

## CONSULTATION ON AN EU ACTION PLAN FOR SHARKS

The European Commission intends to come forward with an EU Action Plan on the conservation and management of sharks, inside and outside Community waters. The Action Plan will outline the measures already in place, and will describe the additional measures needed to manage sharks in a comprehensive and coherent way. Once adopted, the Action Plan will be submitted to the Council and the European Parliament through a Communication explaining the background and the rationale for it. The implementation of the Action Plan will entail the modification of a number of existing regulations and, likely, the adoption of new ones.

The Commission has identified nine fields of action that it believes need to be addressed in the Action Plan (see Part 2 of the Consultation document). Stakeholders are invited to express their views on these fields of action, and present their opinions as to what further measures would be appropriate to reinforce the policy of the European Community on the conservation and management of sharks. The input received in the consultation process will be used as a basis for discussions and in the preparation of the impact assessment of the envisaged Action Plan.

The comments should be submitted by **15<sup>th</sup> February 2008** at the latest, by e-mail to the following address:

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# CONSULTATION PAPER

## 1. BACKGROUND INFORMATION

### 1.1. General considerations

Despite their known vulnerability to overfishing, chondrichthyans (sharks, rays and chimaeras) have been increasingly exploited in recent decades. A number of factors are responsible for this trend, including improvements in fishing technology, processing and consumer marketing, expanding human populations and declines in other fish stocks, all of which have made sharks a more valuable fisheries resource. Thus, shark fisheries have experienced rapid growth since the mid-1980s due to an increased demand for shark products (fins in particular, but also meat, skin, cartilage, etc), especially in Asian markets. Between 1984 and 2004, world catches of sharks grew from 600,000 to over 810,000 metric tons. In addition, many thousands of sharks have been taken accidentally in tuna longline fisheries every year since their introduction in the 1960s.

Shark populations are generally fragile when targeted by unregulated fisheries, resulting in a pattern of “boom and bust”. Rising catches are followed by rapid declines and very slow recoveries when stocks are protected.

Within the framework of the Code of Conduct for Responsible Fisheries, the FAO adopted in 1999 the International Plan of action for the conservation and management of sharks (IPOA SHARKS<sup>1</sup>). This International plan is voluntary but all concerned States are encouraged to implement it. It therefore foresees the implementation by States of national plans to ensure the conservation, management and long-term sustainable exploitation of sharks.

The European Community has not done so yet, although it has adopted a number of measures aiming directly or indirectly at the conservation and management of sharks, and has promoted the adoption of some measures at RFMOs level. However, the range of existing measures is clearly insufficient to ensure the rebuilding of many depleted stocks and the Community should assume a leading role in the development of policies aiming at the rational exploitation of fishing resources. Therefore, the adoption by the College at the end of next year of a Communication on an EU Plan of Action for the Conservation and Management of Sharks is foreseen in the Commission Work programme for 2008.

### 1.2. Shark fisheries in Community waters

In the Northeast Atlantic, fisheries employing a wide range of gears to target a variety of elasmobranch species may be found in the coastal zone from northern Norway to the north to Portugal in the south. Of the coastal species, the spurdog is the most widespread and the most intensively fished. The extensive migrations of this species can result in a group of fish being the target of a fishery in the English Channel or Western Approaches,

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<sup>1</sup> The FAO International Plan of Action for the Conservation and Management of Sharks considers the term “shark” to include all species of sharks, skates, rays, and chimaeras (Class Chondrichthyes). The EU Action Plan will follow the same approach.

and later the same group of fish can be taken in another fishery in the North Sea or off the west coast of Scotland. A similar scenario exists for the highly migratory pelagic sharks, particularly the blue shark, which is an important by-catch of many fisheries that use nets and lines (including sport fisheries). This type of multi-fishery targeting does not occur with the other coastal elasmobranch species, due to the limited migrations made by the species concerned. Consequently, coastal fisheries, which may involve a number of different catching gears, tend to exploit local populations of catsharks, hounds and rays, usually as a by-catch in fisheries directed at teleost species.

