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Keeping the Balance

How environmental conventions
can be used to protect sharks
and their habitats





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Caribbean reef shark (*Carcharhinus perezii*).
Jardines de la Reina, Cuba, March 2008.
© OCEANA/ Carlos Suárez
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Executive Summary

- Besides fisheries management measures, international and regional conventions can protect species like sharks and their habitats. The United Nations Convention on the Law of the Sea has special provisions for the protection of fish stocks and particularly for 73 species of highly migratory sharks.
- So far, only a few efficient measures have been implemented into EU fisheries legislation as a result of the provisions agreed in international conventions, such as the fishing ban on great white sharks (*Carcharodon carcharias*) and basking sharks (*Cetorhinus maximus*) following their listing on Appendix I of the Convention on the Conservation of Migratory Species. There are also bans on the catch and commercialisation of six species of sawfishes (Pristidae family), listed on CITES Appendix I. On the other hand, shark protection provisions that are agreed in a non-legally binding way are often ignored by contracting parties and have largely not been implemented into European Union law.
- In general, many more threatened shark species need to be protected under conservation conventions. Additionally, these provisions for shark protection must be legally binding so that the contracting parties implement and transpose the measures agreed upon into national legislation and policy making.
- The provisions of regional biodiversity conventions such as the Oslo Paris Convention for the Northeast Atlantic, the Helsinki Convention for the Baltic, the Barcelona Convention for the Mediterranean, the Bern Convention for European Wildlife and the Black Sea Convention are, in general, not legally binding and are not highly enforced, compromising their effectiveness in achieving the agreed goals. These conventions can help, however, to draw attention to certain threatened species and encourage nations to protect sharks in waters where they are heavily overfished.
- Shark fins and livers are highly valuable internationally traded products. Fins are mainly exported to Asian markets to become the main ingredient in shark fin soup, while oils from the livers are used in the cosmetics industry around the world. The CITES Convention can have a significant influence on shark protection by controlling and reducing the trade of threatened species.
- The main legally binding instrument in the European Union to protect biodiversity is the Habitats Directive. The Directive was agreed in 1992 and suffers from a lack of adequate updates. Currently, there are no species of sharks or rays included for protection.

Two porbeagles (*Lamna nasus*). A Coruña, Spain, 2006. © OCEANA/ LX
IUCN status: *Vulnerable* (*Critically Endangered* in the NE Atlantic, Mediterranean and Baltic).

Introduction



Spurdog (*Squalus acanthias*), Port of Guilvinec, France, 2007. © OCEANA/ LX
IUCN status: *Vulnerable* (Endangered in the Mediterranean, *Critically Endangered* in the NE Atlantic and Baltic).

Sharks, rays and chimaeras make up the group of fish known as Chondrichthyans- these fish all have skeletons made of cartilage rather than bone. In general, Chondrichthyans grow slowly, mature late and produce few young over long lifetimes. Consequently, their populations grow at extremely low rates, leaving them exceptionally susceptible to fisheries overexploitation and slow to recover from depletion. In general, sharks are more vulnerable to overfishing than the majority of bony fishes.

Today, 21% of global shark, ray and chimaera populations are threatened with extinction, with 26% threatened in the Northeast Atlantic alone and 42% in the Mediterranean.¹ The main reason for this depletion is overfishing, caused by a huge overcapacity in European Union (EU) and other fleets and, until recently, nearly inexistent shark fisheries legislation.

In 2007, Oceana conducted an investigation into shark fisheries in Europe and around the world in harbours where European Union vessels land sharks. During these investigations, Oceana researchers talked to fishermen, captains and fishing company representatives, documenting their findings along the way. The photographs in this report demonstrate the breadth of the European trade of threatened sharks.

Ideally, activities in our oceans should be managed via an ecosystem-based approach integrating fisheries management and measures that protect the natural biodiversity. However, the current policy framework and institutional arrangements in the EU are not delivering a sufficiently high level of protection for the marine environment. To address this need, the European Commission adopted the Marine Framework Strategy Directive in December 2008, which aims to facilitate coherence between varying policies and foster the integration of environmental concerns into marine policies.² The Marine Strategy Framework Directive is intended to lay out the general basis for applying an ecosystem approach to the marine environment, and will become the environmental pillar of an integrated EU maritime policy.

Traditionally, two separate schemes have been used to conserve sharks: management that regulates shark fishery activities (known as fisheries management) and protection of biodiversity and threatened species via international and European environmental laws.

Typical direct fisheries management measures in the EU include fishing limits and quotas established with EU regulations, as well as fishing effort reductions, discard bans and closed seasons and areas, among other methods. Until just a few years ago, sharks and rays in the Northeast Atlantic were not managed with fishing quotas or even scientifically assessed, despite several species, such as spurdog (*Squalus acanthias*) and porbeagle (*Lamna nasus*), having been commercially targeted for decades. Today, these two species are managed with quotas, although these exceed the scientific recommendations. Other recent advances include new fishing quotas and regulated areas for various ray species, catch prohibitions for angelsharks, and limitations on the deep-sea gillnet fishery catching sharks. However, due to missing



Common or blue skate (*Dipturus batis*). Lorient, France, 2007. © OCEANA/ LX
IUCN status: *Critically Endangered*.

fisheries management measures for many years, numerous shark and ray species in European waters and the Northeast Atlantic are overfished.³

Fisheries, especially harmful practices like overfishing and the use of destructive fishing gear, affect not only fish populations but entire ocean ecosystems. A whole range of international conventions has been developed under international environmental law to protect ocean ecosystems. These have an important influence on the management of shark populations.

This report deals with the various multilateral biodiversity and regional conventions that protect sharks, detailing the extent to which they are currently protected under these regimes in Europe, noting how the measures are translated into laws and regulations, and indicating where further protection is needed. A separate Oceana report in this series details the current options for protecting sharks via fisheries management.

