-doing is not acting as a deterrent and, basically, more needs to be done to deter lawbreakers'. It should be noted

that the above reporting and monitoring provisions apply to most Community fisheries (not just deep sea fisheries), and that it is unclear how many of the detected infringements relate to high seas bottom trawl vessels. It should be further noted that a vessel that is not flagged in a European Union Member State is not normally covered by the provisions of the Common Fisheries Policy.

The reluctance with which data is transferred to the European Commission and the patchiness of reporting and monitoring requirements for vessels fishing on the high seas means that information on the proportion of deep-sea catch by country, its value, the number of vessels trawling the high seas in any one year and their ownership is not readily available.⁶⁴ More specifically, assessing the extent of deep-sea trawling on the high seas in general, and the Northern Atlantic in particular, is made difficult by:

- * *the lack of reliable catch statistics, in particular those identifying a high seas catch;*⁶⁵
- * *the fact that most high seas bottom trawl fisheries are unregulated and occur in a huge geographical area;*⁶⁶
- * *the fact that intergovernmental bodies, such as the North Atlantic Fisheries Organisation (NAFO) and the International Council for the Exploration of the Sea (ICES) do not make information on specific vessels and their activities available publicly;*
- * *the lack of transparency of the industry and their business relationships;*
- * *the fact that available statistics are often inaccurate and may not reflect the true scale of legal fishing in international waters;⁶⁷ illegal, unreported and unregulated (IUU) fishing further blurs the accuracy of available statistics.⁶⁸*

In addition, it is difficult to identify companies involved in the chartering of vessels, and in the trading and retailing of the high seas bottom trawl catches and resulting products. Regrettably, it is conditions such as these that further encourage IUU fishing.

2. European interests in high seas bottom trawling

2.2 The high seas bottom trawling industry in Europe

Despite the challenges described above, a review of the Lloyd’s register, the EU fleet register, national databases and other government and industry sources, as well as observations at sea (Greenpeace sources), allows the identification of at least 398 European vessels that are equipped to engage in high seas bottom trawling

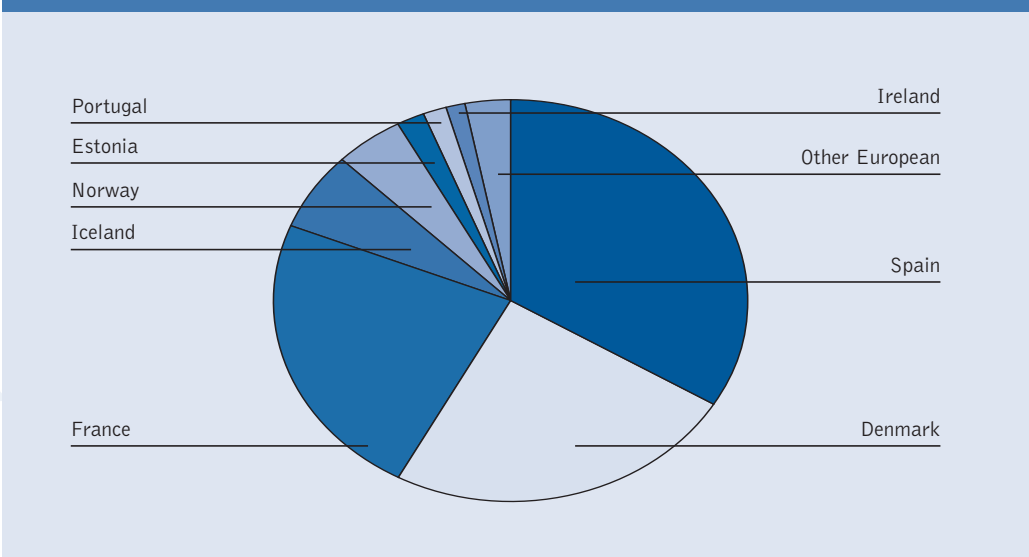
(Full methodology in Appendix 1).

In comparison, Lloyd’s register, in 2005, identified 318 vessels equipped to engage in high seas bottom trawling as flagged in Europe, while 80 were flagged to other countries but were linked to European coastal states through the nationality of their owners or operators. The vast majority (80%) of vessels were flagged in Spain, Denmark, or France (see Table 1 and Figure 1).

TABLE 1: EUROPEAN VESSELS EQUIPPED TO BOTTOM TRAWL ON THE HIGH SEAS (ADAPTED FROM SOURCE: LLOYD’S REGISTER)

COUNTRY	NO OF VESSELS	% OF EUROPEAN VESSELS
Spain	107	33.6
Denmark	77	24.2
France	74	23.2
Iceland	20	6.3
Norway	15	4.7
Estonia	6	1.9
Portugal	5	1.6
Ireland	4	1.3
Other	10	3.1
Total	318	99.9

FIGURE 1: PROPORTION OF HIGH SEAS BOTTOM TRAWLERS FLAGGED IN EUROPEAN COUNTRIES



In addition to desk-based research in 2004 and 2005, Greenpeace documented bottom trawlers fishing in the international waters of the NAFO and NEAFC Regulatory Areas and the “Loophole” area of the Barents Sea. The following 18 vessels were identified:

TABLE 2: VESSELS DOCUMENTED BOTTOM TRAWLING IN INTERNATIONAL WATERS

VESSEL NAME	CALL SIGN	FLAG	PORT OF REGISTRY	OWNER	LOCATION	AREA LOCATED	DATE
ANA GANDON	EBVE	Spain	Vigo	Hermanos Gandon S.A. ¹	Spain	NAFO Reg. Area	August 2005
ANUVA	LYMP	Lithuania	Klaipeda	JSC Anuva ²	Spain	NE Atlantic; International Waters	November 2004
BORGIN	LYQI	Lithuania	Klaipeda	Polaris EHF	Iceland	NAFO Reg. Area	August 2005
FREIREMAR UNO	EHXB	Spain	Vigo	Pesca Herculina	Canary Islands	NAFO Reg. Area	August 2005
KERGUELEN	FNSH	Togo ³	Port-aux-Francais	Silva Vieira	Portugal	Barents Sea	September 2005
LOMUR 2	ESGH	Estonia	Tallinn	Baltic Lomur	Estonia	NAFO Reg. Area	August 2005
LOOTUS II	ESPU	Estonia	Tallinn	Lootus Teine	Estonia	NAFO Reg. Area	August 2005
MURTOSA	5VMA0	Togo	Lome	Murtosa Fishing CO	Falkland Islands	Barents Sea	September 2005
ONTIKA	ESKO	Estonia	Tallinn	Reyktal Ltd (Reyktal AS)	Estonia	NAFO Reg. Area	July-Aug 2005
OTTO	YLAC	Latvia	Riga	Mersrags-I Ltd	Latvia	NAFO Reg. Area	August 2005
PETUR JONSSON	TFXN	Iceland	Reykjavik	Petur Stefansson	Iceland	NAFO Reg. Area	July 2005
PLAYA DA CATIVA	EHTR	Spain	Gijon	Pesquerias Tara S.A. 4	Spain	NAFO Reg. Area	August 2005
PLAYA DE TAMBO	EDWY	Spain	Vigo	Pesquerias Marinenses S.A.	Spain	NAFO Reg. Area	August 2005
PUNTA ROBALEIRA	EHTA	Spain	Vigo	Hermanos Gandon S.A.	Spain	NAFO Reg. Area	August 2005
RIO ORXAS	EAUU	Spain	Gijon	Inter Rodríguez A.I.E. ⁴	Spain	NAFO Reg. Area	August 2005
SANTA CRISTINA	CUFE	Portugal	Aveiro	Aveiro Pesca	Portugal	NAFO Reg. Area	July 2005
SANTA MARIÑA	EEMX	Spain	Vigo	Pesquera Barra S.A.	Spain	NAFO Reg. Area	August 2005
SUNNA	ESCS	Estonia	Tallinn	OU Caslente	Iceland	NAFO Reg. Area	July-Aug 2005

Vessel Details from Lloyds Ships Register unless otherwise specified.⁶⁹

¹ Ministerio De Agricultura, Pesca Y Alimentación. 2005. Resolución de 30 de junio de 2005, de la Secretaría General de Pesca Marítima, por la que se dispone la publicación de la actualización de los anexos de la Orden de 21 de diciembre de 1999, por la que se ordena la actividad pesquera de la flota española que faena en la zona de regulación de la Organización de la Pesca del Atlántico Noroccidental. Available online at: <http://boe.es/boe/dias/2005-07-28/pdfs/A26855-26858.pdf> downloaded 15th November 2005; Lloyd’s Register Fairplay, available online, via subscription at: <http://www.ships-register.com>⁷⁰

² Lloyd’s Marine Intelligence Unit 2005. Available online, via subscription at: <http://www.seasearcher.com>, accessed 16th November 2005.

