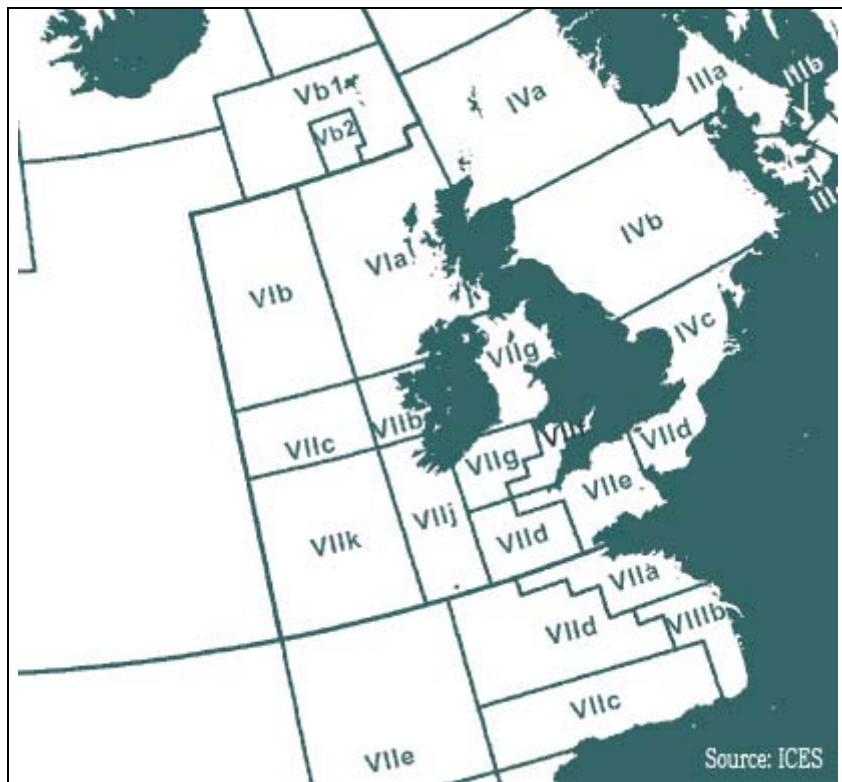


# Northeast Atlantic Deep-sea Gillnet Fishery Management

# Oceana's Recommendations for Permanent Measures

## December 2006



## Introduction

In December 2005, the Council of European Union Fisheries Ministers agreed on a measure to close the deepwater gillnet fishery in the North-East Atlantic (NEAT)<sup>1</sup>. The temporary closure, which took effect on 1 February 2006, encompasses waters deeper than 200 meters to the north and west of Great Britain and Ireland (ICES Divisions VI a and b, VII b, c, j and k, and Subarea XII east of 27° W; see figure 1).

This decision was made in response to the DEEPNET<sup>1</sup> project report, highlighting the incredible waste in this fishery and the damage that it may be causing to deepwater sharks and other species. Prior to the closure, fishing with deep-sea gillnets in the North-East Atlantic had practically no legal restrictions and controlling the fishery was almost impossible. The poor selectivity of the nets and long soak times, combined with surpassed, inadequate, or nonexistent quotas, has led to the unsustainable exploitation of various fish and crustacean stocks in this region.

In December 2006, the Fisheries Council will make a decision on reopening, and implementing further regulations for, the deep-sea gillnet fishery of the North-East Atlantic. This fishery has intrinsic problems that need to be resolved as a matter of urgency, and decisions must be made on how it should be effectively and permanently managed. This paper points out the enduring obstacles in the NEAT deep-sea gillnet fishery and presents Oceana's recommendations for permanent management measures.

### I. The deep-sea gillnet fishery and its current problems.

Since the mid-1990s, a fleet of up to 50 vessels have been conducting a gillnet fishery on the continental slope to the West of the British Isles, North of Shetland, at Rockall and the Hatton Bank. These vessels, though mostly based in Spain are registered in the UK, Germany and other countries outside the European Union (EU) such as Panama.

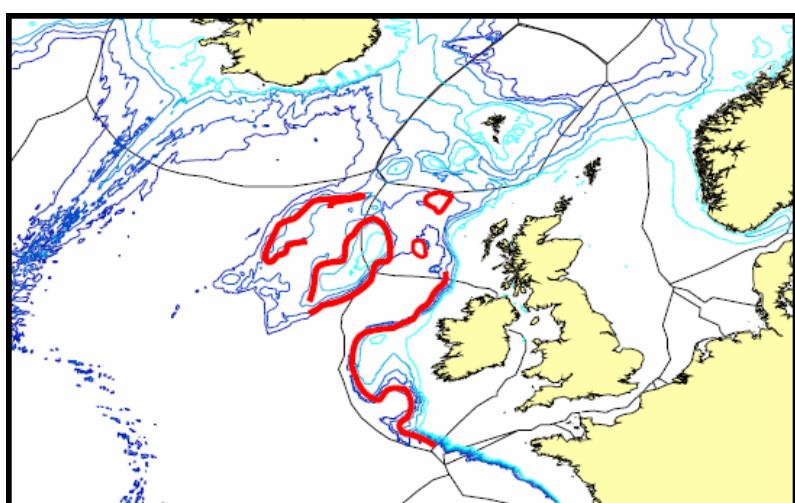
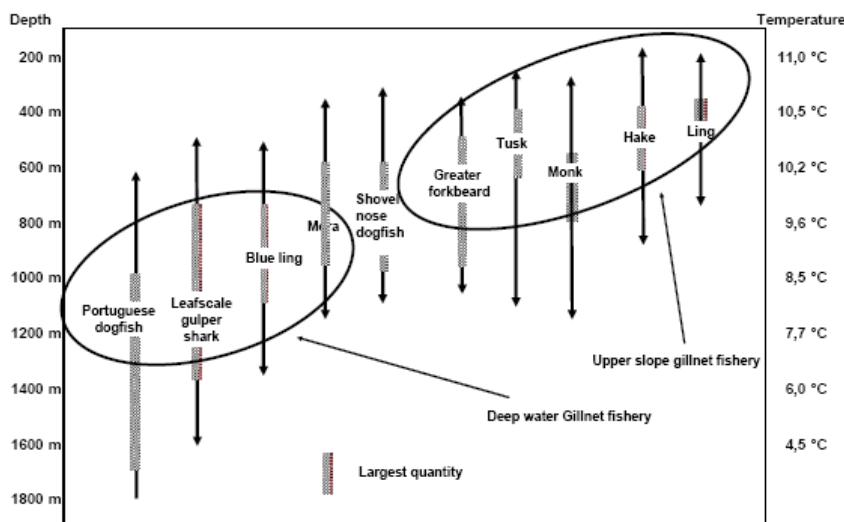