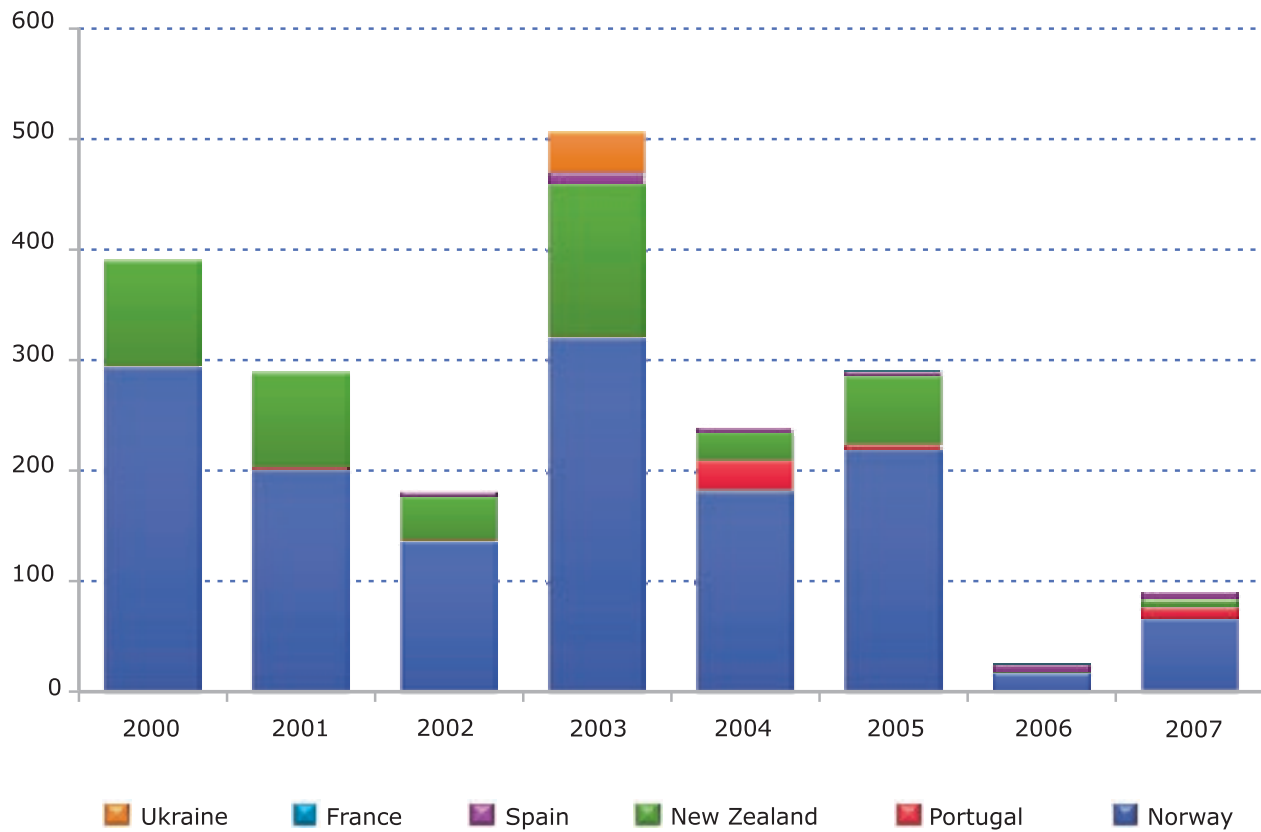
International and regional conventions or “treaties” are agreements that oblige contracting parties (those which have signed the convention) to implement the agreed management measures and protect biodiversity, especially threatened species. Legally binding, or “hard law”, provisions under international environmental law are useful and are becoming more and more relevant for ensuring the protection of commercial fish species, as politicians constantly fail to guarantee species’ survival via traditional fisheries management regimes.

Great white sharks (*Carcharodon carcharias*), basking sharks (*Cetorhinus maximus*) and whale sharks (*Rhincodon typus*) are the most protected sharks under the CMS and CITES conventions. Nevertheless, the species are still caught today, often as unwanted by-catch in other fisheries. Historically, Norway had the biggest basking shark fishery, with catches around 8,000 tonnes in the 1980’s. Since 2000, as shown in the graph on the following page, Norway, Portugal, New Zealand, Spain, France and Ukraine still catch basking sharks. Unreported catches might be much higher.

In some cases, the management measures of a convention are not, or are only partly, legally binding. These non-binding measures are commonly classified as “soft law”. With little enforcement power, they are thus usually inefficient in achieving agreed goals. However, the new EU Marine Strategy Directive aims for a good ocean environmental state and to strengthen cooperation, especially within regional conventions. Non-legally binding measures have the potential to be transformed into legally binding measures and/or provide a political incentive to take action.

However, while some shark and ray species are being fished to the brink of extinction, only a small percentage of them have been included in relevant conventions. This situation has improved slightly in recent years, with the addition of a limited number of shark species to the annexes of relevant biodiversity conventions, even though efficient measures have yet to be implemented following these listings.

Graph 1: Catches (tonnes) of basking sharks 2000-2007 (ICCAT, FAO)





Shark status according to the IUCN Red List of Threatened Species

2

The International Union for the Conservation of Nature (IUCN) is an international organisation dedicated to natural resource conservation and is the world's largest and oldest global environmental network. It publishes and updates the global and regional IUCN Red List of threatened species,⁴ the world's most comprehensive and authoritative inventory of the conservation status of plant and animal species. This list details the relative risk of extinction for these species, cataloguing and highlighting those facing an elevated risk. The IUCN Red List can influence and contribute to shark conservation and management by highlighting the threatened status of individual species.

Species are assessed on a formal set of criteria and placed in categories. Those classified as *Critically Endangered*, *Endangered* or *Vulnerable* are considered threatened with extinction. In 2005, the IUCN Shark Specialist Group's (SSG) *global* assessment of sharks revealed that 18% are threatened globally.⁵ However in Europe, including the Northeast Atlantic and the Mediterranean Sea, significantly more sharks, rays and chimaeras are threatened.

In 2008, the SSG released an assessment of northeast Atlantic sharks, revealing that 26% are threatened with extinction, with another 20% in the *Near Threatened* category. Scientists identified overfishing as the main reason for the poor status of elasmobranch stocks in these EU "home waters". The total percentage of threatened species may well be higher, as there was insufficient information to assess more than a quarter (27%) of the species.⁶

IUCN experts have found the situation even worse in the Mediterranean Sea. According to an assessment published in 2008, this area has the highest percentage of threatened sharks and rays in the world- 42% are threatened with extinction. Overfishing, including targeted catch and by-catch, was found to be the main cause of this decline.⁷



Shark trunks, recognisable by their cut-off fins, sold as hake (*Merluccius Senegalensis*). Cadiz, Spain, 2006. © OCEANA/ LX

The mislabelling of sharks: The case of the tope shark

In Oceana's investigations into shark fisheries, an incidence of shark mislabelling was found in the Cadiz fish market, in the south of Spain. Here, Oceana documented several boxes of sharks, with their fins missing, labelled as hake (*Merluccius senegalensis*). Indeed, these sharks caught by Spanish vessels and mislabelled as "hake" were likely either tope sharks (*Galeorhinus galeus*) or deep-sea sharks. They were likely intentionally mislabelled to hide the fact that they were caught in Mauritanian waters without authorisation.

Tope sharks and most deep-sea sharks are threatened according to IUCN Red List criteria, and neither are scientifically assessed nor managed in Mauritanian waters. The mislabelling of sharks and rays hinders scientific assessment of single species, allowing for the commercialisation of a species or a population decline to go unnoticed for long periods of time.

Tope sharks are highly appreciated and widely consumed in different regions of Spain. While it is generally recognised throughout the country as "cazón", in Galicia it is known as "zapatos" and in Andalusia it is consumed dried as "tollos".¹¹ Catches for tope shark have increased in the last few years and in 2007, almost 900 tonnes were caught by European Union vessels. No management measures are currently in place for this shark classified as globally *Vulnerable*.¹² Other species too are caught and commercialised as "tope", including the blue shark and various other small sharks.