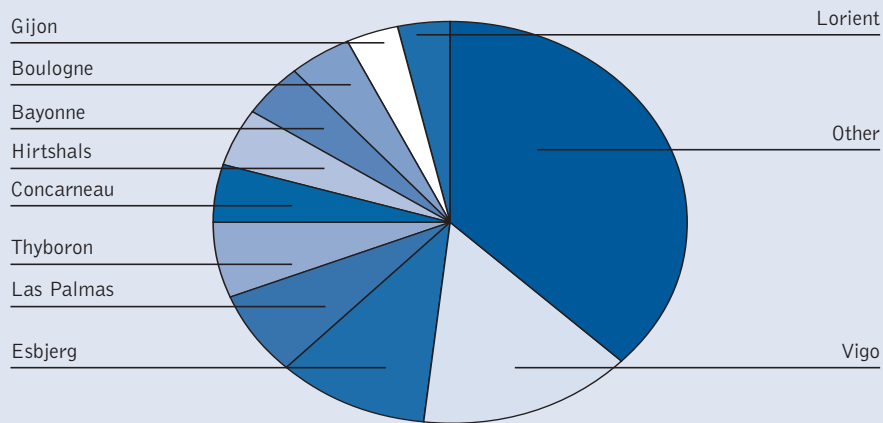
³ Vessel identified as being flagged in Togo by NEAFC. NEAFC 2005 <http://www.neafc.org/measures/docs/iuu-b-list.pdf> Document properties state created 22nd November 2005.

⁴ Ministerio De Agricultura, Pesca Y Alimentación. 2005. Resolución de 30 de junio de 2005, de la Secretaría General de Pesca Marítima, por la que se dispone la publicación de la actualización de los anexos de la Orden de 21 de diciembre de 1999, por la que se ordena la actividad pesquera de la flota española que faena en la zona de regulación de la Organización de la Pesca del Atlántico Noroccidental.

The 318 vessels identified by Lloyd’s are registered at nearly 50 different ports (the registered port could be identified for 280 of the 318 European vessels), with ten ports accounting for nearly two-thirds of the identified vessels (figure 4). The port of Vigo in Galicia, Spain, has a greater number of European bottom trawlers registered than any other port in Europe. Vigo is also the biggest port of registry for freezer trawlers in Europe.

2. European interests in high seas bottom trawling

FIGURE 2: PORT OF REGISTRY OF EUROPEAN HIGH SEAS BOTTOM TRAWLERS



Fresh fish from Vigo is sold in El Berbés, Galicia, Spain. About 20 trawlers regularly land their fish in the UK, but some or all of the catch is then transported to and sold in France. France is the most important European market for deep-sea species, both in terms of overall fresh fish sales and in terms of variety.

The most common country of vessel ownership appears to be Spain, with almost half of the vessels owned by Spanish companies, followed by Iceland, Estonia and Portugal. That said, it is much easier to identify Spanish licensed bottom trawlers because the Spanish Ministry of Agriculture, Fisheries and Food publishes vessel names and companies, which are licensed to trawl in the NAFO Regulatory Area (see section 4.4).

TABLE 3: VESSELS LICENSED TO BOTTOM TRAWL IN THE NAFO REGULATORY AREA 2005

VESSEL NAME	CALL SIGN ⁷¹	FLAG	COMPANY
AREA COVA	EGBP	Spain	Area Cova S.A.
EIRADO DO COSTAL	3FBE8	Spain	Pesqueras Tara S.A.
FAKIR	EAHK	Spain	Freiremar S.A.
FESTEIRO	EAOA	Spain	Freiremar S.A.
GAROYA SEGUNDO	EHIM	Spain	Oyalves S.L.
MANUEL ANGEL NORES	EBZJ	Spain	Manuel Nores Gonzalez
MARIA EUGENIA G	EHWN	Spain	Eloymar S.A.
MORADIÑA	EDQR	Spain	Moradi_a S.A.
PATRICIA SOTELO	EAVX	Spain	Sotelo Dios S.A.
PESCAVAQUEIRO	EDTQ	Spain	Pesca Baquero S.A.
PESCABERBES DOS	EHXX	Spain	Pescaberbes S.A.
PLAYA DE ARNELES	EAXT	Spain	Pesquera Vaquero S.A.
PLAYA DE RODAS	EHQQ	Spain	Nugago Pesca S.A.
PLAYA DE SARTAXENS	EHKC	Spain	Moradi_a S.A.
PLAYA MENDUIÑA DOS	EBWV	Spain	Moradi_a S.A.
PUENTE PEREIRAS CUATRO	EFJS	Spain	Armadora Jose Pereira S.A.
PUENTE SABARIS	E.E.A.L	Spain	Jose Pereira E Hijos S.A.
RIO CAXIL	N/A	Spain	Farpespan S.L.
VILLA DE PITANXO	ECCU	Spain	Manuel Nores Gonzalez
XINZO	EDOF	CNI	Pesqueras Bigaro Narval S.A.

2.3 High seas bottom trawlers documented by Greenpeace

In addition to the more general information in 2.2, Greenpeace has managed to compile a more detailed dossier on a number of specific vessels. The vessels described here were observed bottom trawling on the high seas areas of the North Atlantic during four separate voyages during 2004 and 2005. Their legal status, ownerships and operators were further investigated and summarised below, in particular noting links to European flags, owners or ports.

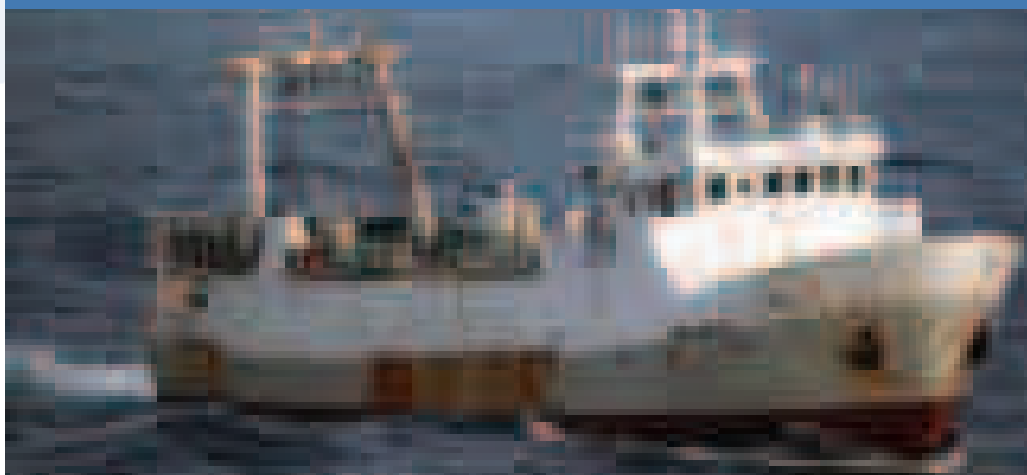
Moreover, some of the vessels have been clearly identified by one or more parties as having engaged in illegal, unreported or unregulated (IUU) fishing. Some of the others engaged in seemingly legal fishing at the time, but have had difficulties in identifying ownership and/or had in the past been identified as IUU vessels or breaking fisheries regulations whilst fishing in the high seas.

2.3.1 Spanish fleet

2.3.1.1 Anuva The fishing vessel *Anuva* was documented bottom trawling in the international waters of the Northeast Atlantic in November 2004 by the Greenpeace vessel, *Esperanza*. At the time, the Norwegian Directorate of Fisheries confirmed to Greenpeace that the vessel had been blacklisted in the Norwegian EEZ.⁷² The vessel is operated and managed by Pesquera Albri S.A,⁷³ a company based in Vigo, Spain.⁷⁴ Since 2001, she has been owned by the Lithuanian company, JSC Anuva, and is currently flagged to Lithuania, although it has been changed flags several times in the last decade.⁷⁵ The beneficial owner of the vessel is the Spanish company Blue Tide, S.L., which is based in Vigo.⁷⁶

The *Anuva* and its checkered history are the subject of a Greenpeace Case Study on IUU fishing published in March 2005 called *The Secret Shame of the Anuva* which can be found at: www.greenpeace.org/anuva

FIGURE 3: THE FISHING VESSEL ANUVA TRAWLING IN THE NORTHEAST ATLANTIC IN NOVEMBER 2004. © GREENPEACE



2.3.1.2. Ana Gandon and Punta Robaleira The *Ana Gandon* (Figure 5) was documented bottom trawling in section 3M of the NAFO Regulatory Area in August 2005.⁷⁷ The vessel is listed in the register maintained by the Spanish Fisheries Ministry as possessing a licence to fish for Greenland halibut in the NAFO regulatory area and as owned by Hermanos Gandon S.A.⁷⁸ Hermanos Gandon S.A. is listed as the owner, operator and manager of the vessel by Lloyd's Register Fairplay and the port of registry is listed as Vigo.⁷⁹ However, the reported owner of the *Ana Gandon*, Hermanos Gandon S.A. does not list the vessel as one of their fleet.⁸⁰ Instead, the company's website lists three vessels which have licences to bottom trawl in the NAFO area⁸¹ as owned by Hermanos Gandon, namely the *Esperanza Menduina*, *Hermanos Gandon Cuatro* and the *Punta Robaleira* (website last updated 16th January 2003).⁸²

The *Punta Robaleira* was observed fishing in the NAFO Regulatory Area by the Greenpeace vessel *Esperanza* on 2nd August 2005 (Figure 6). Its port of registry is also Vigo and it is licensed to fish for Greenland halibut in the NAFO area⁸³.