Figure 1: Northeast Atlantic waters and EEZs (depth contours of 200, 500, 100, 1500 and 2000m). Lines in bold outline approximate positions of the fisheries.<sup>2</sup>

The fishery is conducted in depths between 200 and 1200 meters, with the main target species being anglerfish and deepwater sharks (see Figure 2). This fishery can be divided into four sub-fisheries whose target species are anglerfish (*Lophius spp.*), hake (*Merluccius merluccius*), deep-sea sharks and crab (*Chaceon affinis*). The fisheries are not well documented or

<sup>1</sup>In 2006 the fishery was reopened for hake (*Merluccius merluccius*). Fishing effort is limited to the use of 120 mm gillnets above 600 m.

described and they seem to be largely unregulated, with little or no information on catch composition, discards and a high degree of suspected misreporting.



*Figure 2: Vertical distribution of fish species targeted in the deep-sea gillnet fishery, by depth and temperature from the continental slopes to west of the British Isles<sup>3</sup>.*

The large unknowns associated with the effort of the fishing fleets have continued to frustrate scientist and fisheries managers over many years. True figures for catches and landings in European ports are not known, the amount of time nets are left unattended in the water is not consistent, and there is only minimal monitoring by authorities and no direct observer evidence. In general, there is very little control over species reaching port, especially regarding sharks. Additionally, because a significant amount of fishing occurs outside of EU waters (i.e., in international waters or waters of non-EU countries through fishing agreements), various and often conflictive jurisdictions and authorities are involved. Vessels sometimes change names to hinder authorities from tracking them.

The gears employed in the deep-sea gillnet fishery consist of various rectangular net sections linked together and fixed to the sea floor. This section provides a brief overview of the deep-sea gillnet fishery, which can be divided into four distinct sub-fisheries according to minor modifications in the gear used. A detailed review of the fishery can be found in the DEEPNET report.

### a. The anglerfish fishery

#### *Description of the fishery*

The fishing grounds where anglerfish is targeted are found in ICES sub-divisions VIa, VIb and VIIb, c, j, k and may extend into other areas such as IVa and XII, or different subdivisions of VII and VIII. These are European Union, Norwegian, and international waters. This fishery operates on the upper continental slope (200-600m) and the current fleet comprises approximately 20 fishing boats. Approximately 10 boats belonging to this fleet also partake in the hake fishery and five operate in deeper water (600-1200m) targeting sharks and crabs. While the majority of vessels involved in the fishery are registered under flags of the United Kingdom, Germany, Spain, and non-European Union (EU) countries such as Panama and Belize (as flags of convenience), most belong to Spanish companies and operate primarily out of Galician ports. In Spain, this type of gillnet, and the fishery for anglerfish itself, is known as "Rasco" and each net is made up of a sheet of monofilament netting, with dimensions of 50 m length x 3.5 m width x 280 mm mesh size.

Two species have generally been landed under the name of "anglerfish": the white anglerfish (or white-bellied monkfish, *Lophius piscatorius*) and the black-bellied anglerfish (*Lophius budegassa*). As these fish have become scarcer in surface waters, they are now sought at depths down to 1,000 meters<sup>4</sup>. The true state of the anglerfish stock in many areas is unknown,

although catches have shown an evident decline since 1996<sup>5</sup> and some stocks of anglerfish run the danger of overexploitation.

#### *Fishery management loopholes*

Legislation for the anglerfish deep-sea gillnet fishery is not well defined and leads to numerous legal loopholes. For example, according to EU legislation, the minimum permitted mesh size for catching anglerfish and deep-sea sharks with fixed nets is 220 mm<sup>6</sup>. However, in Spain the minimum permitted mesh size is 280 mm<sup>7</sup>. The smaller net size permitted by EU legislation allows more fish to be caught in the nets. As a result, the majority of Spanish-owned vessels are registered under flags of countries which abide by the EU legislation, thus avoiding their own country's stricter rules.

A single vessel can deploy various sets of nets over several days until it has up to 400 km of net in the water<sup>8</sup>-- 36 times the 11 km net length regulated in Spain<sup>9</sup>. Often, the overwhelming amounts of net cannot be handled effectively by crews, and as a consequence are intentionally abandoned at sea, leading to an extreme and unnecessary amount of accidental catches (see below).

Another obstacle is that there is no specific legislation for minimum sizes for landing anglerfish or any of the other target species in the NEAT gillnet fishery (detailed below).

It is commonly believed that the quotas granted for anglerfish are far higher than what has been regarded as sustainable. Since 1997, the International Council for the Exploration of the Seas (ICES) has been calling for anglerfish catches in NEAT fisheries to be maintained or reduced, but these requests have been repeatedly ignored by politicians. Almost every year, quotas higher than those recommended by scientists have been agreed by the European Fisheries Ministers. For example, Total Allowable Catches (TACs) authorized in 2005 for divisions IIa, IV, Vb, VI, XII and XIV were between 40 and 50% higher than those initially proposed<sup>10</sup>.

Furthermore, the fishery has seen an overall increase in discards and unreported catches<sup>11</sup>. The poor selectivity of deep-sea gillnets, along with the length of time they are left in the water (detailed below), means that much of the fish caught is rotten or in a damaged state when finally brought in. Up to 71%<sup>12</sup> of the total anglerfish catch regularly has to be discarded.