Deep-sea sharks are generally caught for their valuable liver oil, used in the cosmetic industry. Most deep-sea sharks are also threatened due to a lack of fisheries in the past management and excessive targeted fisheries. Officially, there are no reported catches of deep-sea sharks from Spanish vessels in Mauritanian waters.¹³

International conventions like CITES could help limit and control the catches and trade of threatened sharks, so that illicit activities such as this intentional mislabelling would not occur, especially in areas where they are commercialised and lack fisheries management measures.

Table 1. Catches (tonnes) of IUCN Red Listed shark and ray species in the Northeast Atlantic in 2007⁸ (FAO 2007)

		Total European Union	Portugal	France	UK	Spain	Sweden	Denmark	Netherlands	Other
Critically Endangered	Spurdog <i>Squalus acanthias</i>	1,807	13	662	808	115	95	76	25	13
	Porbeagle <i>Lamna nasus</i>	622	-	356	26	228	-	3	-	9
	Gulper shark <i>Centrophorus granulosus</i>	75	72	-	3	-	-	-	-	0
	Angel-and devil sharks <i>Squatinae</i>	2	1	1	-	-	-	-	-	-
	Portuguese dogfish <i>Centroscymnus coelolepis</i>	502	136	231	89	36	-	-	-	10
Endangered	Leafscale gulper <i>Centrophorus squamosus</i>	318	235	60	16	7	-	-	-	-
	Basking shark <i>Cetorhinus maximus</i>	11	11	-	-	-	-	-	-	-
	Devil fish <i>Mobula mobular</i>	2	-	-	-	2	-	-	-	-
	Shortfin mako <i>Isurus oxyrinchus</i>	1,341	1,222	-	-	119	-	-	-	-
Vulnerable	Lowfin gulper <i>Centrophorus lusitanicus</i>	218	218	-	-	-	-	-	-	-
	Angular roughshark <i>Oxynotus centrina</i>	106	106	-	-	-	-	-	-	-
	Birdbeak dogfish <i>Deania calcea</i>	66	39	1	-	26	-	-	-	-
	Spiny butterfly ray <i>Gymnura altavela</i>	21	21	-	-	-	-	-	-	-
	Bigeye thresher <i>Alopias superciliosus</i>	16	-	-	-	16	-	-	-	-
	Kitefin shark <i>Dalatias licha</i>	15	9	1	5	-	-	-	-	-
Total catches of threatened sharks/rays		5,122	2,083	1,312	947	549	95	79	25	32

Many threatened species are caught in large amounts in EU fishing activities. In 2007, EU vessels caught 5,122 tonnes of species classified as threatened in the Northeast Atlantic, as seen in Table 1. It is important to note that these reported catches do not include sharks caught as by-catch and discarded, many of which are also likely threatened with extinction. The threatened sharks in the Northeast Atlantic are mostly caught by vessels from France, the United Kingdom and Portugal, and the most problematic catches are those of the *Critically Endangered* spurdog (*Squalus acanthias*), porbeagle (*Lamna nasus*), gulper sharks (*Centrophorus granulosus*) and angel sharks (Family Squatinidae). Shortfin makos (*Isurus oxyrinchus*) and bigeye threshers (*Alopias superciliosus*) are also highly caught. These are pelagic species that are vulnerable to extinction and mainly targeted by Spanish and Portuguese surface longliners for their valuable fins, sold to Asia for shark fin soup.⁹

In deeper waters, Portuguese dogfish (*Centroscymnus coelolepis*), leafscale gulper sharks (*Centrophorus squamosus*) and other deep-sea sharks, categorised as threatened on the IUCN Red List, are mainly caught in deep-sea gillnet and bottom trawl fisheries from the United Kingdom, France and Portugal.¹⁰ The meat and livers of these species are highly commercialised – the latter is used as an ingredient for facial creams in the cosmetic industry.

While the EU has indeed introduced fisheries management measures for deep-sea sharks, many other highly caught species that are threatened with extinction remain unmanaged throughout European waters, including shortfin mako, thresher sharks (*Alopias* spp.) and the angular rough shark (*Oxynotus centrina*).



Tiger shark (*Galeocerdo cuvier*) fins, Vigo, Spain, 2006. © OCEANA/ LX
IUCN status: *Near Threatened*.



United Nations Convention on the Law of the Sea

The most important treaty for international maritime law is the United Nations Convention on the Law of the Sea (UNCLOS), which was agreed in 1982 and entered into force in 1992. UNCLOS provisions are legally binding for signatory parties, which include 159 countries, including the European Union, although some countries have yet to ratify while other non-signatories have acceded to it. Under UNCLOS, 200 mile oceanic Exclusive Economic Zones (EEZs) were established adjacent to land areas. In these areas, coastal states have the sole right to exploit fish stocks and the obligation to ensure that living resources are not endangered by overexploitation. Specifically relevant to sharks are UNCLOS Articles 63 and 64, which lay out the management rules for highly migratory fish stocks that live and/or swim between different nations' EEZ's.¹⁴

UNCLOS Annex I lists the species that are considered highly migratory according to Articles 63 and 64. Fishing nations are obliged to ensure the conservation of the species listed here, including sharks, through direct cooperation or the establishment of international organisations. However, while there are 73 highly migratory and threatened shark species listed in UNCLOS Annex I,¹⁵ parties have failed to agree fishery catch limits or any other protection measures for them.

To achieve the conservation and management objectives agreed to in UNCLOS, the United Nations Agreement on the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (UN Fish Stocks Agreement) was created and entered into force in 2001. This Agreement establishes the ecosystem approach to fisheries, requiring signatory parties to assess fishing impacts on associated and dependent species and to apply the precautionary approach to prevent overfishing and protect biodiversity in the marine environment.¹⁶ However, even though Regional Fisheries Management Organisations (RFMOs) have been established in almost every ocean to manage fisheries for migratory species, almost no provisions for shark management are in force in international waters, and the UN Fish Stocks Agreement still lacks full implementation by the signatory parties.

Oceana urges the UNLCOS parties to prohibit fisheries for highly migratory endangered sharks and to agree catch limits and quotas for all other commercially fished shark species. Additionally, measures such as gear modifications and trainings must be taken to prevent sharks by-catches in fisheries for other highly migratory species, such as purse seine fisheries for tuna and swordfish.



Blue sharks (*Prionace glauca*) in crates. Lorient fish market, Brittany, France, 2007. © OCEANA/ LX
IUCN status: *Near Threatened*.

The lack of protection for highly migratory shark species

Under UNCLOS, signatory nations are obliged to manage fish stocks in their EEZ's and also in international waters. The UN Fish Stocks Agreement establishes that fisheries management must be based on the precautionary approach. As the European Union is a contracting party to this agreement, and in line with the Common Fisheries Policy,¹⁷ it must ensure that the precautionary approach is adopted as a basis for shark fisheries management and that catch limits are agreed for commercialised species.

However, this has largely not been achieved and the majority of commercialised migratory shark species are caught without limit. For example, the blue shark (*Prionace glauca*), included in UNCLOS Annex I, is the most highly caught shark species in the world but lacks any type of international fishing management measure. The photo on this page shows fresh blue sharks being landed in the port of Lorient, France, in 2007, along with bluntnose sixgill sharks (*Hexanchus griseus*), another species included in UNCLOS Annex I and lacking fisheries management measures.