In a fax to Greenpeace, the parent company of both the *Ana Gandon* and the *Punta Robaleira* did not admit to bottom trawling in the high seas.⁸⁴

FIGURE 4: THE FISHING VESSEL ANA GANDON TRAWLING IN THE NAFO REGULATORY AREA, AUGUST 2005. © GREENPEACE

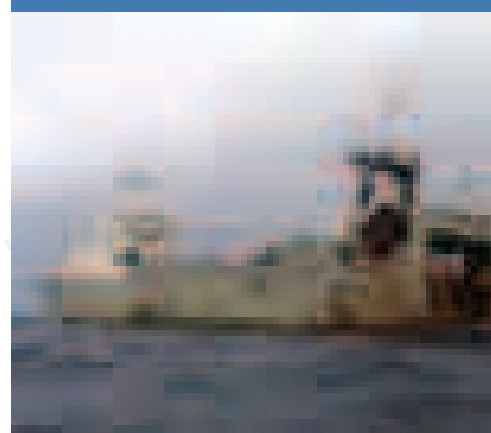
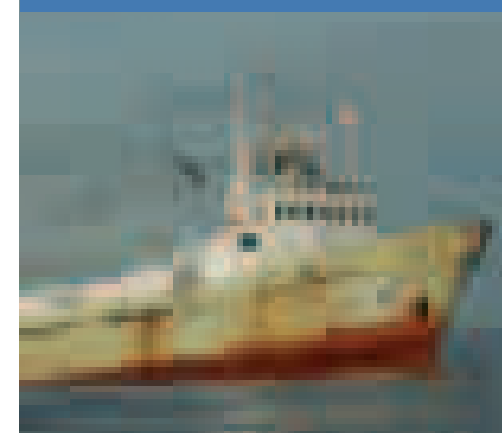


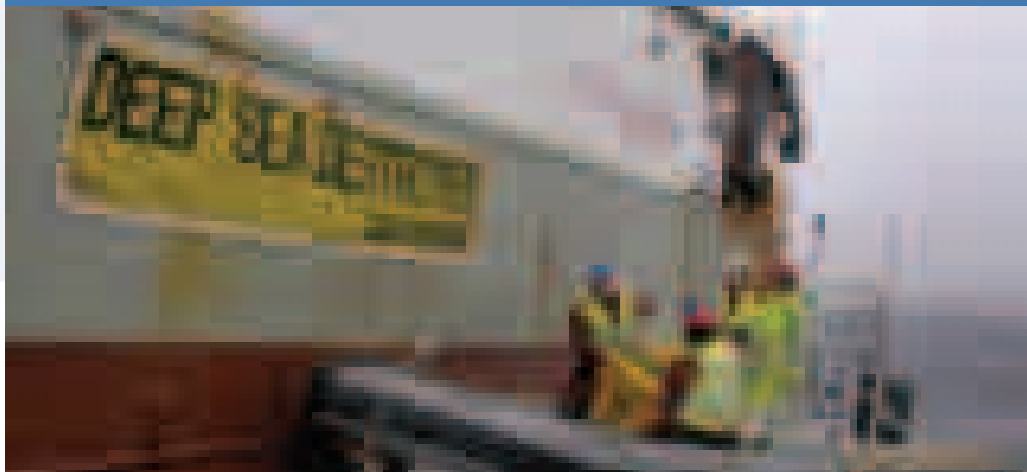
FIGURE 5: THE FISHING VESSEL PUNTA ROBALEIRA TRAWLING IN THE NAFO REGULATORY AREA, AUGUST 2005. © GREENPEACE



2. European interests in high seas bottom trawling

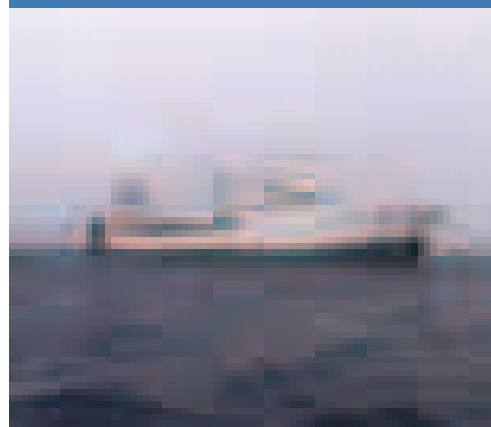
2.3.1.3 Playa de Tambo The Spanish flagged *Playa de Tambo* was documented bottom trawling in the NAFO Regulatory Area in August 2005 (Figure 6).⁸⁵ The vessel is licensed to trawl for Greenland halibut in the NAFO area⁸⁶ and is owned, operated and managed by the Spanish company Pesqueras Marinenses S.A.⁸⁷ The company owns five vessels in total⁸⁸ and fishes for a number of species including Greenland halibut and Patagonian toothfish, which are sold through Pesmarín.⁸⁹

FIGURE 6: THE FISHING VESSEL PLAYA DE TAMBO IN THE FLEMISH CAP, IN THE NORTH WEST ATLANTIC OCEAN. © GP/HUNTER



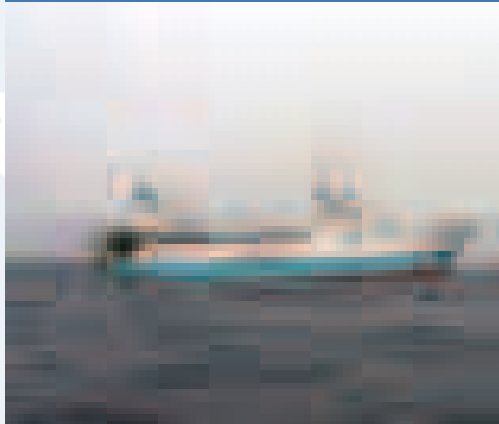
2.3.1.4 Freiremar Uno The Spanish flagged *Freiremar Uno* is owned by the Canary Islands-based Pesca Herculina S.A.⁹⁰ The vessel has a licence to bottom trawl for Greenland Halibut in the NAFO Regulatory Area⁹¹ and was observed fishing in the area by Greenpeace in August 2005.⁹² On October 4th 2004, the vessel was issued a **NAFO citation** for failing to facilitate the work of an inspector.⁹³ The *Freiremar Uno* is managed and operated by Freiremar S.A, which also has a head office in the **Canary Islands**.⁹⁴ Freiremar S.A. is a Spanish fishing company and sells fish throughout Europe and to Japan.⁹⁵ Freiremar has offices in Africa, North and South America and wholesale outlets throughout Spain.⁹⁶ Freiremar fishes for a number of species, including Greenland halibut and in 2002, claimed to be the "principal ship owner of freezer vessels operating under Spanish flag."⁹⁷ Freiremar's products are sold under the Nakar and Freiremar brands.⁹⁸

FIGURE 7: THE FREIREMAR UNO OBSERVED IN THE NAFO REGULATORY AREA IN JULY AND AUGUST 2005. © GREENPEACE



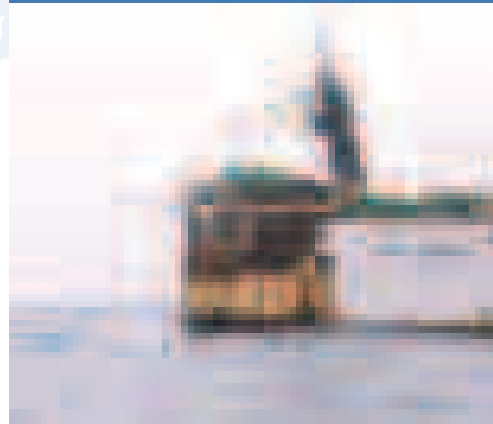
2.3.1.5 Playa de Cativa The Spanish flagged *Playa da Cativa* was documented bottom trawling in the NAFO Regulatory Area by the Greenpeace vessel, *Esperanza* in August 2005 (Figure 8).⁹⁹ The vessel is owned, managed and operated by Pesquerias Tara S.A.,¹⁰⁰ and the vessel is listed by the Spanish Ministry for Agriculture, Fisheries and Food as being licensed to bottom trawl in the NAFO Area.¹⁰¹

FIGURE 8: THE FISHING VESSEL PLAYA DA CATIVA TRAWLING IN THE NAFO REGULATORY AREA IN AUGUST 2005. © GREENPEACE



2.3.1.6 Rio Orxas The Spanish flagged fishing vessel the *Rio Orxas* is licensed to trawl for Greenland halibut in the NAFO area¹⁰² and was observed fishing in the NAFO Regulatory Area on 7th August 2005 by the Greenpeace vessel the *Esperanza* (Figure 9).¹⁰³ In a document published on 28th July by the Spanish Ministry for Agriculture, Fisheries and Food, the vessel is listed under the company Inter Rodríguez A.I.E.¹⁰⁴ However, a document published a few weeks earlier by the same Ministry lists the company as Pesquera Inter S.A.¹⁰⁵ Lloyd's Register Fairplay and Lloyd's Marine Intelligence Unit refer to Inter Pesquera as the owner, although the date of ownership differs in the each of the sources.¹⁰⁶ The vessel's ownership may have changed in July and not been updated at present. This is yet another example of the discrepancies in information that is publicly available on high seas bottom trawling fleets.

