



Protecting People and Planet

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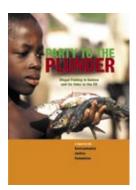
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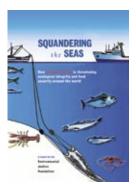
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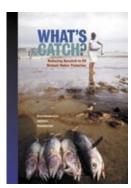














GLOSSARY

CECAF - Fishery Committee for the Eastern Central Atlantic

DG Mare - Directorate-General for Maritime Affairs and Fisheries (European Commission)

DG Sanco - Directorate-General of Health and Consumers (European Commission)

EC - European Community

EEZ - Exclusive Economic Zone

EU - European Union

FAO - United Nations Food and Agriculture Organisation

FoC - Flags of Convenience

GDP - Gross Domestic Product

IEZ - Inshore Exclusion Zone

IPOA - International Plan of Action

IUU - Illegal, Unreported and Unregulated (fishing)

MCS - Monitoring, Control and Surveillance

MoFMR - (Sierra Leone) Ministry of Fisheries and Marine Resources

Mt - metric tons

OECD - Organisation for Economic Co-operation and Development

RSLAF - Republic of Sierra Leone Armed Forces

SRFC - The Sub-Regional Fishing Commission

UNDP - United Nations Development Programme

GLOSSARY OF TERMS

Artisanal Fisheries - Small-scale and local fisheries carried out by people who rely on fishing to support their families and communities. Generally subsistence and/or only partly commercial in nature.

Bycatch - The parts of a fishery catch containing non-targeted species (including fish, birds or marine mammals) and often discarded at sea.

Demersal – Living / found at or near the bottom of a body of water: e.g. a demersal fish

Flags of Convenience (FoC) - Vessels use the flags of states that either cannot or do not apply and enforce regulations. Countries such as Panama operate an open registry, and make a business from granting flags to foreign owned vessels.

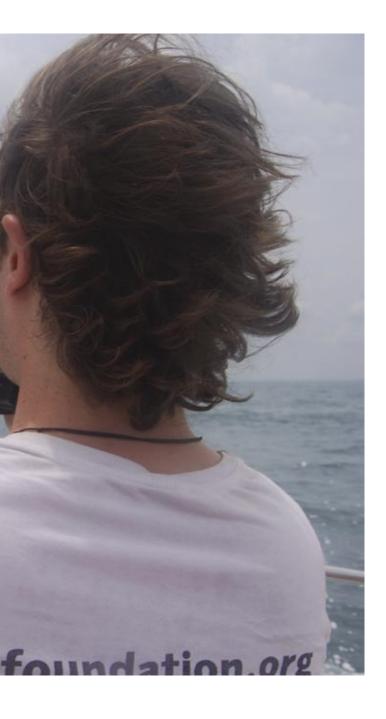
Ports of Convenience (PoC) - Where a port State is unwilling or unable to exercise measures to combat IUU fishing activities, such as inspections to detect IUU-caught fish, and prohibitions on landing of illegal catches.

Third Country Fishing Vessel - Fishing vessel supplying fish to the European market that flies the flag of and is registered in a State other than a European Member State

EXECUTIVE SUMMARY

- Illegal, Unreported and Unregulated (IUU) or 'pirate' fishing is devastating marine environments and stealing from some of the poorest people of the world. IUU is the term given to any fishing activity that contravenes national or international laws, such as: banned fishing gears; targeting protected species; operating in protected or reserved areas or at times when fishing is prohibited; or operating without any form of permit or license to fish. IUU fishing vessels cut costs to maximise profits and use a variety of means, including 'flags of convenience' to avoid detection and penalty for wrongdoing.
- Globally, pirate fishing accounts for US\$10 23.5 billion a year, representing between 11 and 26 million tons of fish.
 It is driven by the enormous global demand for seafood, and threatens the future of world fisheries. The impacts are social, economic, and environmental, and in many cases IUU operators specifically target poor developing countries.

- Investigations by the Environmental Justice Foundation (EJF) have demonstrated the direct links between pirate fishing in the West African nation of Sierra Leone, the illegal operators, and the Asian and European seafood markets, the largest in the world.
- South Korean and Chinese vessels dominate the pirate fishery in West Africa, in clear contravention of those countries' international responsibilities to ensure that the vessels flagged to them operate legally.
- Investigations show that many South Korean and Chinese
 pirate fishing vessels carry import numbers designated
 by the European Commission, specifically the Food and
 Veterinary Office of the Directorate-General of Health
 and Consumers (DG Sanco). The DG Sanco number infers
 that the vessel has met supposedly strict EU hygiene
 standards, and is therefore allowed to export fish to the
 European Union. EJF investigations reveal that fish is
 handled and packed in extremely unhygienic conditions;



in addition, companies with one vessel with a DG Sanco number can have other illegal vessels that 'launder' their fish through the numbered vessel. The use of DG Sanco numbers by pirate fishing vessels in West Africa is believed to be widespread, making consumers vulnerable to unhygienic food and facilitating IUU fishing.

• In 2008 EJF documented vessels fishing illegally in Sierra Leone; all identified vessels are listed by DG Sanco, and many have a history of IUU fishing. This includes the Apsari-3, arrested by the Sierra Leone Navy in November 2008 for IUU fishing. The vessel was carrying many boxes of illegally-caught fish that were observed being packed in unsanitary conditions – all the boxes were clearly stamped with the vessel's DG Sanco number. Previous EJF investigations in Guinea-Conakry documented 53 vessels linked to IUU fishing activities, and revealed that almost half carried DG Sanco numbers. Today the situation is worse; 32 (60%) of these vessels are now listed as being able to import fish into the EU.

- There appears to be no coordination between the EU's DG Sanco and the Directorate-General of Fisheries and Maritime Affairs (DG Mare) to ensure that known IUU vessels are identified, and then barred and/or eliminated from DG Sanco lists. Vessels that fish illegally do so to minimize costs associated with legal fishing methods. Lack of official licenses and proper safety equipment, unsanitary conditions and appalling crew conditions have all been documented by EJF aboard IUU vessels.
- Sierra Leone is desperately vulnerable to pirate fishing as a result of recent civil war, struggling economy and dependency on fish. 70% of the population live on less than one dollar a day and the country is ranked by the United Nations as bottom of 179 countries on its Human Development Index, one of the poorest in the world. Foreign illegal fishing vessels are stealing around US\$29million of fish from Sierra Leone each year; in sub-Saharan Africa as a whole, the total value of illegal fish is approximately US\$1billion. Fishing is a vital source of income for the Sierra Leonean men and women around 230,000 people are engaged in traditional fish capture, and fisheries represents around 10% of GDP. Fish is also a crucial component of food security, contributing 80% of the total animal protein to the country.
- IUU fishing is devastating marine environments bottom trawl nets catch everything in their path, and only those species considered commercially valuable are kept; the remainder, around 75% of the total, is discarded dead. IUU is a growing threat to marine species including turtles and sharks, as well as commercial fish species and juvenile fish needed to replenish stocks.

A SUMMARY OF THE EVIDENCE:

a) APSARI-3. South Korea. DG Sanco number: KORF-098. Licensed to fish in Sierra Leone's waters, but arrested for fishing less than 2 nautical miles from the shoreline and well within the Inshore Exclusion Zone (IEZ) strictly reserved for artisanal fishermen and as a breeding and nursery area for fish.

All identification markings had been carefully concealed. The vessel carried two names on the hull – 'Apsari-3' in paint, and behind this, the embossed 'No.52 Sung Kyung'. Later investigations showed the vessel is also known by a third name, the Dong Won No.521. The vessel's call sign, DTAA, was also taped over and hidden.

- **b) SETA-70.** South Korean. DG Sanco Number KORF-242. History of IUU fishing arrested in Liberia in Feb 2008. Unlicensed to fish but observed fishing illegally in Sierra Leone's IEZ, May 2008.
- c) LUANDA 11. South Korean. DG Sanco Number— KORF-214. Trawler, observed fishing illegally May 2008.
- **d) PUYU 6002.** Chinese. DG Sanco Number 1200/20038. Illegally fishing in IEZ, October 2008 destroyed fishing gear owned by local fishermen.

This report highlights just how these 'dirty fish' are ending up on the plates of European consumers, and why it is imperative that action is taken to end this problem. Simple solutions are identified.

INTRODUCTION

THE UNITED NATIONS FOOD AND AGRICULTURE ORGANISATION (FAO) NOW ESTIMATES THAT 80% OF THE WORLD'S FISH STOCKS FOR WHICH THERE IS DATA, ARE FULLY EXPLOITED, OVEREXPLOITED OR IN DECLINE. WE ARE ALREADY, IN EFFECT, TAKING ALL THE FISH WE CAN¹.

Mismanagement, poor regulations, lack of enforcement, fleet overcapacity and sheer greed have resulted in plummeting fish stocks in many regions of the world, a fall that has coincided with a large and growing demand for seafood from consumers in the Far East and Europe. As a result Illegal, Unreported and Unregulated (IUU) fishing – often called 'pirate' fishing – has proliferated throughout the world as unscrupulous operators attempt to maximise their profits to supply this demand. While accurate data for the scale and impacts of IUU in many fisheries is limited, it has been estimated that pirate fishing operators are taking between 10 and 23.5 billion US dollars in illicit catches each year². IUU operations undermine attempts at sustainable fisheries management, often causing extensive damage to marine environments, and jeopardising the lives and livelihoods of coastal communities.