## **b. The hake fishery**

#### *Description of the fishery*

This fishery is conducted along the continental slope from north of the British Isles to as far south as Portugal, and may be extending to the coast off West Africa<sup>13</sup>. At least 60 European vessels fish with gillnets in depths greater than 200m for hake. Around half of these are French, with the remainder registered in Spain, the UK, Ireland and Portugal<sup>14</sup>. The Spanish fleet comprises around 20 fishing vessels. There is also a small Portuguese hake gillnet fishery off the west and south coasts of Portugal that involves approximately three vessels<sup>15</sup>. Spanish hake nets are known as "Volanta" and each net is made up of sheets of monofilament netting, with dimensions of 50 m length x 10 m width x 90 mm mesh size (depending on the area).

#### *Fishery management loopholes*

The hake gillnet fishery is riddled with conflictive legislation. As is the case for the anglerfish sub-fishery, a single vessel is able to deploy various sets of nets reaching a total length highly superior to the seven km maximum net length regulated in Spain. However, according to EU legislation, the minimum permitted mesh size for catching hake with fixed nets is 120 mm<sup>16</sup>, while the Spanish permitted minimum mesh size is 90 mm<sup>17</sup>, allowing the EU fleet in Spanish waters to use less selective fishing gear.

There is no specific legislation for minimum sizes for landing hake in the NEAT deep-sea gillnet fishery and the spawning stock biomass has greatly decreased<sup>18</sup>. Furthermore, some scientific studies have demonstrated that the hake gillnet fishery presents a proportion of discards which

could vary from 2% to 80%<sup>19</sup>, proving this fishery to be potentially one of the most wasteful in the world.

Finally, it is difficult to obtain good statistical landing data for hake due to the high number of landings sites and the fact that the fish are mostly sold fresh and in large quantities (as French catches) directly from the fisherman to the consumer. Official statistical data does exist for several countries but the data reported are still far from the reality.

### c. The deep-sea shark fishery

#### Description of the fishery

Very little is known about the stock structure of deep-water sharks, and it is possible that these species range over wide areas. As deep sea sharks made up a significant portion of the by-catch in the anglerfish and hake deep-sea gillnet fishery, they came into their own as a targeted species for certain fleets. Today, the main species taken from Iceland (ICES Area Va) to the west of Scotland and in the Rockall Trough (Area VI) and west of Ireland and Western Approaches (Area VII) are Portuguese dogfish (*Centroscymnus coelolepis*) and the leafscale gulper shark (*Centrophorus squamosus*). These species are also important components in shark landings from Biscay (Area VIII) and off the Portuguese coast (Area IX). The nets used in this fishery are similar to the ones used in the anglerfish gillnet fishery, but with mesh sizes down to 160 mm in certain areas.

In recent years, excessive catches of deep sea sharks, which are much higher than those recommended by scientists, have contributed to dramatic population declines in some species and the complete depletion of various stocks<sup>20</sup>. In the most recent analysis carried out by ICES on deep-sea sharks, scientists advised the EU to end targeted fishing on these species and to classify these species, particularly the leafscale gulper shark (*Centrophorus squamosus*) and the Portuguese dogfish (*Centroscymnus coelolepis*), the two main species caught in the deep-sea gillnet fishery, as depleted<sup>21</sup>. In fact, the IUCN (World Conservation Union) regards *C. squamosus* as one of the species most sensitive to overexploitation and classified it as Vulnerable on its Red List. Major declines in the Catch per Unit Effort (CPUE) of these species, both on the verge of collapse, have been detected in the mere 14 years of existence of the fishery. As another example of the serious toll taken on deep-sea sharks, the spiny dogfish (*Squalus acanthias*), listed as Vulnerable by the IUCN, has declined by more than 60% in the last 25 years<sup>22</sup>.

#### Fishery management loopholes

The compilation of data from different studies has enabled ICES to corroborate the huge increase in landings of deep-sea sharks by the gillnet fleet, although since sharks are grouped together under general categories such as “deep-sea sharks” or “elasmobranchs”, there is no detail available on the diversity of species landed. From partial data for *C. coelolepis* and *C. squamosus* alone, catches increased from 486 tonnes in 1991 to 2,184 tonnes in 2000 and to 5,174 tonnes in 2003<sup>23</sup>.

The majority of elasmobranchs caught in European waters are not covered by the quota system used for other species of commercialized fish, which means that there are no catch limits for many sharks. Other times, catch limits are grossly overvalued. For example, in granting the 2005 and 2006 EU deep sea fishing quotas, the Commission proposed a quota of nearly 3,500 tonnes under the ambiguous term “deep-sea sharks” for areas V, VI, VII, VIII, IX, X and XII<sup>24</sup>. This amount was subsequently increased by the Council of Fisheries Ministers to approximately 7,000 tonnes<sup>25</sup>.

Regarding 2007 fishing opportunities, ICES advised a zero catch limit for deepwater sharks in all of these areas and noted that means to avoid by-catch of these species must be implemented. And while the Commission proposed a 2007 bycatch quota for ICES areas V, VI, VII, VIII, IX, and XII that amounted to a 33% reduction from actual 2005 catches, the Council agreed a bycatch TAC of 2472 tonnes, representing only a 25% reduction. Additionally, for ICES area X, where the scientific recommendation was also a zero TAC, the Council actually agreed a 25% increase over 2005 catches. The European Union has repeatedly ignored

international scientific advice on fisheries management for deep-sea sharks, many of whose populations have been severely depleted.

#### d. The crab fishery

##### Description of the fishery

Like with deep-sea sharks, the king (or red) crab (*Chaceon affinis*) sub-fishery developed after constituting high amounts of accidental catches. *C. affinis* is normally found on seamounts and escarpments at depths over 500 meters, and has already been shown to be vulnerable in certain areas of the Atlantic. Available data suggests that king crab can be taken as by-catch in the gillnet fishery for anglerfish and deepwater shark but there is also some evidence of directed fishing in some areas for this species. The fleet operating in this fishery is not well described and some of the same vessels targeting anglerfish and deep-sea sharks also take crab.

##### Fishery management loopholes

ICES has warned the fishing community about the lack of international agreements on minimum sizes, levels of exploitation, quotas or catch methods for the exploitation of *C. affinis* in NEAT waters, and has reiterated the importance of revising management measures before this fishery expands<sup>26</sup>. As with the vast majority of invertebrates subject to fisheries exploitation, *C. affinis* suffers a complete lack of basic management measures. Indeed, there is even a lack of scientific data that could be used to regulate catches.