FIGURE 9: THE FISHING VESSEL RIO ORXAS TRAWLING IN THE NAFO REGULATORY AREA IN AUGUST 2005. © GREENPEACE



2.3.1.7 Santa Mariña The *Santa Mariña* is flagged to Spain and possesses a licence to fish for Greenland Halibut in the NAFO Regulatory Area.¹⁰⁷ The vessel is owned, managed and operated by the Spanish company Pesquera Barra S.A.¹⁰⁸ Greenpeace observed the *Santa Mariña* fishing in the NAFO Regulatory Area in August 2005¹⁰⁹ (Figure 10).

FIGURE 10: THE SANTA MARIÑA HAULING ITS NETS AND FISHING IN THE NAFO REGULATORY AREA IN AUGUST 2005. © GREENPEACE



2. European interests in high seas bottom trawling

2.3.2 Portuguese fleet

2.3.2.1. Kerguelen and Brites Greenpeace sighted and communicated with the fishing vessel *Kerguelen* as it was engaged in illegal high seas bottom trawling in the Barents Sea during the week of September 20, 2005. The Togo flagged *Kerguelen* is black-listed by the North East Atlantic Fisheries Commission (NEAFC) and the European Community as a vessel that has been confirmed as having engaged in illegal, unreported and unregulated fishing (IUU vessels).¹¹⁰

In October 2005, Greenpeace learned that the *Kerguelen* had docked in the Portuguese port of Aveiro. According to Portuguese sources the owner of the *Kerguelen*¹¹¹ is *Silva Vieira*. The three principal species targeted by the Silva Vieira group (Grupo Silva Vieira GSV) as a whole are redfish, cod and (American) plaice/yellow tail flounder. The fact that cod is a principal target species is interesting given that there is a moratorium on cod fishing in the NAFO area. However, much of the cod appears to come from fishing in the Barents Sea. More detail on this vessel is available in the Greenpeace IUU Case Study on the *Kerguelen* at: www.greenpeace.org/kerguelen

In addition to the *Kerguelen*, other vessels in Silva Vieira's fleet include the *Aveirensense* and the *Brites*. In May 2004, Canadian fisheries inspectors boarded the *Brites* on the Grand Banks. When the net was eventually retrieved, its mesh was 107 millimetres wide. To protect threatened species, the smallest mesh width allowed on nets under international rules is 130 millimetres wide. Despite clear evidence indicating a violation of international fishing regulations, the *Brites* was not prosecuted. Consultations between the Portuguese government and the European Union resulted in an order for the *Brites* to return to Portugal to undergo inspection. A fisheries inspector from the EU remained on board for the trip home. The decision to send the boat home was supposed to demonstrate the EU's commitment to conservation.¹¹² The outcome of the entire incident remains unclear, and despite requests by Greenpeace documents on the exchange between Portugal and Canada have not been forthcoming.¹¹³

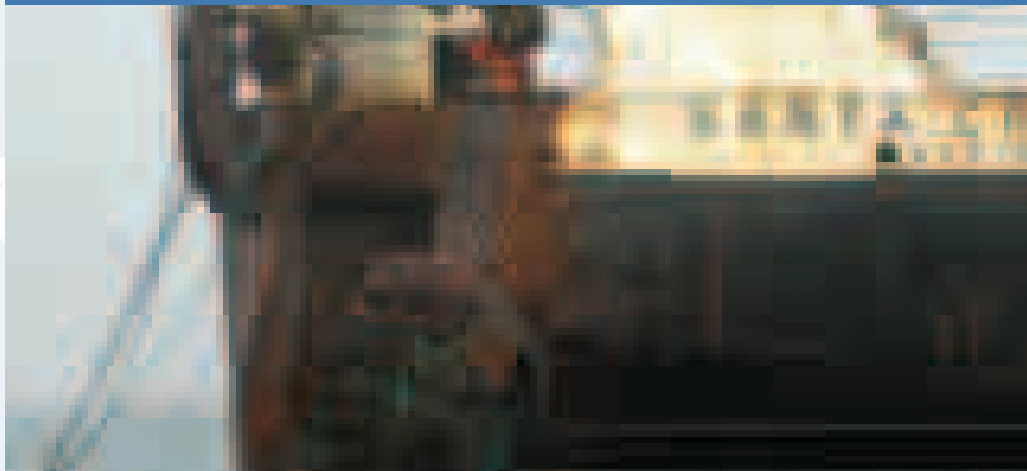
In November 2004, the European Commission adopted a regulation stating that Portuguese vessels fishing for redfish in NAFO Area 3M had exhausted their quota in that area and that further fishing for redfish by Portuguese-flagged vessels was prohibited for the allocation year. The Regulation was made effective from October 14, 2004.¹¹⁴ Yet even before the effective date of the regulation, the *Brites* was back on the Grand Banks. Lloyd's reported the vessel back in St. John's, Newfoundland by September 25, 2004.¹¹⁵ For more information on this and other vessels fishing in the NAFO Area, and on how NAFO is 'Regularly Failing to Manage our Oceans', see the in-depth Greenpeace NAFO case study at: www.greenpeace.org/nafo¹¹⁶

FIGURE 11: THE KERQUELEN IN THE NAFO REGULATORY AREA, SEPTEMBER 2005. © GREENPEACE/DICK GILLBERG



2.3.2.2 Santa Cristina The vessel *Santa Cristina* is owned, managed and operated by the Portuguese company Aveiro Pesca.¹¹⁷ She was observed bottom trawling by Greenpeace in the NAFO Regulatory Area in July 2005 (Figure 12).¹¹⁸ Aveiro Pesca owns two other trawlers, the *Calvao* and the *Santa Mafalda*.¹¹⁹ Both the *Calvao* and *Santa Mafalda* were issued NAFO citations in 2005 whilst fishing in the NAFO Regulatory Area.¹²⁰

FIGURE 12: THE SANTA CRISTINA HAULING ITS NET IN THE NAFO REGULATORY AREA, AUGUST 2005. © GREENPEACE/HUNTER



2.3.2.3. Murtosa On September 19, 2005, the Greenpeace ship *Esperanza* observed and stopped the Togo-flagged factory trawler *Murtosa* from illegally fishing for cod in the international section of the Barents Sea known as the “Loophole”. Current levels of illegal and unregulated fishing for cod in the Barents Sea are estimated to be at least 100,000 tons, about one third of the annual legal quota. The trawler’s captain confirmed to Greenpeace that he was knowingly taking cod with no legal quota.

Reflagged several times in its lifetime, from Portugal to the Falkland Islands, and to Togo since 2004, the *Murtosa* is blacklisted by Iceland¹²¹ and at the October 2005 meeting of the North East Atlantic Fisheries Commission (NEAFC), the *Murtosa* was added to the black list of vessels confirmed to have engaged in IUU fishing. The *Murtosa* was subsequently added to the EU’s blacklist.

The *Murtosa* provides a striking example of the difficulties in identifying the owners and operators of vessels involved in IUU fishing¹²². Both the Lloyd’s Register Fairplay and the Lloyd’s Maritime Intelligence Unit refer to an “unknown owner”, although the Lloyd’s Register still records the operators of the vessel as Murtosa Fishing Co., based in the Falkland Islands and connected with the vessel since 1996. Prior to this, the vessel was owned by Empresa de Pesca de Aveiro, the Portuguese company owning and operating the Santa Cristina. Greenpeace has not been able to confirm any links between Murtosa Fishing Co. and Empresa de Pesca de Aveiro, nor has it been able to identify the “unknown owner” recorded by Lloyd’s. During Greenpeace’s visit to the ship in September 2005, however, the captain stated that the ship was operated by a Portuguese company with links to the Falklands Islands. The ship’s crew was largely, and possibly entirely, Portuguese.

FIGURE 13: MURTOSA FISHING UNREGULATED IN THE LOOPHOLE OF THE BARENTS SEA IN SEPTEMBER 2005. © GP/GILBERG



2.3.3 Lithuanian fleet

2.3.3.1 Anuva See 2.2.1.1

2.3.3.2 Borgin The *Borgin* was documented trawling in the NAFO Regulatory Area by the Greenpeace vessel *Esperanza* in August 2005. The *Borgin* is flagged to Lithuania and is owned, managed and operated by the Icelandic company Polaris EHF.¹²³ In December 2004, the *Borgin* received three citations in NAFO division 3L for improperly labelled shrimp harvested in Division 3L, failure to carry an independent and impartial observer, and lack of an operational VMS.¹²⁴

FIGURE 14: THE BORGIN FISHING IN THE NAFO REGULATORY AREA IN AUGUST 2005. © GREENPEACE/HUNTER



2. European interests in high seas bottom trawling

2.3.4 Estonian fleet

2.3.4.1 *Lootus II* The Estonian flagged *Lootus II* was seen by Greenpeace bottom trawling in the NAFO Regulatory Area in August 2005. It has had **seven citations in the last four years for breaking NAFO rules**,¹²⁵ including fishing for species under moratoria and exceeding by-catch on plaice and witch flounder.^{126/127} The vessel is owned by the Estonian company Lootus Teine,¹²⁸ who according to Lloyd's Register Fairplay are also the manager and operator¹²⁹. Lloyd's Maritime Intelligence Unit attributes ownership to the company MFV Lootus OÜ. This simple discrepancy again underlines the problem of identifying the actual owner of such a vessel and holding them to account for the vessel's actions.