The majority of deep-water elasmobranches landed from the Northeast Atlantic are taken as a by-catch in trawl fisheries operating in water depths in excess of 500 m, but more typically beyond 1,000 m and from the longline artisanal fisheries taking place off both mainland Portugal and the Azores. Since 1991, the expansion of effort by large French vessels into deeper waters to the west of the UK (Sub-areas VI and VII) has resulted in increasing catches of deep-water sharks. To the south, in ICES Sub-areas VIII and IX, Spanish and Portuguese longline fisheries are directed at a number of deep-water shark species. The Portuguese mainland longline fishery that targets black scabbardfish, operates in a restricted area off Portugal and takes deep-water sharks, especially Portuguese dogfish and leafscale gulper shark as by-catch.

In general terms and given the state of their populations, it is prohibited for Community vessels to fish for, to retain on board, to tranship and to land basking shark (*Cetorhinus maximus*) and white shark (*Carcharodon carcharias*) in all Community and non-Community waters.

It is worth mentioning the case of Angel shark (*Squatina squatina*) which spreads in the Northeast Atlantic from southern Norway, Sweden and Shetland Islands to Morocco and West Sahara, including the Canary Islands and the Mediterranean. Even if it bears a small commercial fishery, usually as by-catch, the stock is in a critical state. This species is included in the IUCN red list of threaten species.

In the Mediterranean sharks constitute a common by-catch in various commercial fisheries both in Community and international waters. Bottom trawling exploits several cartilaginous fishes. Rays, skates and shark specie belonging to the families of Scyliorhinidae (*Scyliorhinus* spp., *Galeus melastomus*), Triakidae (*Mustelus* spp.) and squalidae (*Centrophorus* spp., *Squalus* spp., *Etmopterus spinax*) and the chimaerid fish (*Chimaera monstrosa*) are common items in the bottom trawl catches. Moreover, sharks are occasionally caught by artisanal fishing in inshore waters by trammel nets. Even a recreational fishing targeting blue shark (*Prionace glauca*) in the Adriatic Sea develops during the summer months.

According to preliminary information some species have been identified to be endangered: White shark, Basking shark, Manta and other Mediterranean endemic rays (i.e. *Raja melitensis*, *R. polystigma*, *R. rondeleti*).

### **1.3. Shark fisheries by the EC fleet outside Community waters**

In 2005, there were some 393 long-line vessels, which were authorised by EC Member States to undertake fisheries in the waters covered by the Tuna RFMOs (IATTC, WCPFC, IOTC and ICCAT). In the past, sharks have been considered as a bycatch species in the longline fisheries, however, now some fleets may be directly targeting sharks, rather than taking them as bycatch.

### *1.3.1. Strategy at regional level*

It's one of the EC general policy strategic elements to strengthen the role of RFMOs in their fisheries management capability by fostering highly qualified advice of their respective scientific committees.

Several Sharks species are caught as important by-catches in fisheries targeting other groups of marine resources, therefore a proper management of the latter fisheries both in terms of limiting the fishing capacity, controlling or reducing the fishing effort, controlling access to waters and improving selectivity of fishing nets bear indirect positive effects also on sharks.

There are currently few binding management recommendations on sharks adopted by RFMOs of which the Community is a contracting party. In cases where there are no recommendations or no management plan foreseen, the Community should encourage the respective scientific committees to develop proposals aimed at improving the availability of data and to carry out preliminary assessments.

In some instances, such as the International Commission of the Conservation of Atlantic Tunas (ICCAT), the European Community has urged the Scientific Committee for Research and Statistics (SCRS) to call for the improvement of data collection and provision for pelagic sharks species taken in the tuna fisheries and to assess the stock situation. In 2004, the SCRS conducted the first blue and shortfin mako sharks assessments but still requires more data, both in terms of quantity and quality, for a reliable assessment to be undertaken. Once these results are forthcoming, the Commission should encourage all contracting parties to approve binding management rules, and where necessary catch limits.