The impacts of IUU fishing are social, economic, and environmental, and in many cases pirate operators are stealing from some of the poorest people on the planet. Sub-Saharan Africa has been particularly hard-hit³, and vulnerable wartorn or post-conflict nations, those least able to manage and protect their fish resources, are specifically targeted by IUU operations. A telling example is the West African nation of Sierra Leone, currently ranked last of 179 nations on the United Nation's Human Development Index⁴. Fisheries resources could potentially provide Sierra Leone with a crucial source of developmental income; yet devastated by its recent civil war and with little in the way of resources, Sierra Leone has little ability to monitor and control its coastal waters. As a result, foreign IUU fishing vessels are widespread and estimated to be stealing around US\$29 million of fish each year⁵.

EJF investigations in Sierra Leone (and elsewhere along the coast of W. Africa) have documented the extent and impacts of IUU fishing and exposed links of these operations to both Europe and East Asia. Of particular relevance are the loopholes in national and international laws that these vessels exploit to get away with their illegal activities. While most nations, are taking little action to address these problems, Europe has recently addressed many in Council Regulation (EC) No 1005/2008 establishing a Community System to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing⁶, scheduled to be introduced in January 2010. This comprehensive legislation, written by the Directorate-General for Maritime Affairs and Fisheries (DG Mare), should be effective at helping to reduce the incidence of IUU fishing in West Africa.

However, IUU vessels in Sierra Leone are at the same time directly benefitting from other EU regulations allowing them access to the European seafood market.

All IUU vessels identified by EJF in Sierra Leone carry numbers designated to them by the European Commission's Directorate-General of Health and Consumers (DG Sanco), meaning they have supposedly met strict EU hygiene standards and are therefore allowed to export fish to Europe. Vessels that fish illegally often do so to minimise the costs associated with legal fishing methods and are often at sea for years, thousands of miles away from their home countries. Cost-cutting can and does extend to all aspects of fishing relating to health and safety, including the handling of the catch and on-board storage facilities. The EU system is failing in two crucial ways - not only are DG Sanco standards rarely actually achieved, there also appears to be no coordination between DG Sanco and DG Mare to ensure that known IUU vessels are barred or eliminated from DG Sanco lists. Shortcomings in EU regulation is facilitating IUU fishing in West Africa, while simultaneously compromising the health and safety of European consumers.

It is absurd that the EU allows a situation whereby one regulatory framework aims to end IUU fishing, and another contributes to it. The system is flawed. DG Sanco does not carry out the vessel inspections and designation of the numbers itself; rather it delegates this task to a 'competent authority' in the flag state7. Significantly all IUU vessels observed by EJF carrying DG Sanco numbers in Sierra Leone are owned by East Asian companies from countries that have demonstrated little capacity or will to govern the activities of fishing vessels flying their flag in West Africa8. Many IUU vessels rarely if ever come into port or return to their home countries - it is extremely unlikely that they are ever inspected by either the third country competent authority or EU officials to see if they are actually meeting DG Sanco criteria. In addition, DG Sanco does not require that a vessel carrying one if its numbers actually demonstrates that it is legally licensed to fish9.

Ironically, Sierra Leone is currently banned from exporting fish to the EU due to its lack of infrastructure and training to achieve EU hygiene Requirements. Fisheries should be contributing to the development of Sierra Leone, and is particularly significant to food security and the rural poor. Unfortunately this report shows a reality that the high demand for seafood in Europe and East Asia is driving the theft and potential collapse of these crucial resources. Targeted approaches are needed to address IUU operations within Sierra Leone and the wider West African region, as well as internationally. The EU regulation on IUU fishing will hopefully have an impact on the ability of some of these IUU vessels to operate. However, this report clearly highlights that gaps still exist that must be addressed, not least in regards to the roles of DG Sanco and the Governments of South Korea and China, and the support West African nations need to effectively address IUU fishing themselves.

WHAT IS IUU 'PIRATE' FISHING?

In short, IUU is any fishing activity that contravenes national or international laws, such as using banned fishing gears; targeting protected species; operating in protected or reserved areas or at times when fishing is prohibited; or operating without any form of permit or license to fish. IUU fishing vessels cut costs to maximise profits and use a variety of means, including 'flags of convenience' to avoid detection and penalty for wrongdoing.

The Food and Agriculture Organisation (FAO) defines IUU fishing as the following¹⁰:

ILLEGAL FISHING refers to fishing activities:

- 1 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;
- 2 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
- 3 in violation of national laws or international obligations, including those undertaken by cooperating States to a relevant regional fisheries management organization.

This includes, but is not limited to: fishing out of season; harvesting prohibited species; using banned fishing gear; catching more than the set quota; fishing without a licence.

UNREPORTED FISHING refers to fishing activities:

- 1 which have not been reported, or have been misreported, to the relevant national authority, in contravention of national laws and regulations; or
- 2 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:

- 1 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
- 2 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.

This includes fishing conducted by vessels without nationality or flying a flag of convenience, or flying the flag of a State not party to the regional organization governing the particular fishing region or species. It also relates to fishing in areas or for fish stocks where there is a lack of detailed knowledge and therefore no conservation or management measures in place.

BELOW: The South Korean bottom trawler Apsari-3, illegally fishing off the coast of Sierra Leone. Like many IUU fishing vessels in West Africa, the Apsari-3 is listed by the European Directorate-General for Health and Consumers (DG Sanco) as allowed to export fish into the European Union. ©EJF



THE ROLE OF DG SANCO

THE EUROPEAN UNION HAS A NUMBER OF REGULATIONS GOVERNING FOOD HYGIENE, WHICH ARE OVERSEEN BY THE DIRECTORATE-GENERAL OF HEALTH AND CONSUMERS, KNOWN AS DG SANCO¹¹.

These include Regulation (EC) 852/2004¹² which lays down the general hygiene requirements for foodstuffs; Regulation (EC) 853/200413 which lays down additional specific requirements for food businesses dealing with foods of animal origin¹⁴, including live bivalve molluscs and fishery products; and Regulation (EC) 854/2004 which lays down the official controls for foods of animal origin . Commission Decision No 2006/766/EC establishes provisional lists of third country establishments from which EU Member States are authorized to import fishery products¹⁵. Countries wishing to export fish to the European Union have to be mentioned on these lists and each fishing vessel needs an approval number, designated by the Food and Veterinary office of DG Sanco. This system was set up to ensure that European consumers could expect the same standards of hygiene and food safety from imported seafood as those caught within the European Union.

However EJF investigations have shown that the system is failing to ensure the health of European consumers and is also enabling the entry of illegally-caught fish into the EU. During the process to acquire a DG Sanco number, it is not EU officials who establish whether EU hygiene standards are met, but a designated authority of the third country concerned. Once the European Commission has been given guarantees that the establishments appearing on the list meet the relevant EU health requirements, the designated authority can itself approve the establishment or vessel

'MOST OF THE COUNTRIES INSPECTED DID NOT FULLY COMPLY WITH THE RELEVANT CONDITIONS FOR EXPORTING FISHERY PRODUCTS' DG SANCO 2007 ANNUAL REPORT

for a DG SANCO number¹⁶. Although the EU has the right of free access in order to ensure compliance, it is the third-country designated authority that is then responsible for the inspection and monitoring of vessels or establishments, but a lack of oversight – especially difficult to undertake on vessels operating beyond the law - has resulted in inadequate enforcement.

The problems associated with this system are regularly highlighted by DG SANCO's annual reports. 2007's report concluded that of the several missions conducted, 'most of the countries inspected did not fully comply with the relevant conditions for exporting fishery products'17. The report describes how many of these establishments were in such a poor state that it was required to delist them. Yet the number of establishments inspected globally is limited to a few missions each year: it is unlikely that IUU fishing vessels are rarely if ever subject to such EU inspection.

Vessels that fish illegally often do so to minimize the costs associated with legal fishing methods, and can be at sea for years, thousands of miles away from their home countries. Lack of official licenses, proper safety equipment, and exploitive crew conditions have all been documented aboard pirate fishing vessels. This cost-cutting can and does extend to all aspects, including the handling of the catch and on-board storage facilities¹⁸. EJF has documented appalling hygiene conditions on IUU fishing vessels that nonetheless carry a DG Sanco listing, posing a health threat to consumers in the EU.

BELOW: Many fishing vessels that fish illegally in West Africa appear on DG Sanco lists, despite the fact that many also fail to meet the supposedly strict health and hygiene standards. Images from the Lian Run 14, arrested in Guinea for IUU fishing and carrying DG Sanco number 2100/02791¹⁹. ©EJF





EJF INVESTIGATIONS IN WEST AFRICA HAVE DOCUMENTED NUMEROUS IUU FISHING VESSELS. MANY OF THESE ARE FROM CHINA OR SOUTH KOREA; OTHERS FLY FLAGS OF CONVENIENCE (FOC), WHICH ALLOW IUU VESSELS TO DISGUISE THEIR ORIGIN AND IDENTITY.

A significant number of the IUU vessels observed by EJF appear on DG Sanco's lists of vessels allowed to export fish to the European Union. In 2006 EJF partnered with Greenpeace International to investigate IUU fishing in the West African state of Guinea-Conakry. Over a two week period alone, 104 fishing vessels were observed; 53 were either engaged in or linked to IUU fishing activities, and of these, 25 vessels carried DG Sanco numbers (according to the 2007 published lists). That is, almost half of the vessels linked to IUU fishing were legally permitted to export to the EU. Significantly, a number of other vessels that did not hold DG Sanco numbers were either fishing with listed vessels, or were owned by companies with listed vessels.

Unfortunately the situation is even worse today; according to the DG Sanco lists published at the end of 2008, one of the IUU vessels observed in 2006 has been removed, but seven more IUU fishing vessels have been added. This means that of the 53 IUU fishing vessels EJF and Greenpeace documented in 2006 there are now 32 - 60% - that carry DG Sanco numbers. Significantly, the Lian Run 14, a vessel which EJF and Greenpeace helped secure the arrest of by the Guinean authorities for fishing without a license, is still on the DG Sanco list*.