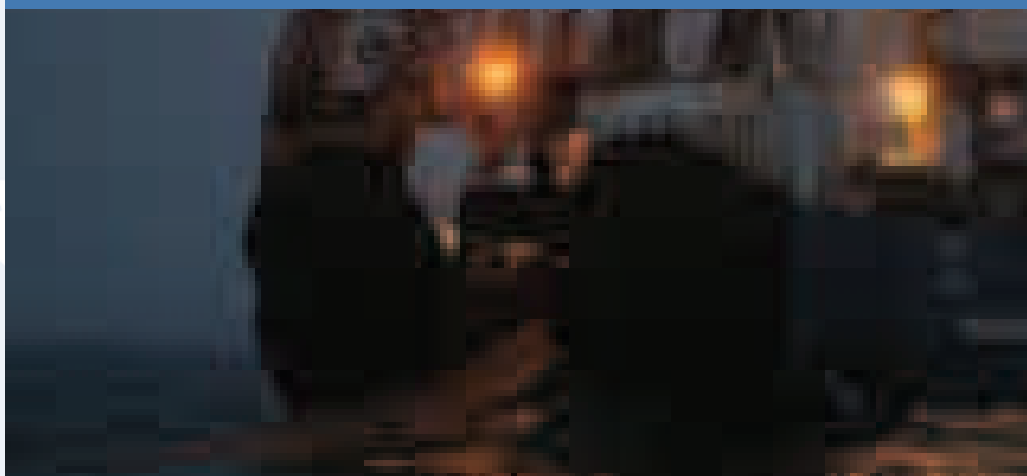
The original name of the *Lootus II* was *Fragana* (until 2000) and the owner at the time was Juan Oya Perez¹³⁰, a Vigo-based fishing company and a subsidiary of **Grupa Oya Perez**.¹³¹ Lootus Teine is a holding of the Spanish group Grupo Oya Perez, who also became a shareholder in MFV Lootus OÜ on December 21, 2004.¹³² Juan Manuel Oya Perez from Grupo Oya Perez was part of the EU delegation at the 25th Annual Meeting of NAFO on September 15-19, 2003 in Nova Scotia. **In 2004, three of the members of the EU delegation to the NAFO meeting were from Grupo Oya Perez¹³³**, despite none of the Spanish vessels being registered on the NAFO registry apparently belonging to Grupo Oya Perez. **Grupo Oya Perez has also been linked to the illegal fishing of Patagonian toothfish (*Dissostichus eleginoides*) in the Southern Ocean.**¹³⁴

FIGURE 15: THE FISHING VESSEL LOOTUS II IN THE NAFO REGULATORY AREA IN AUGUST 2005. © GREENPEACE/HUNTER



2.3.4.2 Lomur 2 The *Lomur 2* was observed trawling in the NAFO Regulatory Area in August 2005 by Greenpeace.¹³⁵ The *Lomur 2* is flagged to Estonia and owned by the Estonian company Baltic Lomur.¹³⁶ The *Lomur 2* is operated and managed by the Icelandic company Balticutgerd EHF.¹³⁷

FIGURE 16: THE FISHING VESSEL LOMUR 2 IN THE NAFO REGULATORY AREA IN AUGUST 2005 © GP/VIRGINIA LEE HUNTER



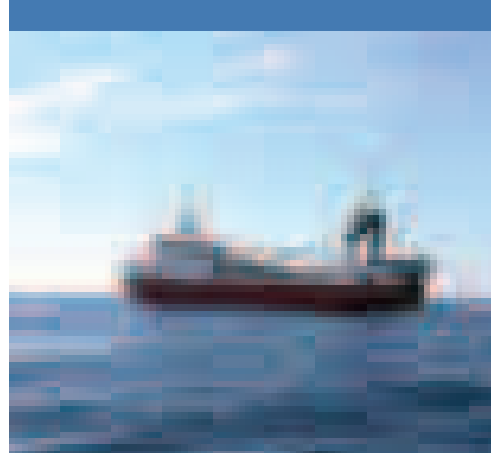
2.3.4.3 Sunna The Estonian flagged fishing vessel *Sunna* was documented fishing in the NAFO Regulatory Area by the Greenpeace vessel *Esperanza* in August 2005 (Figure 17).¹³⁸ The registered owner of the *Sunna* is OU Caslente of Iceland, and the vessel is managed and operated by Anglo EHF, also of Iceland.¹³⁹

FIGURE 17: THE SUNNA TRAWLING IN THE NAFO REGULATORY AREA. © GP/VIRGINIA LEE HUNTER



2.3.4.4 Ontika The Estonian flagged *Ontika* was observed fishing in the NAFO Regulatory Area in July and August 2005¹⁴⁰ (Figure 18). The vessel is owned, operated and managed by the Estonian company Reyktal Ltd (Reyktal AS).¹⁴¹ The company was established in 1997 and operates five freezer trawlers in total, that fish for Greenland halibut and shrimp in the North Atlantic.¹⁴²

FIGURE 18: THE FISHING VESSEL ONTIKA TRAWLING IN THE NAFO REGULATORY AREA. © GREENPEACE



2. European interests in high seas bottom trawling

2.3.5 Latvian fleet

2.3.5.1 Otto The *Otto* is flagged in Latvia and was observed trawling by the *Esperanza* in August in the NAFO Regulatory area (Figure 19). The vessel is one of six EU approved Latvian freezer vessels.¹⁴³ On 11 February 2004, two citations were issued to the vessel by NAFO inspectors for failing to have an authorization to fish in the NAFO Regulatory Area and for failing to provide VMS position reports every two hours.¹⁴⁴

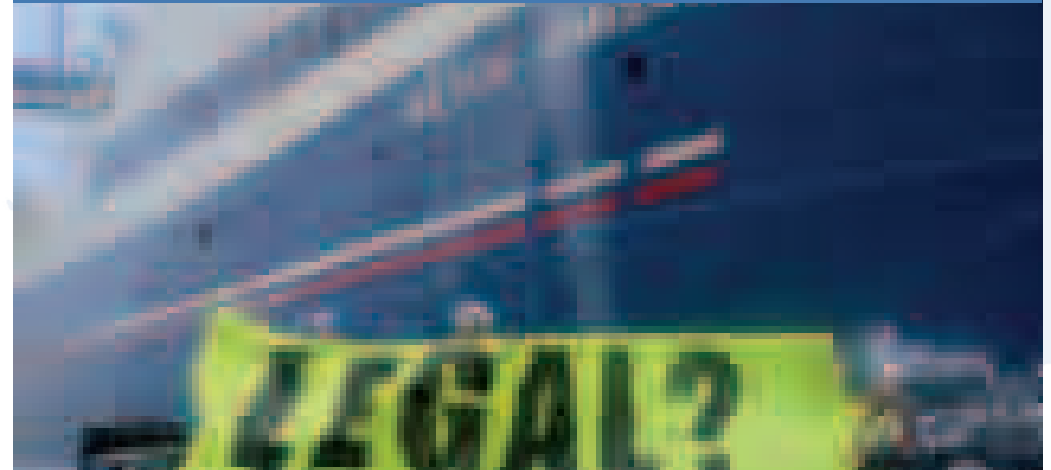
FIGURE 19: THE FISHING VESSEL OTTO TRAWLING IN THE NAFO REGULATORY AREA. © GREENPEACE



2.3.6 Icelandic fleet

2.3.6.1 Petur Jonsson Greenpeace observed the Icelandic flagged Petur Jonsson bottom trawling in the NAFO Regulatory Area in July 2005.¹⁴⁵ The vessel is owned by the Icelandic company Petur Stefansson.¹⁴⁶

FIGURE 20: THE FISHING VESSEL PETUR JONSSON IN THE NAFO REGULATORY AREA. © GREENPEACE/HUNTER



2.3.6.2 Sunna See 2.3.4.3.

2.3.6.3 Lomur 2 See 2.3.4.2.

2.3.6.4 Borgin See 2.3.3.2.

3. Governance in the North Atlantic

© GP VIRGINIA LEE HUNTER

Since the late 1970s, most coastal states have claimed Exclusive Economic Zones (EEZs) over waters out to 200 nautical miles from their coastline. Coastal states have sole jurisdiction over fish stocks in their EEZ. Areas that lie beyond the EEZ are known as the high seas. This area covers around 64% of the world's sea surface.