Other RFMOs set up by-catch working party (first meeting in 2005) in order to compile shark data (Indian Ocean Tuna Commission - IOTC), or prohibits any direct sharks fishery (Commission for the Conservation of the Antarctic Marine Living Resources - CCAMLR) or have resolution on the conservation of sharks caught in association with fisheries (Inter American Tropical Tuna Commission – IATTC)

The prohibition of shark finning practices established by Regulation 1185/2003 applies to all types of fishing in Community waters, and to all Community vessels fishing in non-Community waters. As the Community policy is to show equal commitment towards conservation in all waters where its fishing vessels operate, the Community also took a proactive attitude to facilitate the promotion of measures prohibiting finning practices for adoption in operational international fora, namely Regional Fisheries Organisations (RFMOs).

Therefore, in the last years, the prohibition of finning practices was agreed within several RFMOs on the basis of a Community proposal (with joint support from other parties).

Several Sharks species are wide-ranging and highly migratory inhabiting international waters. Therefore, the responsibility for the management of fisheries exploiting such stocks shall be primarily undertaken within the relevant Regional Fisheries Organizations and it is for these bodies to determine the appropriate measures that should apply to the waters placed under their responsibilities. It is therefore important to support the work of RFMOs in this regard, reinforce those already established and co-operate for the prompt establishment of new RFMOs in areas not yet covered.

In the absence of clear recommendations and advice on sharks- management stemming from RFMOs, the present European Community's action will be mainly oriented to improve the knowledge on directed fisheries as well as on incidental catches of sharks. In view of the above, the Community will continue working with and supporting the Regional Fisheries Organisations.

### 1.3.2. Fisheries Partnership Agreements (FPA)

The Fisheries Partnership Agreement (FPA) concluded between the European Community and the third countries are, in general, primarily oriented towards fish species. They are in conformity with appropriate Council regulations regarding sharks. All European vessels shall comply with the measures and recommendations adopted by the competent regional fisheries management organisations in the regions. In addition, in some particular cases, there is specific reference in the technical statements of the specific agreement regulations (e.g. Mauritania).

### 1.3.3. West African fisheries

The two main FPAs in this region were concluded between EC and Morocco and EC and Mauritania. As for the former, the fishing conditions for each category shall be agreed each year before the issue of licences. In accordance with the fishing datasheet, there is no allowance for swordfish and surface sharks for the by-catches in the small scale fishing. In the Mauritanian FPA, for the category concerning pole-and-line and surface long-liners, in accordance with the relevant ICCAT and FAO recommendations, fishing for the basking shark (*Cetorhinus maximus*), white shark (*Carcharodon carcharias*), sand tiger shark (*Carcharias taurus*) and tope shark (*Galeorhinus galeus*) is prohibited. Moreover, the fisheries are in accordance with ICCAT recommendations 04-10 and 05-05 concerning the conservation of sharks caught in association with fisheries managed by ICCAT.

#### 1.3.3.1. Demersal

Since 1992, Spain has developed a deepwater trawl fishery for Senegalese hake *Merluccius senegalensis* and Benguela hake *M. polli* off Mauritania, in which sharks represent an important part of the by-catch. A decline of the elasmobranch by-catch was observed, which represented 9.4 % (228 t) of the total catch in 1992 and only 1.4 % (24 t) in 1999.

Spain has also developed a deepwater bottom longline fishery off Mauritania in which elasmobranchs represented 2% of the total catch in number and in weight. The elasmobranchs accounted for 9 - 20 % of the by-catches in the 0 – 100 m depth range and up to 60 % in the deepest stratum (> 500 m depth).

In 2001, Spain carried out a longline survey on the Sierra Leone Rise in order to evaluate the potential of the demersal resources on the seamounts in this area between 200 and 2000 m depth. It was observed that sharks accounted for 82-85% of the fauna on the deepest seamounts (800 – 1900 m depth) where commercial bony fishes were few; they represented 2-6 % of the total catch on the seamounts where the alfonsino *Beryx splendens* was dominant.