Unborn thresher sharks (*Alopias vulpinus*) next to their mother's liver. Las Palmas, Gran Canaria, Spain, 2008. © OCEANA/ LX
IUCN status: *Vulnerable*.



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International multilateral biodiversity conventions



Marine Reserve between Ibiza and Formentera. Ibiza, Spain, 2008. © OCEANA/ LX

Protected species: angel shark, catshark, stingray, torpedo, hammerheads, blue shark and tope shark. © OCEANA/ LX



Biodiversity conventions can either be multilateral or regional in scope. Multilateral conventions are signed and constitute rights and obligations between a number of countries, often located all around the world. Regional conventions are only open to a limited number of countries located within a certain global area, for example countries around the Baltic or Mediterranean Seas.

There are six international multilateral conventions that focus on the conservation of biodiversity, with three that are relevant for the protection of sharks: the Convention on Biological Diversity (CBD), the Convention on the Conservation of Migratory Species (CMS) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Legally binding measures for direct and/or indirect shark protection have been agreed under all three of these and have consequently been translated into European Union laws. The agreed provisions that are not legally binding generally lack implementation in the European Union. This chapter presents a summary of these conventions.

A. The Convention on Biological Diversity

The Convention on Biological Diversity (CBD) was adopted in 1992 and opened for signature at the Earth Summit in Rio de Janeiro that same year. The main goals of this Convention include the conservation of biodiversity and the sustainable use of its components. In theory, the CBD could drive national management for commercially fished sharks if and when considered appropriate by the parties to the convention. However, while the Convention itself is legally binding, implementation of the convention's provisions is the responsibility of each party¹⁸ and few have actually implemented direct shark conservation measures under this convention. Even so, the 188 parties to the convention have made important decisions regarding habitat protection and biodiversity loss which can indirectly benefit sharks.

In the 2002 Conference of the Parties (COP), a target was set to halt the loss of biodiversity by 2010. In their annual conference in 2004, sub targets were established to effectively conserve at least 10% of the world's marine and coastal ecological regions by 2010,¹⁹ in particular vulnerable marine and coastal habitats and ecosystems such as tropical and cold-water coral reefs, seamounts, hydrothermal vents, mangroves, seagrasses and spawning grounds. That same year, a Plan of Implementation was agreed at the World Summit on Sustainable Development in Johannesburg to establish representative networks of Marine Protected Areas (MPAs) by 2012, consistent with international law and based on scientific information.²⁰

Following the EU's Biodiversity Strategy of 1998 and its first Biodiversity Action Plan in 2001, the European Commission produced a new Action Plan in 2006 to halt biodiversity loss by 2010, setting out concrete actions and outlining the responsibility of Community institutions and Member states. These goals are in line with those



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established by the CBD. However, a mid term review of activities published in 2008 showed that the EU will fail to reach the 10% goal of conserving marine and coastal ecosystems by 2010.²¹ The goal to establish 10% of the oceans as Marine Protected Areas by 2012 will not be achieved either as Member states have failed to protect sufficient areas. As of 2008, only 87,505 km² of out of more than 7 million km² of marine areas in the European Union has been protected, representing around 1.2 percent.²²

The protection of marine ecosystems with MPAs can benefit sharks by protecting valuable areas used for feeding, reproduction and nurseries. Oceana is urging European Union countries to complete the protection of at least 10% of Europe's marine areas by 2012.

B. The Convention on the Conservation of Migratory Species of Wild Animals

The Convention on the Conservation of Migratory Species of Wild Animals (also known as CMS or the Bonn Convention) is an inter-governmental treaty agreed to under the United Nations Environment Programme that aims to conserve terrestrial and marine animals and birds that migrate between countries. CMS is highly relevant to shark conservation as many species such as the whale shark (*Rhincodon typus*) and great white shark (*Carcharodon carcharias*) are highly migratory.

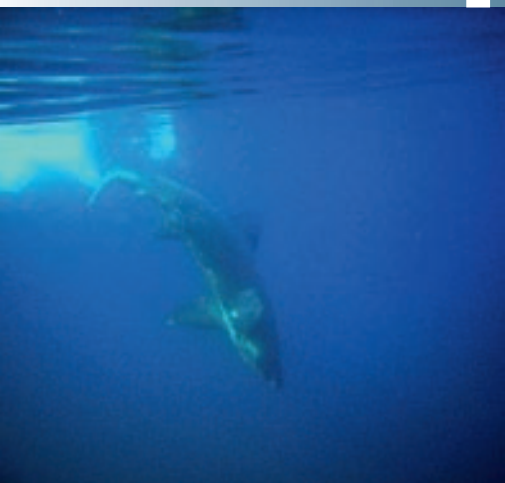
Provisions are partly legally binding on the parties and CMS mandates that parties ensure the protection and conservation of the natural habitat of the species listed on Appendix I,²³ which lists "migratory species that need or would significantly benefit from international cooperation". Currently, only two European elasmobranchs, the basking shark (*Cetorhinus maximus*) and the great white shark (*Carcharodon carcharias*) are included in the legally binding Appendix I. As a consequence of these listings, the EU transformed this obligation into fisheries legislation and prohibited their catch in European Community waters and by European Community vessels everywhere.²⁴

Appendix II constitutes "soft law" and signatory parties are encouraged to take specific measures for species listed here. Great whites, whale sharks and basking sharks are listed in Appendix II, and in December 2008, porbeagles (*Lamna nasus*), longfin makos (*Isurus paucus*), shortfin makos (*Isurus oxyrinchus*) and the northern hemisphere population of spurdogs (*Squalus acanthias*) were also added.²⁵

In 2007, the CMS Scientific Council reported that 35 species of sharks meet the criteria for listing and today further efforts are being undertaken to protect many of these sharks under the convention. Governments are currently driving an initiative to develop a new legal instrument under CMS to protect migratory sharks worldwide. Discussions are still ongoing, although parties have already decided in favour of a weak, non-legally binding instrument instead of legally binding rules²⁶. In these discussions, all



Spanish trawler discarding a basking shark incidentally caught in international waters of the Northwest Atlantic. © Oceana
IUCN Status: *Vulnerable* (*Endangered* in the NE Atlantic).



Basking shark (*Cetorhinus maximus*), Corsica, Mediterranean, 2006. © OCEANA/ Houssine Kaddachi

The basking shark

Basking sharks (*Cetorhinus maximus*) are gentle giants – they can grow up to 11 metres long (though they generally reach around nine) and are among the largest fish in the sea, second only to whale sharks. Basking sharks are planktivores, filtering sea water through their mouths to feed on phytoplankton and zooplankton. Like whales, basking sharks have traditionally been hunted with harpoons, especially for their huge valuable livers which contain large amounts of squalene, an ingredient used in anti-aging creams and other cosmetic products. The fins and the meat of this shark are also commercially traded and its skin can be used to manufacture leather.