Regional Fisheries Management Organisations (RFMOs) are the recognised legal mechanism for regulating the exploitation of fisheries on the high seas. RFMOs, or similar arrangements, generally provide a forum for states involved in regional fisheries to negotiate on and co-operate with fisheries management and conservation. They are essentially responsible for carrying out the following functions: agreeing and implementing management and conservation measures, compiling and disseminating data, and establishing monitoring, control, surveillance and enforcement mechanisms. Where an RFMO or arrangement exists, state parties to the United Nations Fish Stocks Agreement cannot legally participate in the fishery unless they become a member of the RFMO or arrangement, or agree to apply its conservation and management measures.¹⁴⁷ It should be noted, however, that RFMOs only have the powers given to them by their member states and the ability to regulate those member states. It also means that vessels flagged to states that are not party to the RFMO who are not parties to the United Nations Fish Stocks Agreement are not obliged to abide by their rules.

Indeed, many RFMOs have very limited authority and most limit their remit to certain specific fish species, such as tuna. Only five RFMOs have the legal competence to regulate bottom high seastrawl fishing. These are the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), the Northwest Atlantic Fisheries Organization (NAFO), the Northeast Atlantic Fisheries Commission (NEAFC), the Southeast Atlantic Fisheries Organization (SEAFO) and the General Fisheries Commission of the Mediterranean (GFCM). To date, only CCAMLR has taken comprehensive steps to protect the marine biodiversity of the seabed from the impact of fishing, although it too is struggling to deal with the scourge of illegal, unregulated and unreported (IUU) fishing by flag-of-convenience vessels, non-parties, and in some cases its own parties, who fail to abide by its rules. The GFCM has taken the precautionary measure to ban bottom trawling below 1,000 metres depth, a depth that is not yet exploited in the Mediterranean, but has largely failed to

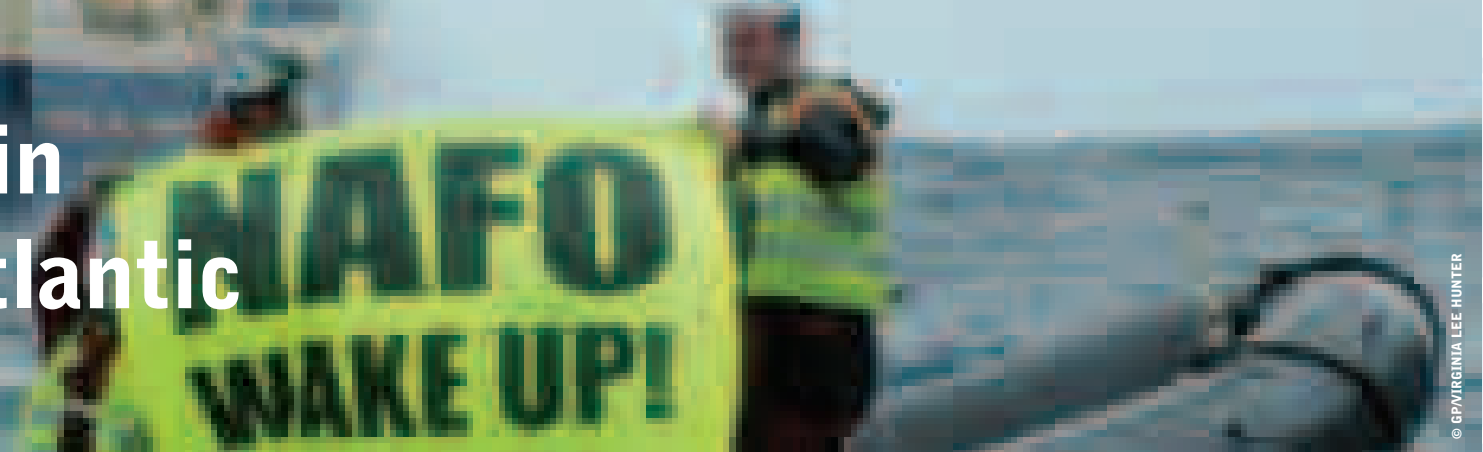
protect deep-sea life above this depth. NEAFC has protected a small number of sites – and not the main areas that are subject to bottom trawl fishing - from gear that is used in contact with the sea floor.

Even if the protection of deep-sea biodiversity was adequately managed by RFMOs, the limited geographical coverage of RFMOs with the competence to regulate deep-sea fisheries and their impacts on the benthic environment, leaves approximately three-quarters of the high seas completely unregulated when it comes to this type of fishing. The UN Secretary-General recently reported the gaps in coverage as being the southeast Pacific Ocean for all fish stocks, and the southwest Atlantic, south-east Pacific, west-central Pacific, Indian Ocean and the Caribbean for straddling fish stocks and discrete high seas fish stocks.¹⁴⁸

Drawing conclusions, a document on deep-sea fisheries tabled at the FAO Committee on Fisheries in March 2005 stated, "few regional fisheries management organizations (RFMOs) have a mandate to manage deepwater species, which are generally found in the high seas situations. ... Given that usually these fisheries take place in the high seas, they may be commonly characterized as unregulated and unreported."¹⁴⁹

The North Atlantic is governed by two RFMOs, the North East Atlantic Fisheries Commission (NEAFC) and the North West Atlantic Fisheries Organisation (NAFO). Information on the state of stocks in the Northeast Atlantic is provided by the International Council for the Exploration of the Sea (ICES). In addition to the rules and recommendations of NAFO and NEAFC, vessels are governed by the laws of their flag state. For all vessels flagged in the EU, this is the Common Fisheries Policy (CFP) of the European Community. Norway and Iceland have their own domestic rules.

3. Governance in the North Atlantic



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3.1 The International Council for the Exploration of the Sea (ICES)

The International Council for the Exploration of the Sea (ICES) is the leading source of information on marine ecosystems for governments and international regulatory bodies that manage the Northeast Atlantic Ocean and adjacent seas. It co-ordinates and promotes marine research and provides advice to the European Commission, the North East Atlantic Fisheries Commission (NEAFC) and coastal states around the North Atlantic.

Large fractions of ICES Subareas VI, VII, X, XII, and XIV consist of high seas (Figure 22). High seas that are subject to deep-sea fishing include areas around Rockall Bank, Hatton Bank and the southwest part of Lousy Bank (Subarea VI), the Mid-Atlantic Ridge north of the Azores EEZ (Subarea X), and part of the Reykjanes Ridge south of the Icelandic EEZ (Subareas XII, Division XIVb), where it lies outside the EEZ.

Scientific advice from ICES concerning most of the deep-sea species, indicates that fishing effort should be significantly reduced. In 2002, the Advisory Committee on Ecosystems of ICES warned that "recent information shows that deep-water trawling does take place in deep-water biogenic habitats. Any fishing gear physically impacting these habitats, by direct contact or by indirect effects such as wash or sedimentation, will cause an effect and therefore give rise to cause for concern [...] There is sufficient information to suggest that the most effective way of mitigating the effect of trawling on these habitats is to close such areas to fishing."

In October 2005, the ICES further called for a complete overhaul of deep-sea fisheries, and recommended that all existing deep-sea fisheries should be cut back to low levels until they can demonstrate that they are sustainable. ICES also recommended that no new fisheries for deep-sea fish should be allowed until it can be demonstrated that they are capable of being sustainable, and that zero catch levels should be set for depleted deep-sea shark species.

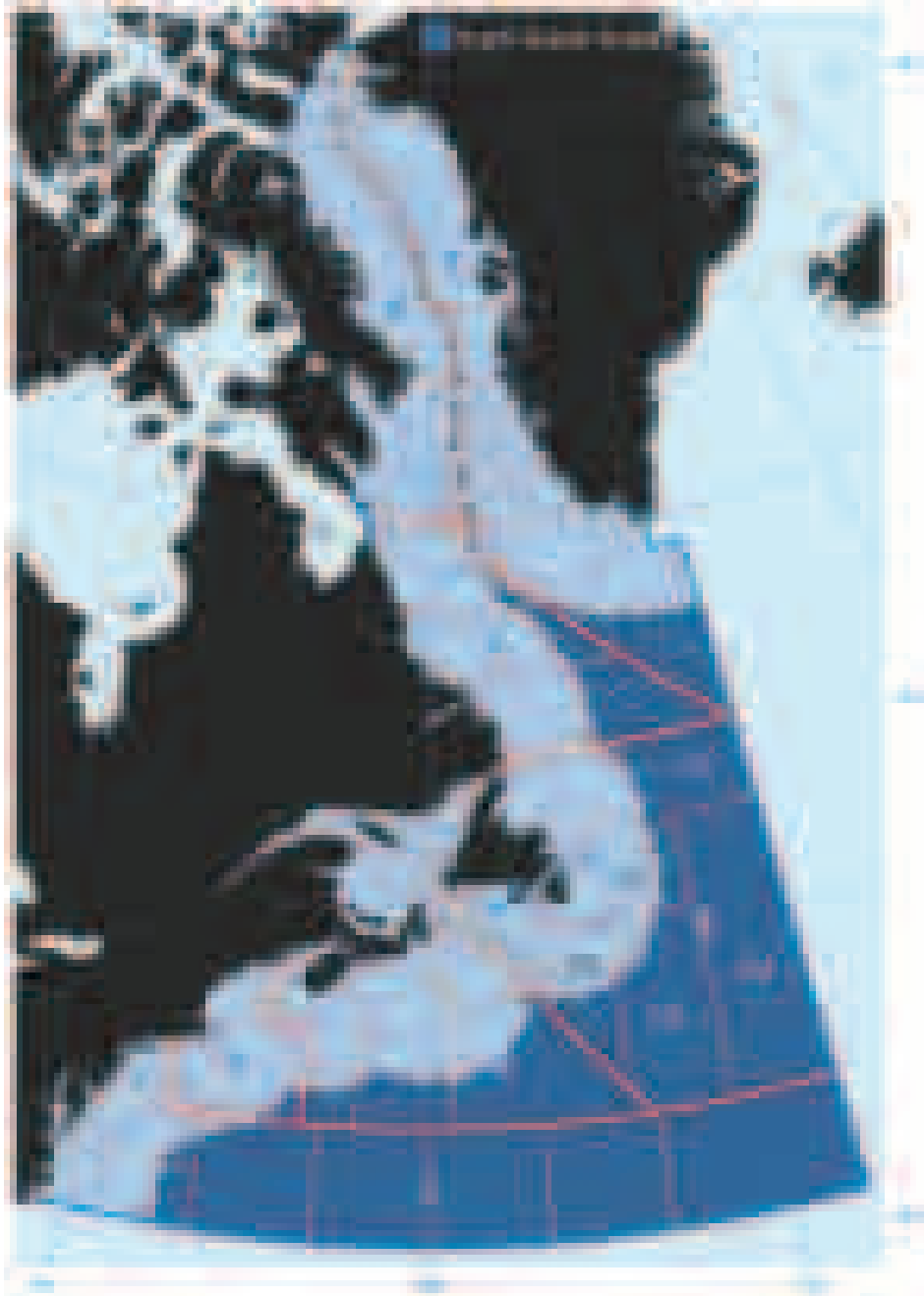
3.2 The North East Atlantic Fisheries Commission (NEAFC)