### 1.3.3.2. Pelagic

Off the West African coast there are fisheries for small pelagic species by Community vessels which are known to have significant by-catches of sharks which are discarded at sea.

The main component of the elasmobranch by-catch (about two thirds) consists of hammerheads, mainly *Sphyrna lewini* and *S. zygaena* (juveniles and adults). Other regularly caught species are *Carcharhinus* sp., *Mustelus mustelus*, *Leptocharias smithii*, *Alopias vulpinus*, and *Isurus oxyrinchus*. Also a variety of rays and skates have been observed in these by-catches: *Raja* sp., *Dasyatis* sp., and mantarays *Rhinoptera* sp. and *Mobula* sp.

### 1.3.4. Pacific Ocean

The tuna long line fishery in the region, and to a lesser extent the purse seine fishery, catches certain quantities of sharks. In countries with which the EC has FPAs (Kiribati, FSM, Solomon Islands), few data are available on the capture of sharks by industrial fishing gear.

In the wider Pacific Islands region little is known about effects of fishing by the existing tuna fleets on shark population or on the wider pelagic ecosystem. Even less is known about the degree to which FPA tuna fishing would affect sharks or the ecosystem. This situation highlights the need for an effective observer programme, which includes the analysis of data collected, including that on sharks.

### 1.3.5. Western Indian Ocean

In the western Indian Ocean, the purse seine tuna fishery is mainly performed by European countries (Spain and France), and has developed in the last decade. The species of sharks caught in tuna fisheries are mainly oceanic whitetip shark *Carcharhinus longimanus*, blue shark *Prionace glauca*, silky shark *Carcharhinus falciformis*, mako shark *Isurus oxyrinchus*, hammerheads *Sphyrna* spp., and thresher sharks *Alopias* spp.. Also some manta rays *Manta birostris* and *Mobula* spp., and pelagic stingrays *Pteroplatytrygon violacea* are taken.

The proportions of sharks vary with the type of sets : school sets, log sets, marine mammals associated sets.

As in other FPAs, European vessels shall comply with the measures and recommendations adopted by the IOTC in the region regarding fishing gear and the technical specifications thereof and all other technical measures applicable to their fishing activities.

### 1.3.6. Southern Ocean

In the Southern Ocean, some European countries (France, Great Britain, Spain) exploit demersal resources with longlines and bottom trawl nets. For example, the Patagonian toothfish *Dissostichus eleginoides* and the mackerel icefish *Champscephalus gunnari* fisheries developed in the French EEZ of Kerguelen and Crozet Islands. The by-catches of these fisheries include sleeper sharks *Somniosus* spp., porbeagle *Lamna nasus* and various sub-antarctic skates *Bahtyrāja* spp. In the Southern Ocean, all fishing activities

are managed by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR).

#### **1.4. The shark market in the EU**

Dogfish (*Squalus acanthias*) and spotted dogfish (*Scyliorhinus spp.*) are species covered by the common market organisation in fishery and aquaculture products laid down in Council Regulation (EC) No 104/2000<sup>2</sup>.

The quantities of dogfish sold by producer organisations (POs) in EU25 dropped in the last years (from 3.730 tons in 2004 to 1.597 tons in 2006). First sale average prices ranged between €1.644 per ton in 2004 and €1.999 per ton in 2006. The main producers were France and the UK, which accounted for around 73% of the total EU25 sales in this period. As for spotted dogfish, there is also a downward trend in EU25 POs' sales (11.396 tons in 2004, 6.822 tons in 2006), with prices between €1.066 per ton in 2004 and € 648 per ton in 2006. France and the UK were the largest producers, with percentages of sales between 77% and 87% of those registered in EU25.

Dogfish and spotted dogfish are listed in Annex I to Regulation No 104/2000. These species are therefore eligible for intervention measures under the common market organisation. Between 2004 and 2006, dogfish withdrawals in relation to EU25 production ranged between 1.07% and 1.34%. On the other hand, spotted dogfish withdrawals reached about 3.90% of EU25 production in that period.