Today, basking sharks are threatened with extinction according to the IUCN Red List and listed under a number of treaties, including CITES, OSPAR, Bern, Barcelona and CMS. Despite this, there continue to be catches of this vulnerable species in Europe. Portuguese vessels reported 11 tonnes of basking shark catches in 2007, taken from the Portuguese coast and further out to sea.²⁸ Norway also reports basking shark catches in the Northeast Atlantic. In 2007, the Norwegian catch of basking sharks was 65 tonnes, mostly taken in the Lofoten archipelago.²⁹

In the EU, it has been prohibited to catch, retain on board, tranship or land basking sharks since 2006. However, basking sharks are still caught and landed, highlighting lapses in enforcement of EU fisheries legislation. In 2009, these sharks were reported landed by fishermen in Greece and Spain, if not other countries as well.³⁰

countries, except the Seychelles and Australia, supported the weak non legally binding option. Despite developing a European Action Plan for the Conservation of Sharks and many verbal commitments related to shark conservation, the European Union, United Kingdom and France clearly opposed a legally binding agreement. The European Union representative especially mentioned that the EU does not support any constraining instrument.²⁷

There are many migratory pelagic sharks caught by European fleets that are classified as threatened according to IUCN Red List criteria. Oceana recommends that all of these are added to Appendix I of this convention, listing migratory species threatened with extinction. Inclusion on Appendix II, listing migratory species that need or would benefit from international cooperation, can be a first step towards protection.

C. Shark protection under CITES

Shark body parts enter international trade in large quantities. Most important is the trade of meat, fins and liver oil. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) aims to protect wildlife against over-exploitation by preventing international trade of threatened species. CITES is an important conservation instrument, as legislation is legally binding for the contracting parties. The convention provides a management framework and individual governments must adopt national legislation in accordance with the convention decisions. All EU Member states are parties of CITES and the European Community (EC) itself has been fully implementing the convention since 1984.

CITES lists over 7,000 animals and 32,000 plants on its appendices, subjecting them to specific trade regulations. CITES Appendix I lists species that are the most endangered and international trade is prohibited. A listing of sharks on CITES Appendix I would efficiently prevent their commercialisation but to date, only sawfish are listed here.

CITES Appendix II, listing species that may become threatened with extinction if their trade is not regulated, can also be highly useful in shark conservation. This appendix regulates the trade of vulnerable species to ensure its continued sustainability. A listing serves to limit trade to sustainable levels through requiring of export permits, only authorised if the trade is not detrimental to the species' survival.

Ten elasmobranch species are currently protected under this convention. The great white (*Carcharinus carcharias*), basking shark (*Cetorhinus maximus*), whale shark (*Rhincodon typus*) and largetooth sawfish (*Pristis microdon*) are listed on Appendix II of the convention. The remaining six sawfish species of the family Pristidae are all listed on Appendix I, prohibiting all commercialisation.³¹



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In 2007, the EC presented a proposal to the 14th Conference of the Parties to list spiny dogfish (*Squalus acanthias*) and porbeagle sharks (*Lamna nasus*) under CITES Appendix II. These species, both threatened with extinction according to the IUCN, are traded in high amounts and highly prized for their meat and fins. Their stocks have decreased dramatically in many parts of the world. Despite this, the proposal failed to receive the necessary two-thirds majority vote, with many fishing nations such as Norway, Iceland and most Asian countries including Japan fundamentally opposing CITES protection for commercially caught species.³² Once again, for the 15th Conference of the Parties in 2010, Germany put forth proposals to the EC to list the spiny dogfish and porbeagle sharks on CITES Appendix II.³³

While Oceana would recommend listing spurdog and porbeagle on Appendix I, they since are classified on the IUCN Red List as *Critically Endangered* in Europe, Oceana urges Member states and the EU to support Germany's proposal to list these sharks on CITES Appendix II at the 15th Conference of the Parties in 2010. Additionally, Oceana recommends that EU Member states propose to add all IUCN Red Listed *Endangered* and *Critically Endangered* European elasmobranch species to Appendix I to prohibit their open trade. Further, all other threatened elasmobranch species should be added to Appendix II to regulate trade and ensure its continued sustainability.

Hammerhead shark (*Sphyrna* spp.), 2008
© Rob Stewart/ Sharkwater



European regional environmental conventions



Shortfin makos (*Isurus oxyrinchus*), Vigo, Spain, 2006. © OCEANA/ LX
IUCN status: *Vulnerable* (*Critically Endangered* in the Mediterranean).

Several regional conventions exist for the protection of the environment and biodiversity in Europe, and outlining rules for shark conservation. These include the Barcelona Convention³⁴ for the Mediterranean, the Oskar Convention for the Northeast Atlantic, the Helcom Convention for the Baltic and the Black Sea Convention. Several shark species are currently listed on the annexes of these treaties, reflecting different degrees of protection. However, the direct impact of listing a species on a regional convention's annexes is limited, as protection measures are not usually legally binding for the contracting parties. Nevertheless, in some cases, a listing may have a direct impact in national fisheries management, for example if legislation is implemented to prohibit catches of certain species or to establish areas closed to fishing. By far, not all sharks which are threatened and which match criteria for listing are included in the annexes of these conventions.

A. Bern Convention on the Conservation of European Wildlife and Natural Habitats

The Convention on the Conservation of European Wildlife and Natural Habitats, also known as the Bern Convention, was negotiated under the Council of Europe³⁵ and came into force in 1982. The convention has 48 parties: 43 members of the Council of Europe, four African states and the European Union³⁶. This convention aims to "conserve wild flora and fauna and their natural habitats", especially endangered and vulnerable species, and parties are strictly obliged to take the appropriate and necessary legislative and administrative measures to ensure the conservation of habitats of wild fauna and flora.

Eight elasmobranchs are listed under the Bern Convention. Mediterranean populations of the great white shark (*Carcharodon carcharias*), basking shark (*Cetorhinus maximus*) and devil fish (*Mobula mobular*) are listed on Appendix II as being strictly protected and their capture is prohibited.³⁷ Further, Mediterranean populations of the porbeagle (*Lamna nasus*), white skate (*Rostroraja alba*), shortfin mako (*Isurus oxyrinchus*), blue shark (*Prionace glauca*) and angelshark (*Squatina squatina*) are listed on Appendix III as being protected and as such their capture should be regulated.

However, while the above mentioned Mediterranean sharks species are formally listed in the appendices of the Bern Convention, only catches of great white and basking sharks are banned in European Union waters and for EU vessels all over the world. Additionally, even though the Bern Convention is legally binding for parties and catches for sharks and rays listed on Appendix III should be regulated, many of these species are caught in the Mediterranean without management.

Oceana urges that the Mediterranean population of the devil fish, listed on Appendix II, be totally protected in the EU, and that all species currently listed on Appendix III have their catches regulated on a European level. Additionally, Oceana recommends that



Devil fish (*Mobula mobular*), caught on a longline, Mediterranean, 2005. © OCEANA/ Anabel Colmenero
IUCN Status: *Endangered* (*Critically Endangered* in the Mediterranean).

all other *Endangered* and *Critically Endangered* European elasmobranchs be listed under Appendix II (for strictly protected fauna species) and that all other threatened elasmobranchs are listed under Appendix III (for protected fauna species). Finally, the Bern Convention is partly implemented through the EC Habitats Directive (see Chapter 6). However as there are currently no threatened shark or ray species listed in the Habitats Directive, the Bern appendices should provide an impetus for revising the Habitat Directive annexes.