## II. Proposed solutions for permanent measures.

Various scientific studies have demonstrated that deep-sea species can suffer sudden population declines in relatively few years of exploitation, and that they have a low ability to repopulate and recover. It has been estimated that many deep-water species are barely able to withstand commercial fishing, unable to endure catches exceeding 5% of their biomass<sup>27</sup>.

Because of the severe and urgent need for effective deep-sea fishery management in NEAT waters, Oceana strongly supports the institution of the following permanent measures, divided by species and sub-fishery practices.

#### a. Anglerfish

Due to the staggeringly high percentage of wastage, this fishery should be permanently closed. However, if the Council decides to reopen this fishery, **Oceana emphasizes the need to establish TACs in line with scientific recommendations, and enforcement measures to ensure that vessels comply with the authorized quotas.**

Additionally, no kind of highgrading or discarding of anglerfish parts should be permitted under any circumstances. Removal of parts of anglerfish and separate processing should only be permitted if there are conversion tables that enable analogies to be established between total catches and landings. If conversion systems are not established, **Oceana advises a prohibition on all anglerfish discards and a requirement to land all catches in this fishery.**

**Finally, Oceana recommends that species differentiation between *L. piscatorius* and *L. budegassa* be required upon catching or landing.**

#### b. Hake

Several scientific studies have shown that the volume of discards of this fishery range from 2% to 80%<sup>28</sup>. ICES provides management advice for two stocks of hake: the northern stock that comprises Divisions IIa, IIIa-d, Vb, VIIIA, b, d, e and Sub-areas IV, VI, VII, XII & XIV and the southern stock that comprises Divisions VIIIC, IXa and X. ICES advice for the northern stock is

a TAC for 2007 that does not exceed 44 000 t. **Oceana recommends that the Council follow the ICES advice for the 2007 TAC agreement.**

The ICES advice for southern stock is a zero catch for 2007 TAC concerning and for the development of a recovery plan to bring the stock back within precautionary limits. **Oceana recommends that the Council follows the ICES advice for the 2007 TAC agreement.**

Additionally, as the discards in this fishery can reach extremely high numbers (up to 80%), **Oceana advises a prohibition on all discards and a requirement to land all catches for hake.**

As hake approach maturity (approximately 39 cm or three years of age for males; 47 cm or four years of age for females), they disperse to offshore regions of the Bay of Biscay and Celtic Sea. Based on the most recent estimates of Spawning Stock Biomass (SSB) and fishing mortality, ICES has classified the northern stock as being at risk of reduced reproductive capacity and of being harvested unsustainably<sup>29</sup>. **Thus, Oceana emphasizes the need to establish minimum landing sized for the catch of hake in relation to their size at maturity to ensure reproductive capacity.**

In addition, as hake spawn in several batches from February to July along the shelf edge, principally from the areas north of the Bay of Biscay to the south and west of Ireland, **Oceana recommends a temporary closure of the fishery in this area during the critical reproduction stage of this species.**

### c. Deep-sea sharks

Deep-sea sharks are *k*-strategy species, meaning they have late sexual maturity, low fertility rates, long gestational periods, and high longevity. Consequently, they are extremely vulnerable to short-term overexploitation and are incapable of recovering at the same rate they are exploited. Due to the total lack of scientific information to allow rational management of this resource, their already severely threatened status, and their life history patterns which make obsolete any attempt at a sustainable fishery, these species should never be opened to commercial fishing. **Oceana recommends closing the deep-sea shark gillnet fishery permanently.**

It should be noted that for any other shark fishery opened in EU waters, **Oceana calls for species differentiation to be required upon catching or landing.** It is unacceptable that shark quotas continue to be grouped together under general categories such as “deep-sea sharks” or “elasmobranchs”, covering dozens of different species with different biologies and needs.

**Finally, the EU is obliged to implement the International Plan of Action for Sharks for EU waters<sup>30</sup>; member states shall do the same in their coastal waters<sup>31</sup>.** This should be implemented through the creation of management plans for shark species.

### d. King crab

In accordance with the principle of precaution established in the EU’s Common Fisheries Policy, no fishery should be allowed to open or operate without a sufficient technical basis confirming its viability and potential for good management. This, coupled with the particular vulnerability of the king crab as a deep-sea species, necessitates a continued closure of the fishery. Once proper studies are done and a system of proper TACs can be proposed, this fishery may be reopened. **Oceana advocates that this fishery remain closed until proper scientific investigations are carried out for this species.**

### e. Technical measures

A lack of specific, uniform legislation on gear used and the manner in which it is employed leads to a number of problems associated with this fishery. Of special concern are excessive accidental catches and discards resulting from these inconsistencies. Oceana urges the EU to

implement permanent controls regarding net length, mesh size, soak time, fishing depth, observers, discards, and net loss, all of which will ensure the sustainability of this fishery in NEAT waters.

#### Net length

Prior to the temporary deep-sea gillnet fishery closure, more than 6,000 km of fixed gillnets were deployed in NEAT waters every day, and it was calculated that between 5,800 - 8,700 km of net were permanently in use<sup>32</sup>.

**Using the Spanish regulation as precedence, Oceana proposes the total length of nets employed by each vessel at any given time be limited to 11 km for the anglerfish fishery and seven km for the hake fishery to avoid excessive waste of resources and ensure nets can be efficiently handled.**

#### Mesh size

Gillnets for anglerfish typically have mesh ranging between 220-280 mm, while the mesh of nets used to catch sharks is typically 160 mm<sup>33</sup>. Current Spanish legislation limits mesh size for anglerfish in this fishery to 280 mm<sup>34</sup> and to 90 mm for hake. Improper or large mesh sizes means poor selectivity and allows for high numbers of untargeted species to be captured.

**Oceana recommends that the minimum mesh size allowed be fixed and harmonised for the deepsea gillnet fishery and that the Council establishes a permanent mesh size limitation of 280 mm for all gillnets targeting anglerfish and 120 mm for all hake gillnets.**

#### Soak time

The amount of time that nets are left unattended in the water is directly proportional to the quantity of discards thrown overboard, and is an additional concern in this fishery. Approximately 65% of the total catch in this fishery is discarded.