The significance of the DG Sanco listing becomes clear given that during the Guinean investigation, EJF documented practices such as the illegal trans-shipping of fish between vessels, and the repacking of seafood products on IUU vessels into boxes stamped with the name of a legal boat. In some cases more than one vessel carried the same name, taking advantage of one licence and DG Sanco number. Subsequent investigations observed the off-loading of fish from IUU vessels at the Spanish 'Port of Convenience' Las Palmas de Gran Canaria, and the entry of this fish into the EU²⁰. Many of the vessels observed in Guinean waters flew Chinese flags, with the corresponding DG Sanco numbers and responsibilities assigned to China. DG Sanco releases frequent 'Rapid Alerts' notifying the EU public of countries that have failed to comply with health conditions for fishery products; alerts warning about Chinese seafood products are frequent²¹.

In 2008 EJF documented IUU fishing in Sierra Leone. Currently ranked by the United Nations as the least developed country in the world²², Sierra Leone supports one of the richest fishing grounds in the world yet by lacking the infrastructure and resources to effectively police its national waters, it is particularly vulnerable to illegal fishing fleets. As a result, many fish stocks in the region are now considered fully or over-exploited²³. In 2008, EJF alerted the Republic of Sierra Leone Armed Forces (RSLAF) Maritime Wing to an illegal trawler, the Apsari-3, enabling its arrest. The Apsari-3 and other IUU vessels identified by EJF in Sierra Leone were found to be carrying DG Sanco numbers.

IN 2007, AROUND 50% OF IUU VESSELS OBSERVED BY EJF IN GUINEA CARRIED DG SANCO NUMBERS. IN 2008 THIS FIGURE HAD CLIMBED TO 60%. MEANWHILE ALL IUU VESSELS IDENTIFIED IN SIERRA LEONE IN 2008 ARE LISTED BY DG SANCO.

^{*}For a complete list of IUU vessels observed by EJF in West Africa see Annex 1



SIERRA LEONE IS BANNED FROM EXPORTING FISH TO THE EU DUE TO ITS LACK OF INFRASTRUCTURE AND TRAINING TO ACHIEVE EU HYGIENE REQUIREMENTS

To date DG Sanco has not acknowledged the link between its listings and IUU fishing, and it does not require for listed fishing vessels to demonstrate that they will be operating legally at all times²⁴. Further, there is no clear process by which DG Sanco routinely cooperates with the Directorate-General of Maritime Affairs and Fisheries (DG Mare) on existing regulations designed to establish the provenance or legality of fish. This is despite the fact that Article 23 of *Commission Decision 2005/960/EC* requires Commission departments to cooperate and coordinate²⁵. As a result there is a clear case whereby one EU regulatory framework aims to end IUU fishing while another one facilitates it. There is little doubt that IUU vessels and companies will continue to take advantage of the DG Sanco listing system to sell illegal fish into the European market until this anomaly is rectified.

Ironically, Sierra Leone is currently banned from exporting fish to the EU due to its lack of infrastructure and training to achieve EU hygiene requirements – there are no establishments, fishing or transport freezer vessels with approval numbers authorized to export fishery products to the EU (in accordance with EC Regulation 854/2004)²⁶. As a result the country is not listed in Commission Decision of Feb 18th 2008 amending Decision 2006/766/EC which lists those countries and territories from which imports of fishery products for human consumption are permitted²⁷. The EU is therefore perpetuating a situation whereby virtually none of the economic benefits of fisheries actually accrue in Sierra Leone, whilst simultaneously enabling illegally-caught fish to enter the EU. Foreign vessels require little in terms of labour or logistics from the country, land few fish, and do not promote downstream processing and value-added industries²⁸. Poor infrastructure means that the country cannot even benefit from the provision of fuel and supplies to those foreign fishing vessels operating legally as both illegal and legal vessels instead often resupply and unload their catches in Las Palmas in the Canary Islands, benefitting European and Asian companies based there²⁹.

Article 23 of COMMISSION DECISION 2005/960/EC of 15 November 2005 amending its Rules of Procedure would appear to require DG Sanco and DG Mare to coordinate to address IUU fishing. It stipulates that:

- 1. In order to ensure the effectiveness of Commission action, departments shall work in close cooperation and in coordinated fashion from the outset in preparation or implementation of Commission decisions.
- 2. The department responsible for preparing an initiative shall ensure from the beginning of the preparatory work that there is effective coordination between all departments with a legitimate interest in the initiative by virtue of their powers or responsibilities or the nature of the subject.

*In 2007 EJF produced a briefing titled The case for the removal of 'pirate' fishing vessels from DG Sanco lists as a simple and effective strategy for the elimination of Illegal, Unreported and Unregulated (IUU) Fishing that was distributed to a wide variety of relevant stakeholders, including European Fisheries Commissioner Joe Borg who met with EJF in September 2007 and assured action on the issue.

ILLEGAL FISHING VESSELS IN SIERRA LEONE

CASE STUDY APSARI-3

EJF HAS WORKED ALONGSIDE FISHING COMMUNITIES, AND COLLABORATED WITH THE REPUBLIC OF SIERRA LEONE ARMED FORCES (RSLAF) MARITIME WING, NOTIFYING THEM OF IUU VESSELS AND HELPING TO SECURE ARRESTS.

On a patrol trip to an IUU fishing 'hotspot' earlier identified with the assistance of local fishing communities, EJF together with officers from the RSLAF Maritime Wing discovered the Apsari-3 fishing at 7 21'436"N, 12 31'816"W, less than 2 nautical miles from the shoreline and well within the Inshore Exclusion Zone (IEZ) of Sierra Leone. This area, which averages 5 nautical miles from shore, is reserved for artisanal fishermen and is a crucial breeding and nursery area for fish.



ABOVE: Documenting the Apsari-3 illegally fishing in Sierra Leone ©EJF

The Apsari-3 is a 53-metre stern trawler, built in South Korea in 1970³⁰. The vessel was officially licensed to fish in Sierra Leone waters, but was not permitted to enter the IEZ. The vessel was boarded and arrested by the RSLAF for IUU fishing on November 1st, 2008 – the day that the license came into effect. The captain of the vessel, a veteran of West African fisheries and aware of the limitations of enforcement agencies, simply did not expect to be caught.



ABOVE: EJF provided support to the Sierra Leone Armed Forces Maritime Wing in the arrest of the Apsari-3 ©EJF

On board EJF had the opportunity to document the measures taken by the vessel in its attempts to illegally fish and the destructive method of fishing it employed. Disguising markings and multiple vessel identifications are common ploys used by IUU operators to avoid detection and penalties, and above-deck all identification markings on the Apsari-3 had been carefully concealed. The vessel carried two names on the hull – 'Apsari-3' in paint, and behind this, the embossed 'No.52 Sung Kyung'. Later investigations showed the vessel is also known by a third name, the Dong Won No.521. The vessel's call sign, DTAA, was also taped over and hidden.





ABOVE: Disguising identification markings is a common ploy used by pirate fishing vessels ©EJF



ABOVE: Illegal trawlers such as the Apsari-3 fish for months at a time, and will bring in several net loads of fish each day ©EJF

Once the arrest proceedings were completed the captain was instructed to bring in the trawl net – the contents of which were dumped into the ship's hold, where it was then sorted by the crew. Approximately 25% of the catch was kept as commercially valuable species; the remainder, around 75%, was placed on a conveyor belt that dumped the dead fish over the side as discarded bycatch. This included a wide variety of species depended upon by local communities, juveniles of commercial species, and the bodies of elasmobranchs and sharks once their fins had been removed for the Asian market. Not a single fish observed in the hold of the vessel was alive once it went back into the sea, representing a massive wastage of marine life.



ABOVE: Once aboard, the illegal fish were sorted into those species considered to be valuable on the international market. ©EJF

Kept fish were sorted into species, and then packed into boxes for freezing. Print on these boxes included the company name Seo Hae Fisheries Co. Ltd.; the name of the vessel; that the fish was 'Origin: Republic of Korea'; the number KORF-098; and (in Korean) that the fish was caught in the Atlantic (at sea), and the destination was the South Korean port of Pusan (also known as Busan). The number KORF-098 is significant – this is the vessel's DG Sanco number, allowing it to export fish to the EU³¹. Other markings are also important: that the fish is labelled as coming from Korea is in fact legal, though hugely misleading, and further disguises the West Africa origin of the fish. The location where the fish were caught according to FAO designations, in this case Eastern Central Atlantic or FAO Area 34, is also a requirement in European Union law— 'at sea in the Atlantic' is not sufficient³².

Korean script includes 'at sea in the Atlantic', an insufficient description of the location of where the fish was caught ©EJF



Once the arrest of the Apsari-3 had been completed, and the catch had either been processed or discarded, EJF investigators were able to further inspect the vessel. As discussed, a DG Sanco number is supposedly given if a vessel has met a series of hygiene requirements for fisheries products. EJF did not have a hygiene specialist on board however it was very clear that the Apsari-3 failed many DG Sanco listing requirements, including those related to wash basins, crew quarters, oil contamination, ventilation, and resistance to corrosion. The vessel was rusting extensively, and in many areas filthy.

During the journey to the capital, Freetown, EJF investigators spoke extensively with the captain and crew. While the officers were all Korean, many of the crew came from Asian countries including Vietnam, China and Indonesia. Others were from Sierra Leone, taken on board with no contract, and paid in fish, rather than wages. The crew lacked most basic hygiene and toilet facilities, and some slept in quarters that were part of the fish hold.