B. Barcelona Convention for the Protection of the Mediterranean Sea

In 1976, the "Convention for the Protection of the Mediterranean Sea against pollution" (also known as BARCON) was created as a regional treaty to prevent and abate pollution from ships, aircraft and land based sources in the Mediterranean Sea. The Convention was significantly modified in 1995 and the name changed to: Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean. Based on this convention, the "Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean" was adopted in 1995 and came into force in 1999, establishing conservation measures for this region.

Currently, eight elasmobranchs are nominally protected under this protocol. The great white shark (*Carcharinus carcharias*), basking shark (*Cetorhinus maximus*), porbeagle (*Lamna nasus*), devil fish (*Mobula mobular*) and white skate (*Rostroraja alba*) are included in Annex II, listing endangered or threatened species, and the shortfin mako (*Isurus oxyrinchus*), blue shark (*Prionace glauca*) and angleshark (*Squatina squatina*) are included in Annex III, listing species whose exploitation is regulated. Under the protocol, parties should provide legal protection to Annex II species.³⁸

Under the Mediterranean Action Plan, born out of the Barcelona Convention, an additional "Action Plan for the Conservation of Cartilaginous Fish in the Mediterranean Sea" was agreed. It recommends providing legal protection for the endangered species listed including sawfishes (*Pristis* spp.), sand tiger sharks (*Carcharias taurus*), small tooth sand tiger sharks (*Odontaspix ferox*) and the blue skate (*Dipturus batis*).³⁹ However, as the contracting parties of the Barcelona Convention (all those with a Mediterranean shoreline) have widely differing political systems and environmental priorities, such as Albania, Algeria, Lebanon and the European Union, very few parties have implemented national measures to protect the sharks listed in the Barcelona Protocol or the Action Plan.

Indeed, the Mediterranean Sea has been declared by the IUCN as the most dangerous place in the world for sharks and rays, and 42% here are threatened with extinction.⁴⁰ Nevertheless, only the eight above-mentioned species are nominally protected under these agreements. There are clearly many additional species



Thornback ray (*Raja clavata*) captured onboard a longliner, Mediterranean, 2005.
© OCEANA/ Silvia García
IUCN Status: *Near Threatened*.

which deserve listing in the annexes of the Protocol and protection via the Action plan. Oceana recommends that elasmobranchs categorised as threatened in the Mediterranean Sea be added to Annex II of the Protocol, listing endangered or threatened species. Additionally, Oceana urges contracting parties to implement protection measures for the listed species.

C. OSPAR Convention for the Protection of the Marine Environment of the Northeast Atlantic

The Oslo-Paris (OSPAR) Convention for the Protection of the Marine Environment of the Northeast Atlantic was established to regulate international cooperation on environmental protection in that area. This convention notes regions of the Northeast Atlantic where species are threatened or in decline. The EU Member states with coastlines in the Northeast Atlantic are members, as well as Norway and Iceland.⁴¹

This convention compiles a List of Threatened and/or Declining Species and Habitats, which guides the OSPAR Commission in setting priorities for the conservation and protection of marine biodiversity. While the OSPAR convention has no competence in the direct management of fisheries, parties are committed to enforcing the decisions of the convention and in many cases, OSPAR decisions are later implemented into EU law.

In 2008, a number of threatened sharks and rays were added to the OSPAR List of Threatened and/or Declining Species and Habitats, joining the basking shark (*Cetorhinus maximus*), common skate (*Dipturus batis*), spotted ray (*Raja montagui*), thornback ray (*Raja clavata*) and white skate (*Raja alba*) already on the list. These new additions were the porbeagle (*Lamna nasus*), spurdog (*Squalus acanthias*), gulper shark (*Centrophorus granulosus*), leafscale gulper shark (*Centrophorus squamosus*), Portuguese dogfish (*Centrophorus coelestis*) and the angelshark (*Squatina squatina*), based on nominations by WWF and Germany, due to current threats and significant declines in their populations.⁴² These listings will draw attention to relevant governments and fisheries management organisations that should consider these species as a high priority in management decisions and actions regarding protection. Parties are also requested to report back on progress to OSPAR, which will further assist in identifying appropriate management measures for these listed species.

Spotted torpedo (*Torpedo marmorata*), Atlantic Ocean, 2005. © OCEANA/ Juan Carlos Calvin
IUCN status: *Least Concern* in the Mediterranean.



Oceana recommends that all elasmobranch species classified as threatened by the IUCN Red List be added to the OSPAR List of Threatened and/or Declining Species.

D. Helcom Convention on the Protection of the Marine Environment of the Baltic Sea

The Baltic Marine Environment Protection Commission (also known as the Helsinki Commission, or HELCOM for short) is the governing body of the Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention). The convention, first established in 1974 and revised in 1992, includes the entire



Small-spotted catshark (*Scyliorhinus canicula*), Asturias, Spain, 2008.
IUCN status: *Least Concern* in the Mediterranean.

Baltic Sea area and inland waters (but excluding the Skagerrak strait). HELCOM, as with other regional biodiversity conventions, offers no specific measures for the management or conservation of sharks and rays in the Baltic. However, in 2008, HELCOM adopted a Red List of Threatened and Declining Species of Lampreys and Fishes of the Baltic Sea⁴³. The aim of this list is to assist in defining measures for species and biotopes/habitats which are in urgent need of protection, although specific action has yet to be proposed for the recovery of the listed species.⁴⁴

As several sharks and rays inhabit the Baltic, the following are included on the HELCOM Red List as high priority species: porbeagle (*Lamna nasus*), small-spotted catshark (*Scyliorhinus canicula*), thresher shark (*Alopias vulpinus*) spurdog (*Squalus acanthias*), basking shark (*Cetorhinus maximus*), blackmouth catshark (*Scyliorhinus canicula*), tope shark (*Galeorhinus galeus*) thorny skate (*Amblyraja radiata*), common skate (*Dipturus batis*) spotted ray (*Raja montagui*) and shagreen ray (*Leucoraja fullonica*).⁴⁵

Oceana recommends that the governments of the Baltic states take additional management measures to protect the listed species.

E. Black Sea Convention on the Protection of the Black Sea

The Convention on the Protection of the Black Sea Against Pollution (the Black Sea Convention) is a treaty that provides a legal framework to conserve the marine environment in the Black Sea by controlling pollution. European Union Member states Bulgaria and Romania, along with Georgia, the Russian Federation, Turkey and Ukraine, are the parties to this convention.

The Strategic Action Plan for the Rehabilitation and Protection of the Black Sea, signed in 1996, established a regional Black Sea Red Data Book to identify and describe endangered species.⁴⁶ Biodiversity in the Black Sea has suffered heavily from overfishing, and these waters are home to some threatened sharks and rays, such as spiny dogfish (*Squalus acanthias*) and the thornback skate (*Raja clavata*). However, there is not a single shark or ray listed in the Black Sea Red Data Book.