Most of the Northeast Atlantic is under the fisheries' jurisdiction of coastal states, and thus defined as national waters. However, three large areas of international waters constitute the Regulatory Area of the North East Atlantic Fisheries Commission (NEAFC) (see map). NEAFC forms the framework for international co-operation in the area of fisheries regulation beyond national fishing limits in the Northeast Atlantic and Arctic Ocean. It is the competent organisation for recommending measures to Contracting Parties for the management and exploitation of fish stocks. Its membership is composed of Estonia, the Faroe Islands, Greenland, Iceland, Norway, Poland, the Russian Federation, and the European Community.

NEAFC is competent to regulate deep-sea bottom trawling, but its mandate explicitly excludes the management of sedentary species. NEAFC has started to regulate deep-sea fisheries, including by closing five areas of high seas to bottom trawling and static gear to protect vulnerable marine ecosystems. These measures will be in place for three years, ending in December 2007. No agreement was found on one area, the Hatton Bank.

NEAFC has further recommended that fishing effort on deep-sea species be capped at effort levels of previous years. These decisions represent a 'lowest common denominator' approach to fisheries management and fly in the face of scientific advice from ICES recommending that the management of deep-sea fisheries in these areas are completely overhauled, that existing deep-sea fisheries are cut back to very low levels until they can be shown to be sustainable, that no new deep-sea fisheries should be allowed and that any such fisheries for deep-sea shark species should be set at a zero total allowable catch level – in other words, immediately halted.

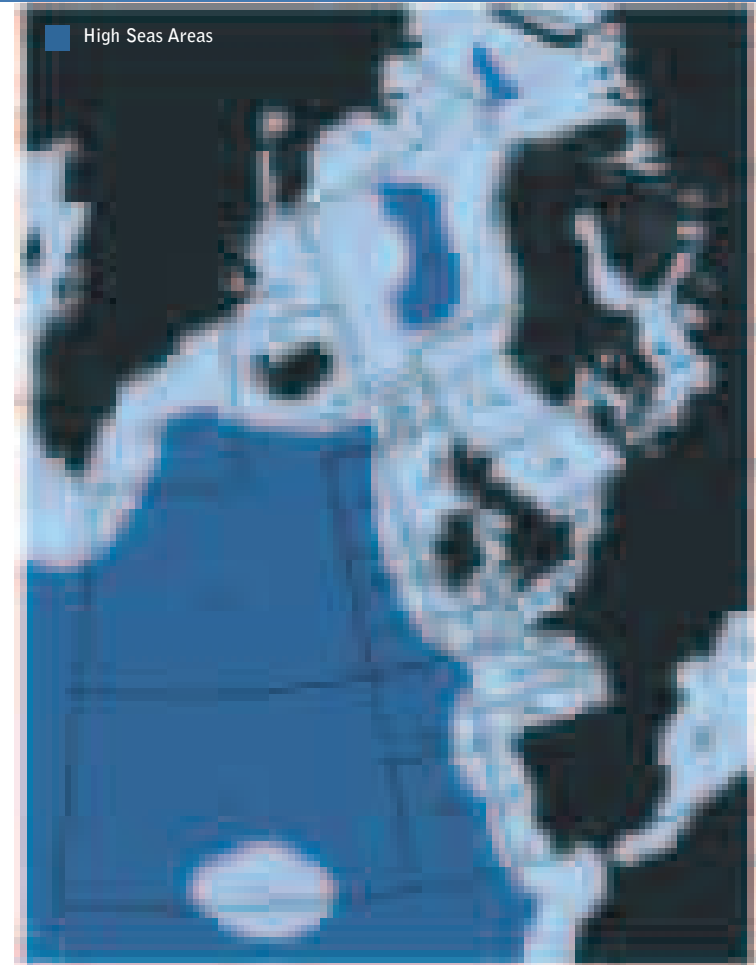
FIGURE 21: MAP OF THE NAFO AREA (FISHERIES AND OCEANS CANADA).



3.3 The Northwest Atlantic Fisheries Organization (NAFO)

The Northwest Atlantic Fisheries Organization (NAFO), like NEAFC, is one of the few RFMOs which have the competence to regulate deep-sea bottom trawling. However, like NEAFC, its mandate explicitly excludes sedentary species. The NAFO Regulatory Area encompasses high seas and straddling stock areas (highlighted in figure 21), including areas 3K, 3L, 3M, 3N and 3O. The majority of high seas bottom trawling in the Northwest Atlantic occurs on the Flemish Cap and Grand Banks. Like NEAFC, NAFO also limits the total allowable catch for certain species in international waters, but many important deep-sea species are not included. There are currently no regulations in place to protect corals or other deep-water species and habitats from the impacts of bottom trawling in the NAFO area.

FIGURE 22 MAP SHOWING THE NORTH EAST ATLANTIC INTERNATIONAL WATERS AND ICES ZONES (ICES 2005).



International waters within the ICES zones fall under the NEAFC regulatory area.

3. Governance in the North Atlantic

3.4 The role of the EU and European Countries in fisheries management in the international waters of the North Atlantic

Using data from the FAO and other fisheries bodies, a recent study concludes that fishing vessels flagged to only 11 countries – Spain, Russia, Portugal, Norway, Estonia, Denmark/Faroe Islands, Japan, Lithuania, Iceland, New Zealand and Latvia - took approximately 95% of the reported high seas bottom trawl catch in 2001.¹⁵⁰ The European Community (including Latvia, Lithuania, and Estonia but excluding the Faroe Islands) took approximately 60% of the total estimated high seas bottom trawl catch in 2001. Spain accounted for approximately two-thirds of the Community catch, or 40% of the overall global high seas bottom trawl catch. The EU together with other European Countries (notably Iceland and Norway) are responsible for 17% of the total of all world wild capture fishing effort¹⁵¹ and respectively consume approximately 13% of the annual world wild capture catch¹⁵². They therefore play a key role globally in setting the political agenda and delivering the changes needed in global governance to protect the marine environment.

A number of European vessels that engage in high seas bottom trawling are listed above. Of the eighteen vessels encountered by Greenpeace, 9 are owned by Spanish companies, 3 by Estonians, 3 by companies registered in Iceland, 2 by Portuguese owners and one by a Latvian company. The European Union, together with a small number of other European states (namely Norway and Iceland), clearly is a dominant player in the business of high seas bottom trawling, both legally and apparently illegally. Vessels flagged by EU Member States fall under the rules and regulations of the Common Fisheries Policy, and should be managed in accordance with Community law.

In June 2002, the European Community agreed specific access requirements and associated conditions for its deep-sea fisheries (Regulation 2347/2002), acknowledging that 'in order to ensure effective and precautionary management of fishing effort directed at deep-sea species, it is necessary to identify the vessels fishing for these species, by means of special fishing permits' (recital 7 of the Regulation) and that additional control measures such as the use of satellite-based vessel monitoring systems are necessary. The Regulation stipulates that vessels flagged in EU Member States must hold a specific deep-sea fishing permit before fishing in EU and international waters for deep-sea species and that specified deep-sea species must be landed in designated ports. It further introduces effort restrictions and provisions on the use of on-board

observers on deep-sea fishing vessels. In 2004, the Community further adopted total allowable catch (TAC) limits as well as effort restrictions for a number of deep-sea species, including those managed by Regional Fisheries Management Organisations (Regulation EC 2270/2004).