Many, including the captain, identified Las Palmas as the base port. All foodstuffs, drinks and various other products aboard the vessel were from Spain, including some that had been bought in Las Palmas itself. However, a subsequent search of vessel traffic on the Las Palmas Port website shows that the Apsari-3 had visited Las Palmas only twice - once in February 2006 and once in April 2007³³. There are three possible explanations: either this vessel was not being

recorded by the Las Palmas authorities (an issue that is not without precedent³⁴, though admittedly not a legal requirement), landed in another port in the Canary Islands (for instance the wharf in nearby Tenerife is Korean-owned), or the vessel is supplied at sea. If the latter is the case, it is conceivable that it also trans-shipped fish at sea, identified by the Sierra Leonean authorities as a major problem³⁵.

Once in Freetown, the catch was confiscated by the authorities and the vessel fined US\$30,000 for illegal fishing (paid by the vessel's agents in Sierra Leone). The catch was also confiscated³⁶. Although the name and call sign of the vessel are known, like many illegal operators, the true beneficial owners of the Apsari-3 remain unclear. According to the fishing license and fish boxes, the vessel belongs to a company called "Seo Hae Fisheries Co." from Pusan, South Korea. Yet according to Lloyds Register, the vessel with the call sign DTAA is called Dong Won No. 521 and belongs to Dong Won Fisheries Co Ltd, also of South Korea³⁷. This company owns more than 50 fishing vessels, and has a history of IUU fishing³⁸.

It is impossible to establish the ultimate destination of fish caught by the Apsari-3. Crew testimony pointed at multiple destinations, dependent on species, but including South Korea and Europe. Without doubt the vessel's DG Sanco number and Las Palmas links point to at least some of the fish entering the European market.

BELOW: The illegal catch of the Apsari-3 was handled in unsanitary conditions. Approximately 75% was dumped as bycatch. ©EJF



CASE STUDY

SETA-70 / LUANDA 11

DURING THE COURSE OF ITS INVESTIGATIONS, EJF OBSERVED SEVERAL VESSELS ILLEGALLY FISHING IN THE IEZ OF SIERRA LEONE. MANY WERE UNABLE TO BE IDENTIFIED CLEARLY; TWO HOWEVER, HAVE BEEN, AS HAS THE COMPANY THAT OWNS THEM. BOTH VESSELS AND COMPANY HAVE A HISTORY OF IUU FISHING.



THE SETA 70 was not licensed when it was observed illegally fishing in Sierra Leone by EJF investigators ©EJF

The South Korean SETA 70 (call sign DTBE9) was observed by EJF investigators on May 9, 2008 illegally fishing at 7 20'424"N, 12 32'933"W - approximately 1 nautical mile (1.85 kilometres) from the shore³⁹. At the time, SETA 70 was not licensed to operate in Sierra Leone waters⁴⁰. SETA 70 is a relatively new industrial fishing vessel, 46 metres long and built in 200141. It was first flagged to Belize, a country that operates an open registry allowing foreign ownership; and in 2002 the flag was changed to South Korea⁴². It is not certain however if this is the flag that it actually flies, as the vessel was included in a 2004 IUU report submitted to the OECD on a list of fishing vessels flagged to flags of convenience (FoC) with unknown owners built in 2001, 2002, and 2003. This same report states that: "...trend that emerges is the fact that some 14% of large-scale fishing vessels built within the past three years were flying flags of convenience by the end of 2003. This represents a real problem in that a significant portion of new vessels appear to be built with a view to engaging in IUU fishing"43.

Unfortunately, this point is only too well highlighted by the activities of the SETA 70. The vessel is a locally notorious poaching vessel, with a history of IUU fishing. Local fishing communities claim that the vessel is one of a fleet that appears every year as the rainy season begins (nutrient-rich river run-off boosts fish stocks during this period). The vessel frequently comes close inshore, and local fishermen accuse it of deliberately destroying their nets and hooks. As is common with many IUU vessels in West Africa, illegal operations are not limited to just one country. In Febru-



The Luanda 11 (above) and the SETA 70 are both owned by the Spanish-based South Korean company Inter-Burgo ©EJF

ary 2008, only 3 months previous to its illegal presence in Sierra Leone, the vessel was arrested and fined for illegally fishing without a license in neighbouring Liberia⁴⁴.

Also flagged to South Korea, the Luanda 11 (call sign DTBF8), is another industrial trawler that has been frequently observed by fishing communities, and with perhaps an even worse reputation for the destruction of local nets and hooks. Approaches made by local fishers to the Luanda 11 protesting the loss of their gear have been met with threats of violence.

The Luanda 11 is an old trawler, built in 1972, that has been fishing in West African waters for decades⁴⁵. In 2008, EJF investigators onshore first sighted the vessel fishing illegally in the IEZ, and then observed the vessel at sea fishing in the company of the SETA 70 on May 9th, 2008. EJF documented SETA 70 first; by the time the Luanda 11 was reached, also within the IEZ at 70 21'446"N, 120 35'662"W, the trawl net was in the final stages of being hauled up, and the vessel was fleeing out to sea, nevertheless, EJF was able to confirm the vessel's identity. Like the SETA 70, the Luanda 11 was not licensed to fish in Sierra Leone waters at the time⁴⁶; and fishing in the IEZ is strictly illegal for all vessels.

Despite the lack of licenses allowing them to legally fish in Sierra Leone, both the fishing vessels are licensed by DG Sanco to export their fish to the European Union. SETA 70 carries DA SANCO approval number KORF-242 and Luanda 11 is listed as KORF-214⁴⁷.

THE COMPANY BEHIND THE VESSELS:



Both SETA 70 and Luanda 11 belong to the Spanish-based South Korean company Inter-Burgo⁴⁸, a conglomerate with a variety of business interests in Europe, Africa and Asia⁴⁹. Inter-Burgo began business with a tuna fishing vessel in the Canary Islands in the 1970's and the company now has a number of vessels operating in West African waters. The company is based Madrid and has branches in Seoul and Pusan in Korea, Luanda in Angola, Las Palmas in Spain and in Guinea Bissau – Inter-Burgo vessels fish in Angola, Guinea Bissau, Guinea-Conakry, Liberia and Sierra Leone⁵⁰. According to Lloyds Register and company information, the Inter-Burgo group owns and/or manages at least 25 fishing vessels⁵¹.

The activities of the SETA 70 and Luanda 11 in the IEZ in Sierra Leone is not the first time the company has been implicated in IUU fishing. In 2006, EJF and Greenpeace International partially identified a fishing vessel called the 'Luanda' inside Guinea's IEZ⁵² (under different number designations, various Inter-Burgo fishing vessels go by this name⁵³). Past and present Inter-Burgo vessels have been identified by a variety of bodies including Government

Agencies⁵⁴, Regional Fisheries Management Organisations⁵⁶, and non-governmental Organisations as suspected or confirmed as engaging in IUU operations in various regions of the world. Inter-Burgo has also been highlighted as a company that makes use of Flags of Convenience (FoC)⁵⁷; companies such as Inter-Burgo register vessels to FoC countries that have open registers in order to avoid fisheries conservation and management regulations⁵⁸. FoC are a key loophole in international law, and allow unscrupulous operators to frequently change the flag and identity of fishing vessels to mask IUU fishing activities and avoid detection and penalties for law-breaking.

The less-than-legitimate activities of Inter-Burgo are not limited to IUU operations. In Liberia the company has been accused by the General Workers Union that the "Korean management and its associates behave like outlaws in nearly all of their operations or transactions in Liberia with impunity because of their connections with some top government officials", and that Inter-Burgo owed more than 30,000 USD in outstanding wages for Liberian crew members⁵⁹. The company has also been accused of dealing in rotten fish; in 2006 the Angolan Ministry of Commerce seized rotten fish being sold by the company⁶⁰, and the Liberia Marketing Association (LMA) has also accused Inter-Burgo of commonly dispatching cartons of rotten fish to rural Liberia⁶¹.

'If you stand on Shenge Point at night and look out at sea, it is like seeing the lights of New York there are so many illegal fishing boats out there'

A.P. Koroma, Conservation Society of Sierra Leone

CASE STUDY - PUYU 6002

Although the majority of vessels that illegally fish in Sierra Leone's IEZ meticulously hide their identities, local fishers are on occasion able to identify an IUU vessel. On 19th October 2008 the bottom trawler PUYU 6002 (call sign BKTZ*), flagged to China, was illegally fishing approximately 1 nautical mile from shore inside the IEZ near Sierra Leone's Turtle Islands. During the course of these illegal activities the PUYU 6002 ran through and destroyed 900 yards of net, lines and floats owned by a local fisherman, who managed to identify the culprit⁶². The total value of this gear was Leones 16,701,000 (approx US\$5550, UK£3880). In a country where over 70% of the population lives on less than one dollar a day⁶³, this represents a devastating loss.

Like the IUU vessels observed directly by EJF, the PUYU 6002 is licensed by DG Sanco to export fish to the EU, number 1200/20038⁶⁴.

This case study also highlights the difficulty local fishermen face in trying to report illegal fishing vessels to the Sierra Leone authorities, and the lack of institutional organisation and capacity within the Sierra Leone government to deal with the problem. The fisher in question first travelled to the capital Freetown to report the incident to the Ministry of Fisheries and Marine Resources (MoFMR). However, he was told that the matter must be reported via the Local Council Office, in this case located in the south of the country in the town of Bonthe. Travel around the country is slow, and relatively expensive; on top of the expense of the loss of his nets this fisherman had to pay the financial and time cost of travelling about the country. Once he had made the report the fisherman was told to go back to his home community and await

*The PUYU 6001 has also been identified as using the call sign BKTZ⁶⁵.

THE ROLE OF SOUTH KOREAN VESSELS IN WEST AFRICAN FISHERIES*

SOUTH KOREAN VESSELS FIRST STARTED FISHING IN WEST AFRICA IN THE 1960'S, AND HAVE HAD A CONTINUOUS PRESENCE SINCE THAT TIME.