Under normal conditions, fishing trips last approximately five days and gillnets remain in the water for three to four days, but this can be extended to up to ten days in episodes of difficult weather<sup>35</sup>. Additionally, as most vessels do not have the physical capacity or time to bring in the huge amounts of nets deployed, often part of the nets remain at sea while catches are landed, thus extending soak time to up to several weeks. The longer the nets are left in the water, the higher the quantity of by-catch. By the time the vessels return for the nets, the vast majority of catches, both targeted and untargeted species, are seriously damaged or in a state of decomposition. This means that even a large portion of the targeted catch must be discarded. The EU must take action to reduce the level of accidental catches and discards in a move towards improved fisheries management.

**Oceana proposes that net collection be required after 24 hours of use, notwithstanding extensions of time due to inclement weather. In addition, vessels should be prohibited from leaving gear unattended at sea whilst landing catches.**

#### Fishing depth and observers

The deep-sea gillnet fishery occurs between 200 and 1800 m (see Figure 2); these depths can have severe effects on certain stocks. For example, females and juveniles of the leafscale gulper shark and the Portuguese dogfish (*C. squamosus* and *C. coelolepis*, respectively), the two principally targeted deep-sea sharks in this fishery, tend to be found at greater depths than adult males. Fishing at greater depths means catching more females, and because gestational periods are so long this can mean eliminating various generations of deep sea sharks at once, thereby exacerbating their already depleted status<sup>36</sup>.

The use of fixed gillnets at depths of over 200 metres has already been banned in the Macaronesian archipelagos of the Azores, Madeira and the Canary Islands<sup>37</sup>. In addition, Council Regulation 51/2006 prohibited Community vessels from deploying gillnets at a depth greater than 200m in ICES Divisions VIa and b, VIIb, c, j and k and in Subarea XII east of 27° West prior to the complete prohibition taking effect on February 1, 2006<sup>38</sup>. Oceana proposes that these regulations serve as a basis for permanent management of the deep-sea gillnet fishery in all NEAT waters.

**Oceana recommends that deep-sea gillnet fishing be limited to a depth of 200 meters in all waters where the fishery occurs and considers experimental fishing down to a depth of 600 m acceptable, provided that vessels carry onboard observers.** Observer coverage is crucial to gathering scientific information that can be used for long-term management measures. In particular, data that could be gathered on discards from this fishery would be particularly useful in the development of the European discard policy, to be undertaken in 2007.

#### Discards

It should be noted that the EU fisheries management system of Total Allowable Catches is actually a system based Total Allowable Landings (TALs). TACs in actuality refer to the number of fish *landed*, and do not take into account discards, which as seen above account for a high percentage of the total catch in this fishery. Hundreds of tonnes of fish, invertebrates, mammals and other organisms that are thrown overboard are thus unaccounted for. This management system means that scientific assessments, authorized catches and subsequent landings have no uniformity. Indeed, if the tonnes of fish that do not reach port were counted, it would be seen that fleets are far exceeding the TACs established by the EU.

**In an effort to approach sustainable fisheries management, Oceana recommends that the EU's new by-catch policy include measures to account for discards in Total Allowable Catches.** Rectifying this inadequacy would avoid the imbalances between permitted quotas and catches, facilitate better management of marine resources, instil greater reliability in scientific assessment and reduce wastage in fisheries.

#### Net loss and abandonment at sea

On many occasions, gillnets are not recovered at all because they weigh too much, cannot be managed, or have become too old for effective use. Some gillnets are abandoned after being damaged through interactions with bottom trawlers or longliners, as there are no geographical demarcations for each type of gear and fishing efforts often coincide. Others nets are simply lost at sea while vessels go to port to unload their catches. As a result, many kilometres of nets are intentionally discarded or lost at sea; these "ghost nets" continue to catch fish, mammals, turtles, and other organisms for years. It may take many years for the nets to break down and no longer pose a risk to marine species. Taking as a reference the known fishing effort of the fleet operating in NEAT waters, the DEEPNET report estimated that 25,000 nets, totalling 1,254 km, could be lost or deliberately abandoned every year in this fishery<sup>39</sup>. However, given that estimates of fishing efforts are regarded as conservative, the actual volume of nets left in the sea may be much higher.

According to an Institute for European Environmental Policy (IEEP) report<sup>40</sup>:

In deep water fisheries conditions are more conducive to net loss, and there is strong evidence of net dumping and significant levels of ghost fishing in the deep water north east Atlantic fishery for shark and monkfish. The problem of ghost fishing in this fishery appears to be of a different order of magnitude compared to other fisheries in the EU, and as such warrants immediate action and research by the EU, Member States and the industry involved.

According to the IEEP report, the European Commission has made a commitment to address ghost fishing, and the European Council subsequently invited the Commission to move forward on these commitments<sup>41</sup>. There is also clear legal basis for addressing ghost fishing in the EU's Common Fisheries Policy as it impacts fish stocks and the greater marine environment<sup>42</sup>. Finally, it should be noted that the International Maritime Organization's Convention for the Prevention of Pollution from Ships (MARPOL) specifically prohibits the abandonment of fishing gear (synthetic fishing nets) in Annex V, Reg. 3. While the EU is not a signatory of this convention, all EU member states are.

The European Commission and the UN Food and Agriculture Organization's Code of Conduct for Responsible Fisheries have already acknowledged the need to reduce the amount of lost fishing gear<sup>43</sup>. **Oceana also highlights the need for control measures to reduce the incredible loss of fishing gear in the deep-sea gillnet fishery.** As outlined by the IEEP report, preventative measures (e.g., the marking of gear; zoning of fishing activities; limiting gear use in quantity, length, soak time, etc.) are preferable to curative measures (i.e.,

compulsory reporting of lost fishing gear, retrieval programmes). These efforts would stop the loss of thousands of kilometres of deep-sea gillnet each year in NEAT waters.