In April 2009, an updated Strategic Action Plan for the Environmental Protection and Rehabilitation of the Black Sea was adopted in which parties committed to quickly finalising a legal framework to sustainably manage fisheries and living marine resources, and to establish a regulatory framework for maintaining healthy and viable fish stocks in the Black Sea.⁴⁷ Oceana recommends the parties undertake assessments and implement concrete fisheries management measures for sharks and rays in the Black sea.

6

Shark protection under EU biodiversity regulations

The European Community adopted Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the EC Habitats Directive) in 1992.⁴⁸ The origin of this directive is found in the provisions of the Bern Convention.

The Habitats Directive is the key instrument within European Union law to protect threatened species⁴⁹ and, in principle, outlines habitats and species that need protection. Species can be listed on three separate annexes of the directive. Firstly, species listed in Annex II of the directive are those whose natural habitats must be protected by Member states as "special areas of conservation". Secondly, Annex IV lists "Species of community interest", which are species in need of strict protection.⁵⁰ Finally, Annex V lists "Species of community interest whose taking in the wild and exploitation may be subject to management measures".⁵¹

A main fault in the Habitats Directive is that its annexes include only a small number of species and habitats to be protected. Instruments to adapt the Directive to new scientific knowledge are lacking. Additionally, marine species have not been reviewed since the Habitats Directive was first adopted,⁵² signalling a need to address this matter. No threatened shark or ray species are listed in the Annexes. Regarding listed types of habitats, only nine types of marine and coastal habitats are designated,⁵³ even though many more deserve protection.⁵⁴

Oceana recommends that EU Member states propose the addition of threatened sharks and rays to Annex II of the Directive, in order to protect all habitat types that are crucial to shark conservation, (e.g., breeding or nursery grounds). Additionally, all *Critically Endangered* sharks should be added to Annex IV, requiring strict protection and all other commercialised sharks should be added to Annex V to manage their exploitation.

Blue sharks (*Prionace Glauca*). Valetta freshmarket, Malta, 2009. ©OCEANA/ LX.
IUCN status: *Near Threatened (Vulnerable in the Mediterranean)*.





Conclusions

7



Angel shark (*Squatina squatina*). © Carlos Suárez.
IUCN status: *Critically Endangered*.

Threatened elasmobranch species must be added to international biodiversity conventions and the EU Habitats Directive, and agreements to limit or prevent catches and trade must be transferred into national policy.

There are several international and regional conventions in force for the conservation of threatened species, including the United Nations Convention on the Law of the Sea, the Convention on Biological Diversity (CBD), the Convention on the Conservation of Migratory Species (CMS), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Barcelona Convention for the Mediterranean, the Bern Convention on the Conservation of European Wildlife and Natural Habitats, the Helinski Convention for the Baltic, the Oslo Paris Convention for the Northeast Atlantic and the Black Sea Convention. A few shark species are already efficiently protected under these conventions, such as the basking and the great white sharks, whose catch is prohibited worldwide for EU vessels. However, other threatened species are in sore need of protection.

Oceana recommends that all threatened elasmobranch species, particularly spurdogs, porbeagles, mako sharks, thresher sharks, angel sharks, deep-sea sharks, and common skates, among others, be added to, and protected under, these conventions. Oceana also encourages EU Member states to include shark and ray species in the EU Habitats Directive. Additionally, Member states must ensure adherence to all existing shark protection measures in these conventions by transferring them into national law.

Annex 1

Existing multilateral and regional conventions under international environmental law and their provisions for shark protection

Convention name	Type	Provisions for elasmobranch protection	EU is a party to the Convention	Individual EU-Member state parties
United Nations Convention on the Law of the Sea.	Multilateral	Yes, especially for 25 listed migratory sharks. Implementation lacking.	Yes	All
Convention on Biological Diversity (CBD).	Multilateral	No, parties can take measures if considered appropriate.	Yes	All
Convention on the Conservation of Migratory Species of Wild Animals (CMS)	Multilateral	Species listed on Appendix I are strictly protected. For species listed on Appendix II, range states are encouraged to develop global or regional agreements for the conservation and management.	Yes	All
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).	Multilateral	Appendix I prohibits all commercialisation. Appendix II serves to limit trade to sustainable levels through requirements of export permits, only authorised if the trade is not detrimental to the species' survival.	No, but fully implements CITES since 1984.	All
Bern Convention on the Conservation of European Wildlife and Natural Habitats.	Regional	Appendix II lists strictly protected fauna species and Appendix III lists protected fauna species. Provisions are legally binding but lack implementation.	Yes	All
Barcelona Convention for the Mediterranean.	Regional	Even though several recommendations have been agreed to provide legal protection for threatened sharks, implementation in members states is lacking. For the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean: parties should provide legal protection Annex II species. For the Action Plan for the conservation of cartilaginous fish in the Mediterranean Sea: there are recommendations to provide legal protection status for the endangered species identified.	Yes	Cyprus, France, Greece, Italy, Malta, Slovenia, Spain.
Oslo-Paris Convention for the Protection of the Marine Environment of the North-east Atlantic (OSPAR).	Regional	The List of Threatened and/or Declining Species and Habitats guides the OSPAR Commission in setting priorities for work on the conservation and protection of marine biodiversity.	Yes	Belgium, Denmark, Finland, France, Germany, Ireland, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom.
The Baltic Marine Environment Protection Commission (also known as the Helsinki Commission or HELCOM).	Regional	The Red List of threatened species shall assist in defining measures to support threatened and declining species of lampreys and fishes in the HELCOM area, but no specific action is proposed for the recovery of the listed species there.	European Community	Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia, Sweden.
The Black Sea Convention.	Regional	A new, updated Strategic Action Plan for the Environmental Protection and Rehabilitation of the Black Sea was adopted in April 2009. Parties committed to finalise a legal framework for the sustainable management of fisheries and living marine resources, including sharks and rays.	No	Bulgaria, Romania.



Elasmobranch species listed under existing multilateral and regional environmental conventions