South Korea is the 14th largest fishing nation in the world, with a total global take of 1.8 million tonnes in 2007⁶⁶. South Korean companies and Korean fishing vessels are allowed to export fish to the European Union as long as they are included on the DG Sanco list of licensed establishments. In West African waters, Korean vessels reported catches of 26,131 tonnes in 2007⁶⁷, comprising mainly coastal species. These include fish commonly sold as 'Croaker' in the UK ("Corvina" in Spain), 'Sole' ("Lenguado" in Spain), and "Denton" ("Pargo" in Spain)⁶⁸. Many of these species are caught by with bottom trawlers; what little fisheries data is available for West Africa indicates that species caught in this type of fishery are over-exploited in the region⁶⁹.

Korean industrial and inshore trawl fleets operate in direct competition with artisanal fishermen, particularly those vessels that illegally enter the Inshore Exclusion Zone (IEZ)⁷⁰. Up to 75% of catches taken by trawlers can be discarded as bycatch⁷¹; including species that have value to local fishing communities and are crucial to the wider marine ecosystem.

According to the Sierra Leone Ministry of Fisheries and Marine Resources (MoFMR) sources, it is likely that much of the fish caught by Korean vessels is being illegally transshipped at sea to refrigerated transport vessels (reefers) destined for Las Palmas. In 2007 Korean vessels imported almost 5400 tons of fish from West African waters via the Canary Islands - most of it as "mixed frozen fish" and not separated by species. In 2008, 4004 tons of West African fish had arrived⁷³. Las Palmas is the global distribution point for West African fish, which either goes onto the European market, or is further shipped within its Free Trade Zone for transport to destinations including East Asia. In 2007 Spanish companies in the Canaries exported 627 tons of the valuable West African Seabram "Denton" they received from Korean vessels to Europe, mainly to clients in the United Kingdom, Greece and Italy74. "Denton" has been previously traced by EJF from IUU vessels into the EU market75.



ABOVE: South Korean vessels fishing in West Africa supply the fish markets of Europe and Asia ©EJF

Table 1: Catches of Korean trawlers in West African waters⁷²

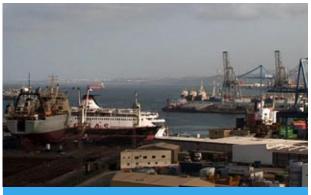
Species	Species (latin names)	Catches 2007 in tons
Croakers, drums nei	Sciaenidae	12.729
Marine fishes nei	Osteichthyes	8.478
Bigeye tuna	Thunnus obesus	1.862
Porgies, seabreams nei	Sparidae	611
Soles nei	Soleidae	803
Tonguefishes	Cynoglossidae	344
Hairtails, scabbardfishes nei	Trichiuridae	207
Yellowfin tuna	Thunnus albacares	307
Rays, stingrays, mantas nei	Rajiformes	259
Groupers, seabasses nei	Serranidae	194
Albacore	Thunnus alalunga	12
TOTAL		26.121

^{*}For more on the role of Chinese vessels in IUU fishing operations in West Africa, please see EJF's report 'Pirate Fish on your Plate'.

Table 2: Exports Korean flagged vessels to the Canary Islands, 2006-2008 $({\sf ESTACOM})^{76}$

Туре	Exports	Exports	Exports
	2006 mt	2007 mt	2008 mt
Mixed Frozen Fish	2310	2228	2077
Sea breams (Dentex dentex and Pagellus spp.)	505	531	491
Frozen Sepia and Cuttlefish	678	616	206
Frozen Calamaris + Octopus	190	272	350
Frozen flat fishes	446	539	316
(Soles and Tongues)			
Frozen shrimps	688	1053	451
Frozen Swordfish	72	0	0
Frozen fish fillets	34	51	57
Frozen sharks	19	15	29
Frozen Crustaceans	17	58	27
TOTAL RANKING	4959	5362	4004





©EJF

THE PROBLEM OF LAS PALMAS

Las Palmas de Gran Canaria, in Spain's Canary Islands, has long been identified as Europe's most notorious 'Port of Convenience', and is particularly relevant to the West African IUU fishery. The port's status as a free economic zone⁷⁷ enables it to have favourable customs regulations allowing access to the EU market, and lax control over the transhipment of goods, which are deemed not to have entered Spain (and therefore the EU) whilst still in the port. As well as serving as a European market entry point for IUU fish, Las Palmas also provides services to IUU (and legal) fishing fleets operating off the coast of West Africa, and hosts a number of companies that operate IUU vessels.

While it is likely a significant proportion of IUU fish from West Africa has been entering Europe via Las Palmas⁷⁸, a substantial amount is likely passing through the port without being recorded as landed in the EU at all. This fish is transhipped onto other markets, including those in East Asia. While incoming ing should (if effectively implemented and enforced) eliminate IUU fish entering the EU marketplace via Las Palmas, it will not be relevant to fish being landed and transhipped within the port's Free Economic Zone. Although the loss of profits from market access into the EU will likely have an impact on West African IUU fishing operations, the large and growing seafood market in East Asia will continue to make Las Palmas an attractive base. Unless this situation is addressed by measures such as an international Port State Treaty, Las Palmas, Spain and the EU will continue to facilitate IUU fishing in West Africa.

IMPACTS OF PIRATE FISHING ON SIERRA LEONE



LOCATED ON THE COAST OF WEST AFRICA, SIERRA LEONE IS RECOVERING FROM A BRUTAL CIVIL WAR, WHICH LASTED FROM 1991 TO 2002.

This devastating conflict resulted in more than 50,000 deaths and the displacement of 2 million people, approximately one-third of the total population⁷⁹. Infrastructure such as roads, schools and hospitals, as well as food production capacity, were damaged and destroyed. Sierra Leone has recently been ranked last of 179 countries by the United Nation's Human Development Index⁸⁰ - making it the least developed nation on earth, and one of the poorest. Currently 70% of the population live below the national poverty line of one dollar a day⁸¹; 51% are undernourished⁸²; 26% live in extreme poverty⁸³; and 27% of children under 5 are malnourished⁸⁴. Most Sierra Leoneans live with little or no access to any form of healthcare, education, sanitation or clean water and sufficient nutrition.

Vulnerable war-torn or post-conflict nations are particularly targeted by illegal fishing operators. Sierra Leone's productive coastal waters are an invaluable source of food and livelihoods. However, in recent years foreign IUU fishing vessels have multiplied in number, taking advantage first of the chaos of the civil war, and now by the government's lack of capacity to monitor and control activities at sea. It is estimated that the country is now losing almost US\$29 million every year to pirate fishing operators⁸⁵ - a potential developmental income that local communities and the government cannot afford to lose.

IUU fishing impacts economic development, environmental security and food security. Fisheries form the life-blood of coastal villages in Sierra Leone, and represent the only source of income and livelihoods for fishermen and those – many of whom are women – involved in secondary activities such as fish processing and smoking, boat building, fish trade and distribution. Around 30,000 artisanal fishers and 200,000

ABOVE: Local women play an important role in artisanal fisheries in Sierra Leone. They report smaller and fewer fish to sell and feed their families, and blame widespread IUU fishing by foreign vessels. ©EJF

ancillary workers⁸⁶ are engaged in traditional fish capture, processing and intra-regional trade, and fisheries represent around 10% of GDP⁸⁷. Fish is also the most affordable and widely available protein source, and constitutes 80% of animal protein consumed in the country⁸⁸. The economic impacts therefore not only include the direct loss of the value of catches that could be taken by legitimate (often artisanal) fishers, as well as wider revenue that could be taken in the form of landing and licence fees, taxes, and ancillary employment in related industries.

IUU fishing may now account for over 26% of the total fish catch⁸⁹ in Sierra Leone. Local fishers consistently report that the extent and impact of these illegal operations is growing and having major adverse impacts. Anecdotal reports suggest that fish catches are declining and the fish caught are also smaller, indicating that juvenile fish needed to replenish stocks are now being caught. Fishermen are also being forced to go further out to sea and for longer periods to secure adequate catches, often in small canoes and pirogues that dangerously were not built for the job. Pirate vessels can cut through the nets and hooks that might have taken years of saving to buy, and at times have run into canoes, or attacked fishermen with stones and boiling water, resulting in injuries and deaths. The threat of harm and loss of livelihoods is forcing some artisanal fishers to abandon fishing altogether.

Many fishing communities are struggling to survive. Depleted fish stocks threaten the ability of fishers to feed their families and sustain incomes, a particular problem as the country has a high dependency ratio - each working person has a number of others to support financially. Debt levels are rising, and

RIGHT: Local fishers are being driven out of their fishing grounds at sea, and instead are now overfishing the shallow estuary waters.

They are aware of the problem, but rely completely on fish for their livelihoods and, as they cannot compete with the trawlers at sea, have no other options. ©EJF



'When I was a young boy, we used to get a lot of fish. But now there is no good catch, we only get small fish. The reason for this is the trawlers' Local fisherman in Sierra Leone

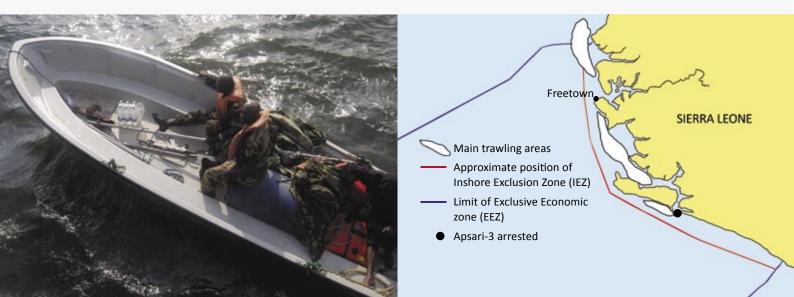
some fishers take loans to replace damaged or lost fishing gears. Families trying to recover from the civil war are unable to rebuild their homes, or cover the costs of sending their children to school. For more remote communities, health services are provided by mobile medical units; yet many of these operate on a cost-recovery basis - if communities cannot pay, then they are not visited.