As regards external trade, EU25 imports of dogfish and other sharks (whole, fresh, chilled and frozen) stood at around 19.000 tons per year between 2004 and 2006. Whereas imports of dogfish accounted for 4.606 tons in 2005 and 4.080 in 2006, spotted dogfish imports were below 100 tons per year in the given period. On the other hand, EU25 exports of dogfish and other sharks ranged between 1.479 tons in 2005 and 696 tons in 2006. Dogfish exports were below 100 tons per year and spotted dogfish exports around 0.

Fresh or frozen fillets and meat of dogfish enjoy a tariff suspension at 6% rate under Council Regulation No 1255/96 temporarily suspending the tariff duties on certain industrial, agricultural and fishery products. This suspension is revised periodically and currently applies until 31 December 2008. The conventional duty rate for fillets ranges between 7.5% (frozen) and 18% (fresh), the duties for meat being 7.5% (frozen) and 15% (fresh).

#### **1.5. The legislative framework applicable to sharks in the EU**

Sharks are fish species whose conservation falls within the domain of the Common Fishery Policy (CFP). Therefore the Community plan is based on the Council Regulation (EC) N° 2371/2002 of 20 December 2002 on the conservation and sustainable exploitation of fisheries resources under the CFP. In addition, within EC legislation there are provisions dealing with output management, technical measures, control, fleet and market policy which could be effective in ensuring a sustainable exploitation of elasmobranch. The co-operation of Member States is basic, since it is the legal

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<sup>2</sup> Council Regulation (EC) No 104/2000 of 17 December 1999 on the common organisation of the markets in fishery and aquaculture products (OJ L 17, 21.01.2000).

responsibility of the fisheries control authorities of Member States to police the rules and to ensure compliance with them.

In general terms, two Regulations fix the rules for sharks' fishing opportunities for directed fisheries and their by-catches:

- a) Bi-annual Council Regulation fixing the fishing opportunities for Community fishing vessels for certain deep-sea fish stocks every two years, for EU and NEAFC waters;
- b) Annual Council Regulation fixing fishing opportunities and associated conditions for certain fish stocks, applicable in Community waters and, for Community vessels, in waters where catch limitations are required (also includes NEAFC, NAFO and CCAMLR).

Several migratory oceanic sharks form a large component of the by-catch of large pelagic drift-net fisheries for tuna and billfishes, among those it is noteworthy to recall the blue shark (*Prionace glauca*), the oceanic whitetip (*Carcharhinus longimanus*), shortfin mako (*Isurus oxyrinchus*), the thresher shark (*Alopias* spp.) and the porbeagles (*Lamna* spp.). Community legislation already limits the size of drift nets and prohibits their use from the start of 2002<sup>3</sup> to target, among other species, the following elasmobranchs, *Hexanchus griseus*, *Cetorhinus maximus*, *Alopiidae*, *Carcharinidae*, *Sphyrnidae*, *Isuridae*, *Lamnidae*, with consequent benefit to elasmobranch populations.

Regulation (EC) No 850/98<sup>4</sup>, that applies from 1 January 2000, sets mesh sizes and associated different minimum percentage of overall target species for towed and fixed gears for *Rajidae*, *Scyliorhinidae*, picked dogfish (*Squalus acanthias*) and spotted dogfish (*Scyliorhinus* spp.).

Regulation (EC) N° 2347/2002 of 16 December 2002<sup>5</sup> establishes specific access requirements and associated conditions applicable to fishing for deep-seas stocks, among others a wide range of deep-water sharks.

The practice of "shark finning", whereby the fins are removed from sharks with the remainder of the shark being discarded at sea, may contribute to the excessive mortality of sharks to a significant extent. Council Regulation (EC) N°1185/2003<sup>6</sup> bans and prevents any further development of this practice by allowing a ratio of 5% fins relative to the live weight of the shark to be granted to vessel with a special permit.