### **III. Conclusions.**

ICES has been quick in incorporating new scientific knowledge into their recommendations for fisheries management, and for years the EU and other countries of the North-East Atlantic have received their expert advice. However, in regards to the deep-sea gillnet fishery, ICES evaluations have been nearly completely ignored. In the case of anglerfish, for which data has been available for decades, the scientific recommendations for catches for the stock found in divisions VIIb-k and VIIIa and b have been ignored in seven of the last ten years<sup>44</sup>, and for the stock found in divisions VIIc and IXa, the last seven years straight<sup>45</sup>. Even after that, the actual catches have often exceeded the excessive TACs granted in the first place. In the case of deep-sea sharks and the king crab, although they have been studied for less time, the repeated warnings sent out by scientists about their vulnerability did nothing to make the EU adopt measures to prevent their depletion.

The deep-sea gillnet fishery in the Northeast Atlantic reveals many errors made in EU fisheries policy: a new fishery has been started without the necessary scientific and technical data to ensure its proper management; there are no uniform regulations on the fishing gear used; there are no specific controls for fishing effort, fishing grounds, landings, etc.; quotas are granted far higher than those recommended; and, there is an excruciatingly high amount of wastage from accidental catches and discards.

These problems need not only to be solved for NEAT waters- they must be solved before the fishery expands into other areas. In accordance with the precautionary principle, new fisheries should not be allowed to open if there is not sufficient data to demonstrate its viability. And for the most part, this scientific data has yet to be provided for this fishery.

It is time the EU puts right the way this fishery has been allowed to operate and implements and enforces the permanent management measures outlined above as a vital step towards achieving a more sustainable deep-sea gillnet fishery.

#### **Spain's gillnetting fleet and their politicians: a conflict of interest.**

Spanish Members of the European Parliament (MEPs) have sometimes been found supporting regulations that grossly contradict scientific and environmental organisations' recommendations for sustainable fisheries. And this time their actions are even in conflict with their own country's fishing fleet.

In supporting the proposal to reopen the NEAT deepsea gillnet fishery, they are going against their own country's regulation with which Spanish fishermen operating in the Cantabrian sea in the Northeast of Spain must comply. As an example, the Spanish regulation limits the total length of rasco gillnets (targeting anglerfish) that can be employed to 11 km, and the total length of volanta gillnets (targeting hake) to seven km. However, the EU proposal their own MEPs support will allow other EU fleets fishing in the same areas as the Spanish fleet to employ gillnets of up to 100 km and 25 km respectively.

In a letter written by the Asociación de Armadores de Artes Fijos (Spanish Fixed Net Ship-owner Association) to the Spanish Ministry of Agriculture, Fisheries and Food, the fleet voiced its strong disapproval of the deepsea gillnet fishery proposal presented by the European Commission. This sector, which has worked for years towards re-establishing and recuperating the severely decimated fish populations in the Cantabrian Sea, fears that their conservation efforts will be cut down by the EU proposal which will allow fishermen of other fleets to use less selective gear. The Association declares that the deep-sea gillnetters operating along with them in the Cantabrian Sea should comply with the guidelines from the Spanish regulation.

Using the Spanish regulation as precedence, the total length of nets employed by each vessel at any given time in the reopened deep-sea gillnet fishery should be limited to 11 km for the anglerfish fishery

# **Summary of Oceana's Recommendations for Permanent Deep-sea Gillnet Fishery Management**

Oceana strongly recommends the Council adopt the following measures:

## **I. Targeted deep-sea species**

For Anglerfish:

- Establish TACs in line with scientific recommendations;
- Establish enforcement measures to ensure that vessels comply with permitted quotas;
- Only allow the separate processing of anglerfish parts if conversion tables are utilized to relate total catches to landings, or prohibit all anglerfish discards and require all catches in this fishery to be landed;
- Require species differentiation between *L. piscatorius* (white anglerfish) and *L. budegassa* (black-bellied anglerfish) upon catching and/or landing;
- Establish a minimum catch size of in line with scientific advice.

For Hake:

- Establish TACs in line with scientific recommendations;
- Establish enforcement measures to ensure that vessels comply with permitted quotas;
- Establish a minimum catch size in line with scientific advice;
- Prohibit discards and require all catch to be landed;
- Temporarily close the fishery during the reproductive period,

For Deep-sea Sharks:

- Close the deep-sea shark fishery permanently;
- Require species differentiation between species upon catching or landing for any other elasmobranch fishery opened to ensure sustainable exploitation.

For King Crab:

- Maintain the closure of the fishery for this species until sufficient scientific data can endorse its viability and sustainability, in accordance with the principle of precaution;
- Carry out sufficient scientific investigations to propose proper TACs prior to reopening the fishery.

## **II. Technical measures**

Net Length

- For the anglerfish deep-sea gillnet fishery: limit the total length of nets employed by each vessel at any given time to 11 km.
- For the hake deep-sea gillnet fishery: limit the total length of nets employed by each vessel at any given time to 7 km.

Mesh Size

- For the anglerfish deep-sea gillnet fishery: establish a permanent mesh size limitation of 280 mm for all nets used in this fishery.
- For hake deep-sea gillnet fishery: establish a permanent mesh size limitation of 120 mm for all nets used in this fishery.

Soak Time

- Require that deep-sea gillnets be collected after 24 hour of deployment;
- Prohibit vessels from leaving gear unattended at sea.

Fishing Depth

- Permanently limit fishing depth to 200 meters in all waters of the fishery;

- Allow experimental fishing for fisheries analysis down to 600 meters only if vessels carry an onboard observer.

Intentional abandonment and gear loss at sea

- Implement preventative control measures to reduce the loss of fishing gear in this fishery, including, but not limited to, strengthening gear marking requirements and enforcing gear marking regulations, zoning of fishing activities, limiting gear use in quantity, length, soak time, etc.;
- Implement curative control measures for lost fishing gear, including, but not limited to, compulsory reporting of lost gear, and retrieval programs.