The Government of Sierra Leone has limited resources and capacity to patrol and monitor the activities of illegal foreign fishing vessels in its national waters. The Ministry of Fisheries and Marine Resources (MoFMR) has a non-salary budget which in 2007 was just 610 million Leones⁹⁰ - around US\$200,000 - and is also hampered by a lack of reliable information on fish stocks. The real impacts of IUU fishing are therefore unknown and combined with the limited capacity of the Ministry makes any attempt at creating a sustainable management policy an enormous challenge. The Republic of Sierra Leone Armed Forces (RSLAF) Maritime Wing is responsible for monitoring and enforcement, but is also severely constrained. Offshore capacity is limited to a single patrol cutter donated by the Chinese Government, but this is largely unsuitable for use in the open ocean⁹¹; there is no air capacity; smaller inshore patrol craft have been donated by the United States and China, however funds for fuel and spare parts severely limit their use (at the time of writing, the Chinese craft is out of action until new fuel filters are fitted)92. In 2007-2008, the Sierra Leone Maritime Wing only had funding to run any patrols at all during six of the 24 months93.

DESTRUCTIVE FISHING

IUU fishing operators rarely abide by management laws designed to conserve and manage fish stocks and protect biodiversity, and often engage in destructive fishing practices, leading to damage to marine habitats and reducing fish numbers, size and distribution. IUU fleets specifically target commercially valuable species, particularly high value demersal fish, lobsters pirate vessels are bottom trawlers, a highly destructive form of fishing where heavy nets are dragged along the ocean floor, destroying seabed habitats and are pulled up onto the trawler, commercially valuable species are identified, and the remainder - as much benthic and demersal organisms, as well as sharks and marine turtles. It also includes juveniles of commercial species (thereby destroying the future of the stock) and 'valueless' fish species, many of which are key to healthy ecosystems and as a food source to estimated that all commercial species in Sierra Leone are fully or over-exploited96.

BELOW: The Sierra Leone Maritime Wing has extremely limited resources to patrol Sierra Leone's coastline, and are currently not able to control pirate fishing operations ©EJF





ABOVE: Pirate trawlers in Sierra Leone fish illegally within a few hundred metres of the shore and in the river estuary - reserved for local fishers and crucial fish breeding areas ©EJF

ILLEGAL, UNREPORTED AND UNREGULATED (IUU) FISHING OCCURS GLOBALLY, AND HAS BECOME A SYMPTOM OF A WIDER CRISIS IN WORLD FISHERIES – IUU FISHING IS NOW CONSIDERED BY LEADING EXPERTS AS ONE OF THE MOST SERIOUS THREATS TO THE ACHIEVEMENT OF SUSTAINABLE FISH STOCKS.

Accurate data on the scope and scale of IUU fishing is hard to come by, as it is in essence a clandestine activity and therefore extremely difficult to accurately assess. Nonetheless it has been recently estimated that illegal fishing accounts for a significant proportion of catches worldwide, with a value of US\$10 - 23.5 billion per year and representing between 11 and 26 million tons of fish⁹⁷.

IUU fishing is widespread, and while in some areas is being reduced, there are certain regions of the world where it is particularly prevalent. In Sub-Saharan Africa, where IUU fishing comprises an average 37% of catches, the total value of illegal fish caught is estimated at US\$1 billion per year⁹⁸, but the true figure could be far higher*. The Eastern Central Atlantic (coastal West Africa) is thought to have the highest levels of IUU fishing in the world: 40% higher than reported catches⁹⁹. The value of this fish is between US\$265 and 506 million¹⁰⁰, a potential source of income lost to nations ranked as some of the least developed in the world¹⁰¹.

The Food and Agriculture Organization of the United Nations (FAO) has now estimated that 80% of the world's fish stocks are fully or overexploited ¹⁰². Mismanagement and fleet overcapacity have resulted in plummeting fish stocks in many regions of the world, a fall that has coincided with an ever-increasing global demand for seafood. To fulfil this demand, illegal fishing operators have looked further afield, and increasingly the countries bearing the greatest costs of illegal operations are those in the developing world, which have abundant fish stocks but often lack the resources, institutional capacity, expertise and/or political will for monitoring and regulating activities in their coastal

waters¹⁰³. Indeed, a 2009 study unsurprisingly demonstrated the strong relationship between IUU fishing and World Bank governance indicators¹⁰⁴, highlighting the fact that developing countries are more vulnerable to illegal activities conducted by both local fishers and foreign fleets¹⁰⁵.

Artisanal fishing communities throughout the world consistently report decreased numbers and sizes of fish, threatening their livelihoods and basic food security¹⁰⁶. In some regions IUU vessels directly threaten and attack artisanal fishers, resulting in injuries and deaths 107. Loss of income is having serious social impacts for many of these communities, including threatened food security, loss of livelihoods, decreased health, and access to education. There is growing evidence that IUU fishing and its impacts are likely contributing to illegal and dangerous migration attempts to Europe¹⁰⁸ from Africa, and is perhaps a contributor to the widely reported expansion of piracy in regions such as Somalia¹⁰⁹. In short, IUU fishing is having significant consequences for sustainable development, and upon the communities dependent on fish for livelihoods and basic food security.

* The figure of almost USD 1 billion dollars (from MRAG's Review of Impacts of Illegal, Unreported and Unregulated Fishing on Developing Countries – FINAL REPORT¹¹⁰) is from 2005. The same report also provides MRAG's global estimate for IUU fishing at approximately \$9 billion/year. However, recent assessments by Agnew et al¹¹¹ raise the estimate for global levels of IUU fishing to between USD10-23.5 billion, an increase of between 1.1 and 2.6 times the previous \$9billion figure. Although reviewed estimates for Sub-Saharan Africa were not made at the same time, applying similar ratio increases projects that the region could in fact be losing between \$1.1 and \$2.6 billion to IUU each year, and as the same report shows that Sub-Saharan Africa has some of the highest IUU fishing rates in the world, the figures could be even higher.

OPPOSITE PAGE: Only fish that are considered to have commercial value are kept by IUU operators. The rest is dumped over the side as bycatch, lost to the marine ecosystem and local fishing communities ©EJF

'When the trawlers come, they take everything in the sea.
Once they have it on board, they keep only the valuable fish. Everything else they dump over the side, you can see it out there, dead fish floating everywhere.'

Local fisherman in Sierra Leone



ABOVE: Local fishing canoes are run down by pirate trawlers ©EJF



ABOVE: IUU fishing vessels tranship their cargoes out at sea and out of sight ©EJF

IUU FISHING - EXTENSIVE IN SIERRA LEONE

The Apsari-3, Seta 70, Luanda 11 and PUYU 6002 highlighted in this report are not the only IUU trawlers poaching fish from Sierra Leone. Observations by EJF investigators, and continuous reports by local fishermen highlight that several IUU vessels operate in the region. At certain times of the year, up to 15 vessels at a time have been visible from a single point on shore¹¹⁰. Local fishermen are afraid to approach these vessels due to a history of intimidation and violence, but even when they do the names and numbers are invariably covered up, making reporting to the authorities an impossibility. Observations by local fishermen are restricted to inshore waters, while the RSLAF Maritime Wing has extremely limited capacity to venture on patrol further out into the EEZ, and no aerial capabilities at all. It is therefore impossible to estimate how many illegal fishing vessels there are in Sierra Leone's national waters, but it is likely that figures are high.



CONCLUSIONS

Sierra leone and the wider West African region is being badly affected by IUU fishing, which is being facilitated by the European Union, and the failure of many countries, particularly China and South Korea, to fulfil their responsibilities as flag states. EU hygiene standards are failing to protect European Consumers or to ensure the legal provenance of the seafood imported into the EU.

The designation of DG Sanco numbers and inspection of the fisheries vessels carrying them by third country authorities results in a system that is failing in two crucial ways: firstly, many legal and illegal fishing vessels are failing to maintain adequate hygiene standards, compromising the health and safety of seafood consumers; secondly, as DG Sanco does not require proof that fish is legally-caught, illegal operators are able to sell their fish to Europe. As a result the designation and use of DG Sanco numbers by IUU vessels in West Africa is widespread.

The EU is taking commendable steps in addressing its role with Council Regulation (EC) No 1005/2008 establishing a Community System to prevent, deter and eliminate illegal, unreported and unregulated fishing. However, there appear

to be no plans to coordinate and complement these efforts by updating and linking DG Sanco regulations to reflect the EU's new stance. The result will be a situation whereby one regulatory framework will aim to end IUU fishing, and another will facilitate it. This gap must be closed: if it is not, there is little doubt that IUU vessels and companies, and possibly third country governments, will continue to benefit.

South Korea and China, as major fishing and consuming nations, are failing to fulfil their obligations as flag states; the IUU fishing activities of their vessels in Sierra Leone and the wider West African region are unacceptable, and should be ended, in accordance with their international obligations.

IUU fishing is international by nature, by operation, and by beneficiaries. It is therefore crucial that local initiatives in Sierra Leone and regional approaches in West Africa to address illegal fishing are supported and complemented by international efforts to ensure the fulfilment of responsibilities of flag states, and ensure that illegal fishing operations cannot find an open market for their 'dirty fish'.