The rules stipulate that 'fish from stocks for which fishing opportunities are fixed [...] may be retained on board or landed only if they were taken by vessels of a Member State which has a quota which is not exhausted. All landings shall count against the quota' (Regulation EC 2270/2004). However, the Regulation applies only to Community fishing vessels carrying out fishing activities in ICES (International Council for the Exploration of the Sea) sub-areas I to XIV inclusive, and Community waters of the Committee for the Eastern Central Atlantic Fisheries (CECAF) areas 34.1.1, 34.1.2, 34.1.3 and 34.2. Moreover, it applies only to fishing activities that lead to catches of species that are explicitly listed in an Annex to the Regulation, namely Black scabbardfish (*Aphanopus carbo*), Iceland catshark (*Apristurus spp.*), Greater silver smelt (*Argentina silus*), Alfonsinos (*Beryx spp.*), Gulper shark (*Centrophorus granulosus*), Leafscale gulper shark (*Centrophorus squamosus*), Black dogfish (*Centroscyllium fabricii*), Portuguese dogfish (*Centroscymnus coelolepis*), Roundnose grenadier (*Coryphaenoides rupestris*), Kitefin shark (*Dalatias licha*), Birdbeak dogfish (*Deania calceus*), Greater lanternshark (*Etmopterus princeps*), Velvet belly (*Etmopterus spinax*), Blackmouth dogfish (*Galeus melastomus*), Mouse catshark (*Galeus murinus*), Orange roughy (*Hoplostethus atlanticus*), Blue ling (*Molva dypterigia*), Forkbeards (*Phycis blennoides*), Longnose velvet dogfish (*Centroscymnus crepidater*), Knifetooth dogfish (*Scymnodon ringens*), Six-gilled shark (*Hexanchus griseus*), Frilled shark (*Chlamydoselachus anguineus*), Sailfin roughshark (*Sharpback shark, Oxynotus paradoxus*) and Greenland shark (*Somniosus microcephalus*). Not included are, for instance, the Red/Blackspot bream (*Pagellus bogaraveo*), Greenland halibut (*Reinhardtius hippoglossoides*), Ling (*Molva molva*), Northern prawn, and tusk (*Brosme brosme*).

Clearly this leaves many gaps in the regulatory system that should prevent damage from fishing to the marine environment, not least in accordance with the objectives of the CFP. If the European Community and other European states are serious about their commitments to conserving and sustainably using deep-sea species and protecting vulnerable deep-sea ecosystems, then it is imperative that they immediately agree to and adopt concrete measures that effectively implement these commitments – not just on paper, but anywhere on the high seas where their flagged vessels, or those owned or operated by their nationals may be fishing.

4. Conclusions and Recommendations

Lack of transparency and the unregulated and at times illegal nature of high seas bottom trawl fisheries make it extremely difficult to assess and control the impacts of this fishery on deep-sea biodiversity. Indeed, even where regulations exist, enforcement is weak and accountability poor. Only a small number of the high seas bottom trawlers that have engaged in illegal fishing have been fined to date. However, in most or all cases the imposed fines have been ineffective as a deterrent and have not stopped the owners or operators of these vessels from continuing to engage in high seas bottom trawling, often as repeat offenders in the same area.

The history of bottom trawling is one of “serial depletion” of targeted fish stocks. It has been likened to mining – where fishermen move on to new fishing grounds once they have depleted the resources in existing ones. From the fishing industry to academia, there is consensus that high seas bottom trawling is the most destructive of all fishing methods to deep-sea life. Its impacts extend way beyond the deep-sea species it targets, to the entire array of dependent and associated sea life and the very topography of the sea floor. All signs indicate that the deep-sea fisheries of the high seas will follow the pattern of the rest of the planet’s fisheries into decline.

This report shows that this damage to deep sea ecosystems is caused by just a small number of vessels, which participate in a largely unregulated and at times illegal fishery. Vessels equipped to engage in high seas bottom trawling only make up a small fraction of the global fishing fleet, with links to just a handful of developed states. While the returns from individual vessels may be high, the overall economic value of the deep-sea catch taken by high seas bottom trawlers appears to be very small. The harm that this industry inflicts on deep-sea life, in comparison, is hugely disproportionate and a danger to the diversity of life that is of value to all nations.

The fact that high seas bottom trawl fishing can continue largely unregulated and at times illegally, is the result of inaction amongst EU Member States, the European Commission, other European countries (notably Norway and Iceland), and the Regional Fisheries Management Organisations, NAFO and NEAFC. These countries and institutions must act now to ensure the long-term viability of vulnerable deep-sea ecosystems.

The most responsible and effective measure to protect deep-sea biodiversity is to support and promote the adoption of a UN General Assembly resolution putting in place an immediate moratorium on high seas bottom trawling. Such a moratorium would offer short-term protection for deep-sea life while at the same time providing policy makers with the opportunity to develop and implement concrete measures to protect deep-sea life and scientists with the chance to study these undiscovered worlds. Any future deep-sea fisheries must be managed equitably and sustainably.

Some in the fishing industry and some government officials have argued that a UN moratorium on high seas bottom trawling would punish legal fishers and continue to leave the oceans open to those that are flouting the rules. But to argue that laws should not be made because some will break them is tantamount to favouring anarchy over a law-based society. What’s more, a moratorium would not negate the urgent need for further comprehensive measures to halt IUU fishing. On the contrary, decision-makers should ensure that the moratorium serves as a catalyst for action to combat IUU fishing and for the further protection of the high seas.

Importantly, a moratorium on all high seas bottom trawling, a relatively small sector, would not have a significant effect on the European or global economy, the wider fishing sector and related industry, nor food security.

In the medium to long-term, better control of the high seas bottom trawl sector can only be improved if transparency and high seas governance are improved. This must be achieved through the use of vessel monitoring systems (VMS), the establishment of a central monitoring, control and compliance authority, by improving port and flag state controls, by prohibiting transshipment of fish on the high seas, and by closing ports to non-compliant fishing vessels. Governments must also address the problems of illegal, unreported and unregulated (IUU) fishing more directly, for instance by stepping up surveillance at sea and by banning the use of flags of convenience.

4. Conclusions and Recommendations

In the long term, high seas management needs to be comprehensively reformed so that it can adequately address the impacts of existing, as well as new and emerging issues (e.g. climate change, bioprospecting and carbon sequestration) impacting our oceans. This reform must include a fundamental change in the way Regional Fisheries Management Organisations (RFMOs) manage the high seas towards a system of Regional Ecosystem Management Organisations (REMOs), which are charged with the protection and/or sustainable management of all high seas biodiversity in accordance with the ecosystem approach and precautionary principle. Under the auspices of the United Nations Law of the Sea Convention, states must work to adopt a new and comprehensive implementing agreement covering any human activities on the high seas. Such an Implementing Agreement would establish a global network of marine reserves (no-take areas) covering 40% of the high seas, and provide for a centralised monitoring, compliance and surveillance agency to ensure that any human activities conducted on the high seas are regulated and that those regulations are effectively enforced.

Appendix 1 - Methodology

In preparing this report, Greenpeace used and assessed data from the Lloyd's register¹⁵³, the EU Fishing Fleet Register (consulted before its recent update, and thus not containing information on the fleets of the new EU Member States, namely Estonia, Lithuania, Latvia, Poland, Slovenia, Malta and Cyprus and land-locked states Slovakia, the Czech Republic and Hungary), national databases and other government and industry sources, as well as the results from first-hand observations made at sea during expeditions of the Greenpeace ship, *Esperanza*, in 2004 and 2005. Companies potentially involved in the trade of high seas bottom trawl catches were identified using information regarding the sale or marketing of species commonly harvested by bottom trawling (see Box 1). The authors further sought to complement this information by writing to 58 companies, asking whether they were involved in high seas bottom trawling. However, only fourteen replied - two of which admitted to an involvement in bottom trawling outside EEZs.

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- Terça-feira, 23 Agosto 2005

Navio sem infracção Após a descarga do Kerguelen, do armador Silva Vieira, a Inspeção Geral das Pescas confirma que "não foi detectada qualquer infracção", ao contrário das suspeitas iniciais.

- Sexta-feira, 19 Agosto 2005

Armador surge em lista negra Uma alegada confusão com o nome de um navio de pesca, registado numa lista 'negra' de infractores, está a envolver o maior armador de pescas português, o industrial Silva Vieira. O barco 'Kerguelen', com bandeira da Guiné-Conacri, pertencente ao armador, chegou anteontem ao Porto de Aveiro e esteve para ser impedido de descarregar 600 toneladas de bacalhau.

- Quinta-feira, 18 Agosto 2005

Navio de pesca acostou em Aveiro O navio 'Kerguelen', do industrial Silva Vieira, foi alvo de uma denúncia de pesca ilegal de bacalhau, pelo que a carga de 600 toneladas será hoje fiscalizada. O armador refuta a acusação e diz que "houve uma confusão na identidade do navio".

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Greenpeace is an independent campaigning organisation which uses non-violent, creative confrontation to expose global environmental problems and to force solutions essential to a green and peaceful future.

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