According to this Regulation, Member States shall send to the Commission comprehensive annual reports on its implementation. On the basis of these reports, the Commission has issued on 23.12.2005 a report to the European Parliament and the Council on the operation of this Regulation. According to this report, the information made available by the Member States to the Commission on the operation of this

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<sup>3</sup> Council Regulation (EC) No 1239/98 of 8 June 1998 amending Regulation (EC) No 894/97 laying down certain technical measures for the conservation of fishery resources. OJ L 171, 17.6.98, p.1

<sup>4</sup> Council Regulation (EC) No 850/98 of 30 March 1998 for the conservation of fishery resources through technical measures for the protection of juveniles of marine organisms.

<sup>5</sup> JO L351, 28.12.2002.

<sup>6</sup> OJ L167, 4.07.2003, p.1.

Regulation, although not always complete, amounts to a confirmation that the Regulation appears to be achieving its general objectives. Therefore, the Commission concluded that the Regulation did not appear to need an amendment at that stage. However, improved implementation of some aspects by some Member States was desirable, in particular in terms of the criteria for allocation of special fishing permits or reporting.

Council Regulation (EC) No 520/2007 of 7 May 2007 lays down technical measures for the conservation of certain stocks of highly migratory species and encourages the release of live sharks captured accidentally, in particular juveniles. It also encourages the Member States to reduce discards of sharks by improving the selectivity of fishing gears.

There has been several communications from the European Commission to the Council and the European Parliament that pointed out the importance of a European Community biodiversity strategy<sup>8</sup> and that highlighted the relationships between fisheries management and nature conservation<sup>9</sup>. The Communications from the Commission to the Council and the European Parliament on a policy to reduce unwanted by-catches and eliminate discards in European fisheries<sup>10</sup> and on the review of the management of deep-sea fish stocks<sup>11</sup> should also be mentioned here.

## **1.6. Objectives of the Community's Action Plan**

The scope of this action plan includes directed commercial, by-catch commercial, directed recreational, and by-catch recreational fisheries catching any elasmobranchs within Community waters. It also includes any fisheries covered by current and potential agreements and partnerships between EU and third countries, as well as fisheries in the high seas and fisheries covered by RFMOs managing or providing non-binding recommendations outside Community waters.

The present Community action plan should be based on the following three main broad objectives:

1. Deepening the knowledge both on shark fisheries and on shark species and their role in the ecosystem.
2. Ensure that directed fisheries for shark are sustainable and that their by-catches are properly regulated.
3. Ensure a coherent approach between the internal and external EC fishery policy for sharks.

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<sup>7</sup> OJ N° L 123 of 12.05.2007

<sup>8</sup> Communication from the Commission to the Council and the European Parliament on a European Community Biodiversity Strategy : COM(98)42 final.

<sup>9</sup> Communication from the Commission to the Council and the European Parliament on Fisheries Management and Nature Conservation in the Marine Environment. COM(1999)363 final.

<sup>10</sup> COM(2007) 136 final of 28.03.2007

<sup>11</sup> COM(2007) 30 final of 29.01.2007

## **2. CONSULTATION ON THE STRATEGY AND FIELDS OF ACTION PROPOSED FOR THE EU PLAN OF ACTION ON THE CONSERVATION AND MANAGEMENT OF SHARKS**

Interested parties are invited to express their views on the 9 fields of action identified below, as well as to present their opinions as to what further measures would be appropriate to reinforce the policy of the European Community on the conservation and management of sharks.

In addition, the services of the General Directorate for Fisheries and Maritime Affairs of the European Commission wish to hear the views of the relevant stakeholders on each of those areas of action, guided by the following questions:

- Is it appropriate for the Community to take initiatives in each of those fields of actions?
- Are the proposed concrete actions properly distributed at Community, regional and national level?
- What would be the likely economic and social impact of the actions envisaged both on the fishing industry and on recreational fisheries in the EU and outside the EU, including developing countries?
- What would be their likely environmental impact?