## References

- <sup>1</sup> Hareide N-R., Garnes G., Rihan D., Mulligan M., Tyndall P., Clark M., Connolly P., Misund R., McMullen P., Furevik D., Humborstad O.B., Høydal K. & T. Blasdale (2005). A preliminary Investigation on Shelf Edge and Deep-sea Fixed Net Fisheries to the West and North of Great Britain, Ireland, around Rockall and Hatton Bank. Bord Iascaigh Mhara, Fiskeridirecktoratet, NEAFC, Sea Fish Industry Authority, Joint Nature Conservation Committee, Marine Institute Foras na Mara.
- <sup>2</sup> *Id.*
- <sup>3</sup> *Id.*
- <sup>4</sup> Caruso, J.H. (1986). Lophiidae.. p. 1362-1363. In P.J.P. Whitehead, M.-L. Bauchot, J.-C. Hureau, J. Nielsen and E. Tortonese (eds.) *Fishes of the North-eastern Atlantic and the Mediterranean*, Volume 3. Unesco, Paris.
- <sup>5</sup> ICES (2004). Anglerfish in Division IIIa (Kattegat and Skagerrak), Subarea IV (North Sea), and Subarea VI (West of Scotland and Rockall) (*Lophius piscatorius* and *L. budegassa*). ACFM report.
- <sup>6</sup> Annex IIC, point 11.3 of Council Regulation (EC) No 51/2006 of 22 December 2005 fixing for 2006 the fishing opportunities and associated conditions for certain fish stocks and groups of fish stocks, applicable in Community waters and, for Community vessels, in waters where catch limitations are required. OJ L 16, 20.1.2006, p. 1-183.
- <sup>7</sup> BOE (2001). Real Decreto 410/2001, de 20 de abril, por el que se regula la pesca con artes fijos en el Caladero Nacional del Cantábrico y Noroeste. Boletín Oficial del Estado (BOE) 2001-04-21. <http://www.boe.es/boe/dias/2001-04-21/pdfs/A14779-14782.pdf>
- <sup>8</sup> *Id.*
- <sup>9</sup> BOE (2001). Real Decreto 410/2001, de 20 de abril, por el que se regula la pesca con artes fijos en el Caladero Nacional del Cantábrico y Noroeste. Boletín Oficial del Estado (BOE) 2001-04-21. <http://www.boe.es/boe/dias/2001-04-21/pdfs/A14779-14782.pdf>
- <sup>10</sup> EC (2004). COUNCIL REGULATION (EC) No 27/2005 of 22 December 2004 fixing for 2005 the fishing opportunities and associated conditions for certain fish stocks and groups of fish stocks, applicable in Community waters and, for Community vessels, in waters where catch limitations are required. Official Journal of the European Union 14.1.2005.
- <sup>11</sup> ICES (2004). Anglerfish in Divisions VIIb k and VIIIa,b (*L. piscatorius* and *L. budegassa*). ACFM report.
- <sup>12</sup> Hareide N-R., Garnes G., Rihan D., Mulligan M., Tyndall P., Clark M., Connolly P., Misund R., McMullen P., Furevik D., Humborstad O.B., Høydal K. & T. Blasdale (2005). A preliminary Investigation on Shelf Edge and Deep-sea Fixed Net Fisheries to the West and North of Great Britain, Ireland, around Rockall and Hatton Bank. Bord Iascaigh Mhara, Fiskeridirecktoratet, NEAFC, Sea Fish Industry Authority, Joint Nature Conservation Committee, Marine Institute Foras na Mara.
- <sup>13</sup> Report of the Scientific, Technical and Economic Committee for Fisheries on Deep-sea Gillnet Fisheries. STECF opinion expressed during plenary meeting held in Ispra from 6-10 November 2006 (SEC 200\*).
- <sup>14</sup> *Id.*
- <sup>15</sup> MacMullen P. H., et al 2002: Fantared 2, A study to identify, quantify and ameliorate the impacts of static gear lost at sea – the final report of EU Study Contract FAIR2 CT98 4338, Seafish technical report ISBN 0 903941 97 X.
- <sup>16</sup> Annex I B of Council Regulation (EC) No 941/2006 of 1 june 2006 amending Regulation (EC) No 51/2006, as concerns blue whiting and herring.
- <sup>17</sup> Real Decreto 410/2001, de 20 de abril por el que se regula la pesca con artes fijos en el Caladero Nacional del Cantábrico y Noroeste.
- <sup>18</sup> Scientific paper of the Centre for Environment, Fisheries & Aquaculture Science (CEFAS) - NORTHERN HAKE (ICES Division IIIa, Sub-areas IV, VI, VII and Divisions VIIIa, b and d) – 2006.
- <sup>19</sup> Anon, 1993. Selectivity of Fishing Gears in Irish Waters. Final Report to the European Commission. BIOECO 93/11.
- <sup>20</sup> ICES (2004). ACFM Annual Report. International Council for the Exploration of the Sea – Advisory Committee on Fisheries Management 4.11.1 Elasmobranch fishes. Copenhagen, Denmark.
- <sup>21</sup> ICES (2005). Deep-sea sharks in the northeast Atlantic (ICES Sub-areas V-XIV, mainly Portuguese dogfish and leafscale gulper shark. Advisory Committee on Fishery Management of the International Council for the Exploration of the Sea. Annual report, October 2005. Copenhagen, Denmark.
- <sup>22</sup> ICES (2004). ACFM Annual Report. International Council for the Exploration of the Sea – Advisory Committee on Fisheries Management 4.11.1 Elasmobranch fishes. Copenhagen, Denmark.
- <sup>23</sup> ICES (2004). Report of the Working Group on Elasmobranch Fisheries (WGEF). Living Resources Committee, 2004. International Council for the Exploration of the Sea. Copenhagen, Denmark. <http://www.ices.dk/reports/ACFM/2004/WGEF/WGEF04.pdf>
- <sup>24</sup> EC (2004). Proposal for a Council regulation fixing for 2005 and 2006 the fishing opportunities for Community vessels for certain deep-sea fish stocks and amending Council Regulation (EC) No 2347/2002. (Com (2004) 746). 29.11.2004.
- <sup>25</sup> PROVISIONAL VERSION. PRESS RELEASE. 15873/04 (Presse 354). Council of the European Union. 2633rd Council Meeting. Agriculture and Fisheries. Brussels, 21-22 December 2004; OJEU (2005). Legislative proposals adopted by the Commission (2005/C 12/11). Official Journal of the European Union 18.1.2005 C 12/26.