RECOMMENDATIONS

1

The current failings of the system listing fisheries vessels by the Food and Veterinary Office of DG Sanco must be addressed, and extended to include controls relating to the legal provenance of the fish. To this end, the European Union should:

- Require DG Sanco to increase the frequency of inspections, particularly for third country fishing vessels in distant water fisheries. Countries that repeatedly fail to achieve adequate standards and/or are suspected of listing vessels without proper inspection should be barred from DG Sanco lists.
- Harmonise all relevant EU regulations that have an impact on IUU fishing with Council Regulation (EC) No 1005/2008 establishing a community system to prevent, deter and eliminate illegal, unreported and unregulated fishing. DG Sanco and DG Mare must improve coordination of efforts to bar IUU fish from the EU market, as required by Commission Decision 2005/960/EC¹¹¹. As an example, vessels listed on the future IUU vessel 'blacklist' should be immediately removed and barred from DG Sanco lists. All vessels owned by a company with a vessel on the IUU blacklist should also be removed and barred, to serve as a deterrent to wrongdoing and ensure the closure of loopholes.
- Prohibit third country flag states whose vessels repeatedly fail to fulfil DG Sanco requirements from exporting fish to the European Union, in harmonisation with Chapter IV of Council Regulation (EC) No 1005/2008, 'Non-Cooperating Third Countries'.
- Apply the precautionary principle in line with Article 174 of the EC Treaty¹¹² and particularly Council Regulation (EC) No 2371/2002 on the conservation and sustainable exploitation of fisheries resources under the Common Fisheries Policy¹¹³ to develop a mechanism requiring that vessels requesting DG Sanco listing demonstrate a legal right to fish. Vessels fishing on the high seas must be from nations that demonstrate membership of the relevant Regional Fisheries Management Organisation (RFMO), and those fishing in third country waters must submit evidence of a legal right to do so. This mechanism should also include measures whereby vessels and companies suspected of IUU fishing activities are refused listing.
- Publish full vessel ownership details of all vessels on all DG Sanco lists.
- Support the development and creation of an Eastern
 Central Atlantic vessel registry and associated blacklist to
 help exclude IUU vessels operating in West Africa, and to
 limit the ability of these vessels to access the EU market.

Support the development of crucial fisheries infrastructure (dedicated port, cold store etc), and downstream value-added industry in Sierra Leone. This should be accompanied by EU support for adequate training by the Directorate-General for Health and Consumers to the relevant competent body in Sierra Leone (Food Unit of the Ministry of Health and Sanitation) towards achieving EU hygiene standards for domestic fish products, including the artisanal fishing sector. Overcoming this impediment to the development of a value-added fishing sector in Sierra Leone will allow the country to maximise economic and developmental benefits from its marine resources.

7

South Korea and China should fulfil their responsibilities as flag states as defined by the FAO International Plan of Action to deter, prevent and eliminate Illegal, Unreported and Unregulated Fishing, and in line with the Code of Conduct for Responsible Fisheries. In particular South Korea and China should:

- Immediately develop national plans of action to eliminate IUU fishing, in line with and incorporating the key elements of the EU Council Regulation (EC) No 1005/2008 including port state controls and catch certification.
- Exercise authority and implement international responsibilities as flag states to ensure that fishing vessels and companies involved in distant water fleets are fishing legally.
- Ensure that all national fishing vessels that are designated DG Sanco numbers are adequately inspected to ensure that they do in fact meet hygiene criteria.

3

As the principal nations engaged in and benefiting from distant water fisheries in West Africa, the EU, South Korea and China should:

- Support the development of science-based fisheries management systems in Sierra Leone and the wider West Africa region.
- Support the development of monitoring, control and surveillance capacity of West African nations, including regional collaboration in these efforts.

4

Developing nations, including Sierra Leone, should take all necessary steps to combat IUU fishing in national waters and at the regional level. Sustainable and transparent fisheries management regimes should be developed that reflect not only potential economic gain, but also reflect the important role that fisheries play in both food security and artisanal fisher livelihoods.

ANNEX 1 - VESSELS LINKED BY EJF TO IUU FISHING ACTIVITIES IN WEST

Vessel Name	Country	Licensed at	Vessel	Flag National-	Call	Owners	DG SANCO	DG SANCO on of	Illegal Links / Activities / History
	Observed	time of observation?	Туре	ity at time of observation	Sign		2007	SANCO as of 12.12.08	
Apsari - 3	Sierra Leone	У	ВТ	South Korea	DTAA	Seo Hai Fisheries or Dong Won Fisheries		KORF-098	Arrested in Sierra Leone 11/08 for fishing in Inshore Exclsuion Zone
Binar 4	Guinea	n	RF	Panama					illegally transhipping 03/2006 - multiple detentions
Chang Hai 3	Guinea	у	RF	China					illegally transhipping 03/2006
CNFC 21	Guinea	у	BT	China	BBRE		3700/20040	3700/20040	Illegally transhipping to Hai Feng 829 on 27/03/06.
CNFC 22	Guinea	У	BT	China	BBRF		3700/20041	3700/20041	Illegally transhipping to Hai Feng 823 on 16/03/06
CNFC 24	Guinea	у	BT	China	BBRH		3700/20043	3700/20043	Illegally transhipping to Hai Feng 830 on 17/03/06.
CNFC 9310	Guinea	У	BT	China	BBGX		3700/20010	3700/20010	Seen fishing in prohibited zone off Gambia 2000. Transhipping to Hai Feng 823 on 16/03/06
CNFC 9311	Guinea	У	BT	China	BBGY		3700/20026	3700/20026	Arrested in Guinea 20/10/04 for mesh violation
Eleni S	Guinea	У	ВТ	South Korea/ Malta	9H3 1386				Arrested in Guinea on 4/2/05 for unauthorised fishing
Elpis	Guinea	n	RF	Belize	V3UW5				Illegally transhipping 03/2006
Guo Ji 806	Guinea	У	ВТ	China	BAST				Arrested in Guinea 2005, no detail. Also known as Taising 806
Hai Feng 823	Guinea	n	RF	China	3FZ09	CNFC			Illegally transhipping
Hai Feng 829	Guinea	n	RF	China	BCGM	CNFC			Illegally transhipping
Hai Feng 830	Guinea	n	RF	China	BSST	CNFC			Illegally transhipping
Itti Guinnee I	Guinea	У	ВТ	Guinea	IYXT	Ittiguinee Sarl	016/N/MPA/ DNPM	016/N/ MPA/DNPM	Arrested in Guinea 2005 for fishing with no license
Itti Guin- nee II	Guinea	У	ВТ	Guinea	IFOO MV295	Ittiguinee Sarl	014/N/MPA/ DNPM	014/N/ MPA/DNPM	Arrested in Guinea 2005 for fishing with no license
Jiu Yuan 812	Guinea	У	ВТ	China	BKST2		1200/20037	1200/20037	Illegally transhipping into Hai Feng 830 on 03/2006. Arrested in Guinea 2005 for no licence.
Koras No6	Guinea	У	ВТ	Korea	GM 1111				Suspected poacher 09/01-12/01 in Sierra Leone. Seen fishing with no licence off Guinea at 09`55'N14`07W 19/7/06. Nets were obscuring the name.
Lian Run 1	Guinea	n	BT	China					Previously Long Way 1, illegally fishing Guinea 2000
Lian Run 7	Guinea	У	ВТ	China	B2SP7				Arrested in Guinea 2003 for fishing with no licence. Many infractions including mesh size.
Lian Run 10	Guinea	n	BT	China					Previously Long Way 10, illegally fishing Guinea 200
Lian Run13	Guinea	n	BT	China				2100/02790	Arrested in Guinea 2005 for fishing with no license. Observed changing name to Lian Run/Yun 24 03/2006
Lian Run 14	Guinea	n	ВТ	China			2100/02791	2100/02791	Arrested by Guinean Authorities 28/03/06 for fishin without a licence.
Lian Run 18	Guinea	У	ВТ	China	BZSN6		2100/02795	2100/02795	Boxes labelled with this name on board arrested Lia Run 14
Lian Run 19	Guinea	У	ВТ	China	BZSN9		2100/02796	2100/02796	Boxes labelled with this name on board arrested Lia Run 14
Lian Run 20	Guinea	У	ВТ	China	BZSN11		2100/02797	2100/02797	Boxes labelled with this name on board arrested Lia Run 14
Lian Run 21	Guinea	у	ВТ	China	BAOT		2100/02798	2100/02798	Arrested in Guinea 03/02/05 for no licence.
Lian Run 24	Guinea	у	BT	China	BZSN5		2100/027801		Illegally transhipping to Binar 4 April 06.
Lian Run 25	Guinea	У	ВТ	China	BZSN6			2100/02630	Illegally transhipping with Elpis on 03/2006.
Lian Run 26	Guinea	У	ВТ	China	BZSN9			2100/02631	Arrested in Guinea 2005 for no licence.
Lian Run 27	Guinea	У	ВТ	China	BZSN5			2100/02632	Illegally transhipping to Binar 4 April 06.
Lian Run 28	Guinea	у	BT	China	BZSN7			2100/02632	Waiting to illegally tranship to Binar 4 April 06.
Lian Run 29	Guinea	У	ВТ	China	B2SP5			2100/02634	Illegally transhipping from Zhang Yuan Yu 15, (unlicensed) on 24/03/06. Illegally transhipping with Elpis on 31/03/06. Waiting for Binar 4 in international waters or Guinea Bissau waters on 6 April 06. Illegally transhipping to Chang Hai 3.
Lian Run 30	Guinea	У	ВТ	China	BAOT	China Dalian		2100/02635	In January 2005 in Las Palmas. Unloading fish to Chang Hai 3 for Africa