**Field of action n° 1:**

**Facilitate improved species-specific catch and landings data and monitoring of shark catches.**

**Objective**

Deepening the knowledge both on shark fisheries and on shark species and their role in the ecosystem.

**Possible option**

- Measures at Community level:
  - Increase investment in shark data collection at landing sites and by processing and marketing industries.
  - Establish systems to provide verification of catch information by species and by fishery.
- Measures to be promoted at the level of Regional Fisheries Management Organisations:
  - Promote the facilitation of improved species-specific catch and landings data and monitoring of shark catches by fishery.
  - Improve, in cooperation with FAO and relevant fisheries management bodies, the monitoring and reporting of catch, bycatch, discards, market and international trade data, at the species level where possible.
  - To request through the FAO and regional fishing management organizations where appropriate that these organizations develop and implement Regional Shark Plans and associated measures to assist in species identification and monitoring, as called for in the IPOA–Sharks, by mid-2009 in order to report to the 15th Meeting of the CITES Conference of Parties.
- Measures at Member State level:
  - Monitor recreational catches and distinguish between the fishing mortality exerted by recreational and commercial fishing.

## **Field of action n° 2:**

### **Facilitate the identification and reporting of species-specific biological and trade data.**

#### **Objective**

Deepening the knowledge both on shark fisheries and on shark species and their role in the ecosystem.

#### **Possible option**

- Measures at Community level
  - At an initial phase, mandate full coverage on fishing vessels by independent on-board observers for vessels over 24 m and with recent by-catches figures of more than 10% to 15% (depending on the particular fishery) of sharks over the total catch. At a latter stage, once the basic information on the fisheries has been obtained, full coverage could be replaced by a partial coverage, at a level ensuring representative coverage.
  - For other fishing vessels taking sharks as a by-catch, mandate sampling scheme for representative coverage of fishing operations by independent, on-board observers.
  - Ensure that all landings and trade of shark fins, meat and oil are recorded separately by commodity and to the species level.
- Measures to be promoted at the level of Regional Fisheries Management Organisations:
  - Promote the identification and reporting of species-specific biological and trade data.
  - Encourage:
    - full coverage on fishing vessels by independent on-board observers for vessels over 24 m fishing in the high seas and with recent by-catches figures of more than 10% to 15% (depending on the particular fishery) of sharks of the total catch,
    - the introduction of sampling schemes for representative coverage of other fishing vessels taking sharks as a by-catch by independent, on-board scientific observers.

**Field of action n° 3:**

**Compile the necessary information to assess threats to shark populations, determine and protect critical habitats, and implement harvesting strategies consistent with the principles of biological sustainability and rational long term economic use.**

**Objective**

Deepening the knowledge both on shark fisheries and on shark species and their role in the ecosystem.

**Possible option**

– Measures at Community level:

- Enhance programs to facilitate data collection, monitoring and stock assessment on a species-specific level.
- To conduct regular assessment in order to identify threats to shark populations and to determine the fishing mortality by stocks and, if possible, partitioned by fishery.
- Identification of space-time boxes in areas where juveniles or spawners are abundant.

– Measures at Member State level

- Develop national expertise

– Measures to be promoted at the level of Regional Fisheries Management Organisations:

- Foster enhanced programs to facilitate data collection, monitoring and stock assessment on a species-specific level.

**Field of action n° 4:**

**Develop research projects to assess threats to shark populations and implement harvesting strategies consistent with the principles of biological sustainability and rational long term economic use.**

**Objective**

Deepening the knowledge both on shark fisheries and on shark species and their role in the ecosystem.

**Possible option**

- Measures at Community level:
  - Study biology and ecology of sharks.
  - Develop prototypes, monitor experiments and propose measures for improving size selectivity and for reducing unwanted by-catch and discarding of no commercial species
- Measures at Member State level
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- Measures to be promoted at the level of Regional Fisheries Management Organisations:
  - Foster implementation of internationally coordinated studies on straddling and/or shared stocks.