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- <sup>26</sup> ICES (2004). Report of the Study Group on the Biology and Life History of Crabs (SGCRAB). ICES Living Resources Committee ICES CM 2004/G:13, Ref. D.
- <sup>27</sup> Morato T., Cheung W.W.L. & T.J. Pitcher (2004). Vulnerability of seamount fish to fishing: fuzzy analysis of life-history attributes. In T. Morato and D. Pauly (eds.), Seamounts: Biodiversity and Fisheries, Fisheries Centre Research Reports 2004. Volume 12 Number 5:51-60.
- <sup>28</sup> Anon, 1993. Selectivity of Fishing Gears in Irish Waters. Final Report to the European Commission. BIOECO 93/11.
- <sup>29</sup> Scientific paper of the Centre for Environment, Fisheries & Aquaculture Science (CEFAS) - NORTHERN HAKE (ICES Division IIIa, Sub-areas IV, VI, VII and Divisions VIIIa, b and d) - 2006.
- <sup>30</sup> Communication from the Commission to the Council and the European Parliament "Elements of a Strategy for the Integration of Environmental Protection. Requirements into the Common Fisheries Policy". COM(2001) 143 final. Brussels, 16.03.2001.
- <sup>31</sup> Article 10 of the Code "Integration of Fisheries into Coastal Area Management".
- <sup>32</sup> Hareide N-R., Garnes G., Rihan D., Mulligan M., Tyndall P., Clark M., Connolly P., Misund R., McMullen P., Furevik D., Humborstad O.B., Høydal K. & T. Blasdale (2005). A preliminary Investigation on Shelf Edge and Deep-sea Fixed Net Fisheries to the West and North of Great Britain, Ireland, around Rockall and Hatton Bank. Bord Iascaigh Mhara, Fiskeridirecktoratet, NEAFC, Sea Fish Industry Authority, Joint Nature Conservation Committee, Marine Institute Foras na Mara.
- <sup>33</sup> Hareide N-R., Garnes G., Rihan D., Mulligan M., Tyndall P., Clark M., Connolly P., Misund R., McMullen P., Furevik D., Humborstad O.B., Høydal K. & T. Blasdale (2005). A preliminary Investigation on Shelf Edge and Deep-sea Fixed Net Fisheries to the West and North of Great Britain, Ireland, around Rockall and Hatton Bank. Bord Iascaigh Mhara, Fiskeridirecktoratet, NEAFC, Sea Fish Industry Authority, Joint Nature Conservation Committee, Marine Institute Foras na Mara.
- <sup>34</sup> BOE (2001). Real Decreto 410/2001, de 20 de abril, por el que se regula la pesca con artes fijos en el Caladero Nacional del Cantábrico y Noroeste. Boletín Oficial del Estado (BOE) 2001-04-21. <http://www.boe.es/boe/dias/2001-04-21/pdfs/A14779-14782.pdf>
- <sup>35</sup> Hareide N-R., Garnes G., Rihan D., Mulligan M., Tyndall P., Clark M., Connolly P., Misund R., McMullen P., Furevik D., Humborstad O.B., Høydal K. & T. Blasdale (2005). A preliminary Investigation on Shelf Edge and Deep-sea Fixed Net Fisheries to the West and North of Great Britain, Ireland, around Rockall and Hatton Bank. Bord Iascaigh Mhara, Fiskeridirecktoratet, NEAFC, Sea Fish Industry Authority, Joint Nature Conservation Committee, Marine Institute Foras na Mara.
- <sup>36</sup> Clark, M. (2004). A contribution to knoledge of the stock structure of the deep-water sharks *Centrophorus squamosus*, *Centroscymnus coelolepis* and *Galeus melastomus*. Appendix 9. DELASS.
- <sup>37</sup> EC (2005). Council Regulation (EC) No 1568/2005 of 20 September 2005 amending Regulation (EC) No 850/98 as regards the protection of deep-water coral reefs from the effects of fishing in certain areas of the Atlantic Ocean. Official Journal of the European Union 28.9.2005.
- <sup>38</sup> Council Regulation (EC) No 51/2006 of 22 December 2005 fixing for 2006 the fishing opportunities and associated conditions for certain fish stocks and groups of fish stocks, applicable in Community waters and, for Community vessels, in waters where catch limitations are required.
- <sup>39</sup> Hareide N-R., Garnes G., Rihan D., Mulligan M., Tyndall P., Clark M., Connolly P., Misund R., McMullen P., Furevik D., Humborstad O.B., Høydal K. & T. Blasdale (2005). A preliminary Investigation on Shelf Edge and Deep-sea Fixed Net Fisheries to the West and North of Great Britain, Ireland, around Rockall and Hatton Bank. Bord Iascaigh Mhara, Fiskeridirecktoratet, NEAFC, Sea Fish Industry Authority, Joint Nature Conservation Committee, Marine Institute Foras na Mara.
- <sup>40</sup> Brown, J. G. Macfadyen, T. Huntington, J. Magnus and J. Tumilty (2005). *Ghost Fishing by Lost Fishing Gear*. Final Report to DG Fisheries and Maritime Affairs of the European Commission. Fish/2004/20. Institute for European Environmental Policy / Poseidon Aquatic Resource Management Ltd joint report.
- <sup>41</sup> Brown, J. G. Macfadyen, T. Huntington, J. Magnus and J. Tumilty (2005). *Ghost Fishing by Lost Fishing Gear*. Final Report to DG Fisheries and Maritime Affairs of the European Commission. Fish/2004/20. Institute for European Environmental Policy / Poseidon Aquatic Resource Management Ltd joint report.
- <sup>42</sup> *Id.*
- <sup>43</sup> See, for example: EC contract FAIR-PL98-4338, A study to identify, quantify and ameliorate the impacts of static gear lost at sea 2003 (FANTARED 2).
- <sup>44</sup> ICES (2005). Anglerfish in Divisions VIIIc and IXa (*Lophius piscatorius* and *Lophius budegassa*). Advisory Committee on Fishery Management of the International Council for the Exploration of the Sea. Annual report, October 2005. Copenhagen, Denmark.
- <sup>45</sup> ICES (2005). Anglerfish in Divisions VIIb k and VIIIa,b (*Lophius piscatorius* and *Lophius budegassa*). Advisory Committee on Fishery Management of the International Council for the Exploration of the Sea. Annual report, October 2005. Copenhagen, Denmark.



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