2 Annex

Convention name	Relevant annexes	Elasmobranchs protected
United Nations Convention on the Law of the seas (UNCLOS).	Annex I, listing highly migratory species.	Bluntnose sixgill shark (<i>Hexanchus griseus</i>) Basking shark (<i>Cetorhinus maximus</i>) Pelagic thresher (<i>Alopias pelagicus</i>) Bigeye thresher (<i>Alopias superciliosus</i>) Thintail thresher (<i>Alopias vulpinus</i>) Whale shark (<i>Rhincodon typus</i>) Family Carcharhinidae Family Sphyrnidae Family Isurida
Convention on the Conservation of Migratory Species of Wild Animals (CMS).	Appendix I, listing species whose protection is obligatory.	Basking shark (<i>Carcharhinus maximus</i>) Great white Shark (<i>Carcharodon carcharias</i>)
	Appendix II, listing species for whom measures are encouraged.	Great white shark (<i>Carcharodon carcharias</i>) Whale sharks (<i>Rhincodon typus</i>) Basking sharks (<i>Cetorhinus maximus</i>) Porbeagle shark (<i>Lamna nasus</i>) Longfin mako (<i>Isurus paucus</i>) Shortfin makos (<i>Isurus oxyrinchus</i>) Spurdog, northern hemisphere (<i>Squalus acanthias</i>)
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).	Appendix I, prohibiting commercialisation.	Dwarf sawfish (<i>Pristis clavata</i>) Freshwater sawfish (<i>Pristis microdon</i>) Smalltooth sawfish (<i>Pristis pectinata</i>) Common sawfish (<i>Pristis pristis</i>) Longcomb sawfish (<i>Pristis zijsron</i>)
	Appendix II, regulating trade.	Great white (<i>Carcharodon carcharias</i>) Basking shark (<i>Carcharhinus maximus</i>) Whale shark (<i>Rhincodon typus</i>) Largetooth sawfish (<i>Pristis microdon</i>)
Bern Convention on the Conservation of European Wildlife and Natural Habitats.	Appendix II, listing strictly protected species whose catch is prohibited.	Great white shark* (<i>Carcharodon carcharias</i>) Basking shark* (<i>Cetorhinus maximus</i>) Devil fish* (<i>Mobula mobular</i>)
	Appendix III, listing protected species.	Shortfin mako* (<i>Isurus oxyrinchus</i>) Blue shark* (<i>Prionace glauca</i>) Angelshark* (<i>Squatina squatina</i>) Porbeagle* (<i>Lamna nasus</i>) Bottlenosed or white skate* (<i>Rostroraja alba</i>)
Barcelona Convention - Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean.	Annex II, listing endangered or threatened species.	Great white shark (<i>Carcharodon carcharias</i>) Basking shark (<i>Cetorhinus maximus</i>) Porbeagle (<i>Lamna nasus</i>) Devil fish (<i>Mobula mobilar</i>) White skate (<i>Rostroraja alba</i>)
	Annex III, listing species whose exploitation is regulated.	Shorthin mako (<i>Isurus oxyrinchus</i>) Blue shark (<i>Prionace glauca</i>) Angelshark (<i>Squatina squatina</i>)

(*) Mediterranean population

Annex 2

Convention name	Relevant annexes	Elasmobranches protected
Oslo-Paris Convention for the Protection of the Marine Environment of the North-east Atlantic (OSPAR).	List of Threatened and/or Declining Species and Habitat.	Basking shark (<i>Cetorhinus maximus</i>) Common skate (<i>Dipturus batis</i>) Spotted ray (<i>Raja montagui</i>) Thornback ray (<i>Raja clavata</i>) White skate (<i>Raja alba</i>) Porbeagle (<i>Lamna nasus</i>) Spurdog (<i>Squalus acanthias</i>) Gulper shark (<i>Centrophorus granulosus</i>) Leafscape gulper shark (<i>Centrophorus squamosus</i>) Portuguese dogfish (<i>Centroscymnus coelolepis</i>) Angelshark (<i>Squatina squatina</i>)
The Baltic Marine Environment Protection Commission (HELCOM).	Red list of threatened and declining species of lampreys and fishes of the Baltic Sea.	
	- High priority.	Porbeagle (<i>Lamna nasus</i>) Small-spotted catshark (<i>Scyliorhinus canicula</i>) Thresher shark (<i>Alopias vulpinus</i>) Spurdog (<i>Squalus acanthias</i>) Basking shark (<i>Cetorhinus maximus</i>) Blackmouth catshark (<i>Scyliorhinus canicula</i>) Tope shark (<i>Galeorhinus galeus</i>) Thorny skate (<i>Amblyraja radiata</i>) Common skate (<i>Dipturus batis</i>) Spotted ray (<i>Raja montagui</i>)
	- Medium priority	Greenland shark (<i>Somniosus microcephalus</i>) Velvet belly lantern shark (<i>Etmopterus spinax</i>) Blue shark (<i>Prionace glauca</i>) Spotted torpedo (Torpedinidae) Shagreen ray (<i>Leucoraja fullonica</i>) Common stingray (<i>Dasyatis pastinaca</i>) Rabbit fish (<i>Chimaera monstrosa</i>)



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- 45_ Further elasmobranchs are listed as medium priority in the list: Greenland shark, Velvet belly lantern shark, Blue shark, Spotted torpedo ray, Shagreen ray, Common stingray and Rabbit fish.
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6 Shark protection under EU biodiversity regulations

- 48_ European Commission 1992. Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31992L0043:EN:NOT>.
- 49_ According to the text, the Directive aims to keep species in a favourable conservation status. The conservation status will be taken as 'favourable' when:
 - Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats.
 - The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future.
 - There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

References

- 50_ Member States shall take the requisite measures to establish a system of strict protection for the animal species listed in Annex IV in their natural range, prohibiting:
- (a) All forms of deliberate capture or killing of specimens of these species in the wild.
 - (b) Deliberate disturbance of these species, particularly during the period of breeding, rearing, hibernation and migration.
 - (c) Deliberate destruction or taking of eggs from the wild.
 - (d) Deterioration or destruction of breeding sites or resting places.
- 51_ According to the text of the directive, such measures may also include in particular:
- Regulations regarding access to certain property.
 - Temporary or local prohibition of the taking of specimens in the wild and exploitation of certain populations.
 - Regulation of the periods and/or methods of taking specimens.
 - Application, when specimens are taken, of hunting and fishing rules which take account of the conservation of such populations.
 - Establishment of a system of licences for taking specimens or of quotas.
 - Regulation of the purchase, sale, offering for sale, keeping for sale or transport for sale of specimens.
 - Breeding in captivity of animal species as well as artificial propagation of plant species, under strictly controlled conditions, with a view to reducing the taking of specimens of the wild.
 - Assessment of the effect of the measures adopted.
- 52_ In fact, when new Member states enter the European Union, marine species are added to the directive, but that is limited to species that occur in the new Member states and does not include all species with an unfavourable conservation status.
- 53_ Marine habitats mentioned in the Directive include: Posidonia meadows (*Posidonia oceanica*), Estuaries, Mudflats and sandflats not covered by seawater at low tide, Coastal lagoons, Large shallow inlets and bays, Reefs, Submarine structures made by leaking gases, Submerged or partially submerged sea caves.
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Oceana's Recommendations for Effective Shark Management in the European Union

- 1 • Sharks must be landed with their fins attached.
- 2 • The capture of commercially exploited shark species by EU vessels must be regulated under the Common Fisheries Policy, with fishing limits and quotas.
- 3 • Shark fisheries must be controlled wherever the EU fleet operates – in European waters and worldwide.
- 4 • Migratory shark species exploited on the high seas must be regulated with catch limits and quotas by the relevant Regional Fisheries Management Organisations.
- 5 • Effective management measures for by-catch reduction must be introduced.
- 6 • Shark discards must be eliminated.
- 7 • Vessels taking sharks must have independent observer coverage on board.
- 8 • Distinct trade statistics for shark species (meat, fins and shark liver oil), differentiated by species, should be developed.
- 9 • Endangered shark species must be added to international conventions and national legislation that limit or prevent catches and trade.
- 10 • A European Plan of Action for Sharks must be implemented.