AFRICA, INCLUDING DG SANCO NUMBERS

Vessel Name	Country Observed	Licensed at time of observation?	Vessel Type	Flag National- ity at time of observation	Call Sign	Owners	DG SANCO 2007	DG SANCO as of 12.12.08	Illegal Links / Activities / History
Liao Yu 839	Guinea	у	ВТ	China	HQIC9				Illegally transhipping to Chang Hai 3 on 26/03
Long Way 008	Guinea	n	ВТ	China					Fishing without a license 03/2006
Long Way 010	Guinea	у	BT	China	V3ZCT				Fishing illegally in Guinea 2000. Illegally Transhipping to Chai Hai 3 on 03/2006
Luanda	Guinea	unknown	ВТ						Full identification not visible. Observed inside IEZ 03/2006
Luanda 11	Sierra Leone	n	ВТ	South Korea	DTBF8	Inter-Burgo		KORF-214	Observed fishing without a licence and inside the Inshore Exclusion Zone 05/2008
Min Yu 701	Guinea	у	ВТ	China	BBUA		1200/20019	1200/20019	Arrested in Guinea 2002 mesh size violation. Arrested in Guinea 2005 illegal mesh in trawl
Nova Aus- tralia	Guinea	n	RF	Singapore	9VGQ2	Seatrade			Two trawlers waiting to illegally tranship 03/2006
Poong Lim 11	Guinea	У	ВТ	South Korea	6MUI	Poonglim Fisheries Co. Ltd.	KORF-097	KORF-097	Suspected poacher 2001 in Sierra Leone. Vessel found fishing illegally in 2001 Guinea, no licence or expired licence.
Poong Lim 12	Guinea	У	ВТ	South Korea	6MWA	Poonglim Fisheries Co. Ltd.	KORF-095	KORF-095	Vessel found fishing illegally in 2000, off coast of Guinea. No licence or expired licence.
Pu Yu 2002	Sierra Leone	n	ВТ	China				1200/20038	Observed illegally fishing within the Inshore Exclusion Zone. Destroyed local artisanal gear.
Sakoba 1	Guinea	У	ВТ		9LFZS				When observed on 02/2004-06 illegally transhipping with Elpis in Sierra Leona waters, had an obscured name and call sign of Osito 89. Observed fishing without a licence in Guinea waters 30/03/2000, 19/04/2000, 2/6/2000. Observed on 04/2006 within IEZ of Guinea.
Saturnia	Guinea	n	ВТ	Senegal			076/AX/95	076/AX/95	Arrested Guinea 2002 mesh size violation. Arrested Guinea-Bissau 2003 mesh obstruction. Illegally fishing Guinea 2000
Seta 70	Sierra Leone	n	BT	South Korea	DTBE9	Inter-Burgo		KORF-242	Observed fishing without a licence and inside the Inshore Exclusion Zone 05/2008. Arrested Liberia for illegal fishing 02/2008.
Tae Wong 608	Guinea	У	ВТ	South Korea	6NGE	Samshin Fisheries Co. Ltd.	KORF-174	Now called: No. 801 Jeasung	Seen off Guinea with expired licence 2002. Vessel found fishing illegally in Guinea 2000, no licence or expired licence.
Trebba	Guinea	n	ВТ	Senegal	6WEP	Italsen	131/BS/99	131/BS/99	Arrested in Guinea 2002 for mesh size violation
Wofagui 2	Guinea	у	ВТ	Senegal/ Guinea	KSB2				Arrested in Guinea 2005 illegal mesh in trawl.
Wofagui 5	Guinea	У	ВТ	Senegal/ Guinea	CSP-5				Seen fishing with no licence off Guinea 2002
Yan Yu 630	Guinea	n	ВТ	China	VBER		3700/20024	3700/20024	Arrested in Guinea 2005 Illegal mesh in the trawl
Yue Yuan Yu 7	Guinea	У	ВТ	China	BXAF6		4400/20007	4400/20007	Observed fishing with no license 2002
Yue Yuan Yu 8	Guinea	у	ВТ	China/ Guinea	BXAF7		4400/20012	4400/20012	Observed fishing with no license 2002
Zenab 3	Guinea	n	ВТ		6MBA				Arrested in Guniea fishing in a prohibited zone 2005
Zhang Yuan Yu 1	Guinea	у	ВТ	China	BAKY		2100/02736	2100/02736	Transhipping empty boxes from the Elpis 03/2006
Zhang Yuan Yu 2	Guinea	n	ВТ	China	BAKY		2100/02737	2100/02737	Boxes labelled with this name aboard Lian Run 14
Hidden Names	Multiple ves		nea and Si	erra Leone have b	een observ	ved fishing with	all identifica-		Required identification markings deliberately hidden

LEGEND

 $\label{thm:condition} \textbf{TYPE OF VESSEL: RF-Reefer, BT-Bottom trawler, PT-Pelagic trawler, FF-Fish factory vessel, FV-Freezer vessel}$

LICENSES: Licensed according to the lists of third country fishing vessels licensed to fish in Guinean waters provided by the Guinean Fisheries Ministry (2006) and Sierra Leone Ministry of Fisheries and Marine Resources (May and November 2008)

OWNERS: Owners of the ship according to Lloyds Seaweb or EJF observations

 ${\tt DG\ SANCO: Sanitary\ number\ provided\ by\ the\ EU\ to\ third\ country\ vessels\ authorised\ to\ export\ fishery\ products\ to\ the\ EU.}$

ANNEX 2

FROM REGULATION (EC) NO 853/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 29 APRIL 2004 LAYING DOWN SPECIFIC HYGIENE RULES FOR FOOD OF ANI-MAL ORIGIN

SECTION VIII: FISHERY PRODUCTS

The requirements of this Section supplement those laid down in Regulation (EC) No 852/2004:

- (a) In the case of establishments, including vessels, engaged in primary production and associated operations they supplement the requirements of Annex I to that Regulation.
- (b) In the case of other establishments, including vessels, they supplement the requirements of Annex II to that Regulation.

In relation to fishery products:

- (a) primary production covers the farming, fishing and collection of live fishery products with a view to their being placed on the market; and
- (b) associated operations cover any of the following operations, if carried out on board fishing vessels: slaughter, bleeding, heading, gutting, removing fins, refrigeration and wrapping; they also include:
- 1. the transport and storage of fishery products the nature of which has not been substantially altered, including live fishery products, within fish farms on land; and
- the transport of fishery products the nature of which has not been substantially altered, including live fishery products, from the place of production to the first establishment of destination.

CHAPTER I: REQUIREMENTS FOR VESSELS

Food business operators must ensure that:

- vessels used to harvest fishery products from their natural environment, or to handle or process them after harvesting, comply with the structural and equipment requirements laid down in Part I; and
- operations carried out on board vessels take place in accordance with the rules laid down in Part II.L 226/62 EN Official Journal of the European Union 25.6.2004
- I. STRUCTURAL AND EQUIPMENT REQUIREMENTS
- A. Requirements for all vessels
- Vessels must be designed and constructed so as not to cause contamination of the products with bilge-water, sewage, smoke, fuel, oil, grease or other objectionable substances.
- Surfaces with which fishery products come into contact must be of suitable corrosion-resistant material that is smooth and easy to clean. Surface coatings must be durable and non-toxic.
- Equipment and material used for working on fishery products must be made of corrosion-resistant material that is easy to clean and disinfect.
- When vessels have a water intake for water used with fishery products, it must be situated in a position that avoids contamination of the water supply.

- B. Requirements for vessels designed and equipped to preserve fresh fishery products for more than 24 hours
- Vessels designed and equipped to preserve fishery products for more than 24 hours must be equipped with holds, tanks or containers for the storage of fishery products at the temperatures laid down in Chapter VII.
- 2. Holds must be separated from the engine compartments and from the crew quarters by partitions which are sufficient to prevent any contamination of the stored fishery products. Holds and containers used for the storage of fishery products must ensure their preservation under satisfactory conditions of hygiene and, where necessary, ensure that melt water does not remain in contact with the products.
- 3. In vessels equipped for chilling fishery products in cooled clean seawater, tanks must incorporate devices for achieving a uniform temperature throughout the tanks. Such devices must achieve a chilling rate that ensures that the mix of fish and clean seawater reaches not more than 3 °C six hours after loading and not more than 0 °C after 16 hours and allow the monitoring and, where necessary, recording of temperatures.

II. HYGIENE REQUIREMENTS

- When in use, the parts of vessels or containers set aside for the storage of fishery products must be kept clean and maintained in good repair and condition. In particular, they must not be contaminated by fuel or bilge water.
- 2. As soon as possible after they are taken on board, fishery products must be protected from contamination and from the effects of the sun or any other source of heat. When they are washed, the water used must be either potable water or, where appropriate, clean water.
- 3. Fishery products must be handled and stored so as to prevent bruising. Handlers may use spiked instruments to move large fish or fish which might injure them, provided that the flesh of the products suffers no damage.
- 4. Fishery products other than those kept alive must undergo chilling as soon as possible after loading. However, when chilling is not possible, fishery products must be landed as soon as possible.
- 5. Ice used to chill fishery products must be made from potable water or clean water.
- 6. Where fish are headed and/or gutted on board, such operations must be carried out hygienically as soon as possible after capture, and the products must be washed immediately and thoroughly with potable water or clean water. In that event, the viscera and parts that may constitute a danger to public health must be removed as soon as possible and kept apart from products intended for human consumption. Livers and roes intended for human consumption must be preserved under ice, at a temperature approaching that of melting ice, or be frozen. L 226/64 EN Official Journal of the European Union 25.6.2004
- 7. Where freezing in brine of whole fish intended for canning is practised, a temperature of not more than -9 °C must be achieved for the product. The brine must not be a source of contamination for the fish.

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