**Field of action n° 5:**

**Improve and develop frameworks for establishing and coordinating effective consultation involving stakeholders in research, management and educational initiatives within and between States.**

**Objective**

Deepening the knowledge both on shark fisheries and on shark species and their role in the ecosystem.

**Possible option**

- Measures at Community level
  - Facilitate stakeholder awareness and consultation regarding shark management and best practices to reduce unwanted by-catch through RAC programs.
  - Direct Member States to allow public access to relevant fishing permit information on sharks.
- Measures at Member State level
  - Launch educational programs aimed specifically at educating fishermen and the public about shark and ray conservation programs and restrictions.
- Measures to be promoted at the level of Regional Fisheries Management Organisations:
  - Foster stakeholder awareness and consultation regarding shark management and best practices to reduce unwanted by-catch through programs promoted by RFMO and international fishermen associations.

**Field of action n° 6:**

**Adjust fishing effort to the available resources.**

**Objective**

Ensure that directed fisheries for shark are sustainable and that their by-catches are properly regulated.

**Possible option**

- Measures at Community level:
  - Limitation or prohibition of fishing activities in areas that are considered sensible to endangered stocks.
  - Stronger limitation of fishing effort by relevant fisheries.
- Measures to be promoted at the level of Regional Fisheries Management Organisations:
  - Foster programmes and analysis to adjust fishing effort at international level.

## **Field of action n° 7:**

### **Adjust catches to the available resources.**

#### **Objective**

Ensure that directed fisheries for shark are sustainable and that their by-catches are properly regulated.

#### **Possible option**

- Measures at Community and Regional Fisheries Management Organisations level:
  - Establish catch limits by stocks in conformity with the advice provided by ICES and by the relevant RFMOs.
  - Prohibit all shark discards and require that all catches (including by-catches) are landed. Unwanted by-catches of sharks that have a chance to survive must be released back into the water.
  - Increase size and species selectivity in order to reduce discards of undersize and unwanted by-catch.
  - Establishment of space-time boxes in areas where juveniles or spawners are abundant.
  - To conduct regular assessment in order to identify threats to shark populations and to determine the fishing mortality by stocks and, if possible, partitioned by fishery

**Field of action n° 8:**

**Minimize waste and discards from shark catches in accordance with article 7.2.2(g) of the Code of Conduct for Responsible Fisheries requiring the retention of sharks from which fins are removed and encourage the use of dead sharks.**

**Objective**

Ensure that directed fisheries for shark are sustainable and that their by-catches are properly regulated.

**Possible option**

- Measures at Community and Regional Fisheries Management Organisations level:
  - To ban finning practices as the general rule. Any exception to this general rule will have to be fully justified on solid and objective grounds and documented previously to the issuing by the Member State of the special permit. Member States should not issue special permits to vessels not having fulfilled this condition.
  - To review the 5% rule by requiring that in no case shall the weight of the fins exceed 5% of the dressed (gutted and beheaded) carcass weight of the shark catch. However, Member States having set up and implemented data collection programmes allowing proving that this percentage could be increased in certain cases, could do so up to a percentage corresponding to 5% of the live weight of the shark catch.
  - For vessels of Member States having been exempted from the obligation of landing of sharks with fins attached, introduce the obligation to land shark fins and carcasses at the same time in the same port.

**Field of action n° 9:**

**Identify and provide special attention in particular to vulnerable or threatened shark stocks.**

**Objective**

Ensure that directed fisheries for shark are sustainable and that their by-catches are properly regulated.

**Possible option**

- Measures at Community and Regional Fisheries Management Organisations level
  - Establish bycatch reduction programs for shark species considered Critically Endangered or Endangered by IUCN, where a zero TAC or prohibited status is not in force for these species.
  - Implement fisheries closed areas and seasons (for spawning aggregations and nursery areas) for the above mentioned stocks.
  - Within the framework of the ongoing evaluation of the Common Market Organisation in fishery and aquaculture products, the Commission will examine the possible impact of market mechanisms on conservation measures, including for shark species.