

SHARK FISHERIES AND TRADE IN EUROPE

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Summary Sharks, skates, rays and chimaeras - the cartilaginous fishes or chondrichthyans - have been fished in Europe in a variety of ways for centuries. These fishes have provided everything from basic sustenance to luxury items, and most of their body parts have been used for specific purposes. Today in Europe, cartilaginous fishes are used primarily as food, however, their livers, fins, cartilage, skin and other derivatives are used for a variety of purposes.

In 1994, the TRAFFIC Network launched a global study of shark fisheries and trade. This report presents an overview of the findings in Europe. It examines the shark fisheries of the Northeast Atlantic and the Mediterranean, reviews the trade in sharks and shark products in Europe and describes the regulation of shark fisheries. Country specific information on shark fisheries and trade is included for France, the UK, Ireland, Norway, Germany, Belgium, the Netherlands, Spain, Italy, Greece, Turkey and Cyprus.

Shark fisheries in Europe Many cartilaginous fish species are extremely vulnerable to over-exploitation, owing to their specific biological and life history characteristics. However, European shark fisheries are virtually unregulated or unmanaged at both national and regional levels. As such, cartilaginous fishes remain available for exploitation as quotas or other restrictions are applied to other fisheries.

The fishing fleets of every European country catch sharks, although most of the sharks are taken incidentally by fisheries targeting other species. In the Northeast Atlantic, landings of sharks have been declining since the early 1970s. These landings declined rapidly in the mid 1980s. The most important shark fishing nations in Europe are France, the UK and Norway, which land some 75% of the area's total shark landings. The Piked Dogfish *Squalus acanthias* is by far the most important shark species landed commercially. Total landings of Piked Dogfish within the Northeast Atlantic have declined rapidly since the mid-1980s, falling to 19 621 mt in 1994, a drop of more than 50% from the 43 411 mt reported in 1987. The Small-spotted Catshark *Scyliorhinus canicula* is also frequently landed. Large pelagic species such as Basking Shark *Cetorhinus maximus*, Porbeagle *Lamna nasus*, Blue Shark *Prionace glauca*, Shortfin Mako Shark *Isurus oxyrinchus*, Tope *Galeorhinus galeus*, and others are exploited in the Northeast Atlantic.

Shark stocks in the Mediterranean are considered close to being fully

exploited. Shark landings in the Mediterranean Sea have been highly variable since 1950. From 1980 to 1993, shark landings averaged 21,000 mt per year. The main shark species landed in the Mediterranean include the Small-spotted Catshark, Piked Dogfish, smooth-hound *Mustelus* spp., Longnose Spurdog *Squalus blainvillei*, Blackmouth Catshark *Galeus melastomus*, gulper sharks *Centrophorus* spp., Bluntnose Sixgill Shark *Hexanchus griseus*, Blue Shark, Shortfin Mako and Thresher Shark *Alopias vulpinus*.

New fisheries for deep-water shark species are developing in Europe as new fishing grounds are exploited following the decline of traditional species.

Trade in sharks and their products in Europe Europe as a region plays an important role as fisher, supplier, processor, trader and consumer of shark products.

Meat Europeans can have a large appetite for certain shark species, and the species, the forms in which they are eaten and the quantities eaten vary from country to country. In northern Europe, Piked Dogfish is in greatest demand, while Smooth-hound *Mustelus mustelus*, Starry Smooth-hound *Mustelus asterias* and other hound sharks are favoured in the southern countries. The French market, the largest in Europe for Piked Dogfish, prefers headed, gutted skinless fish, while in Germany, smoked Piked Dogfish bellies and backs are favoured. Skates and rays, Small-spotted Catshark, Porbeagle, Shortfin Mako and other species also feature prominently in the diets of many Europeans.

Piked Dogfish is most widely known in the UK as "rock salmon," and less frequently as "huss," and as *Schillerlocken* and *seeaal* in Germany. In France and Francophone Belgium, Piked Dogfish is called *aiguillat* or *aiguillat commun*, Small-spotted Catshark is *petite roussette* and Nursehound *Scyliorhinus stellaris* is *grande roussette*. In France, the pink skinless meat of Piked Dogfish, Small-spotted Catshark and Nursehound, Porbeagle and other Squalidae is called *saumonette*. In Spain, Shortfin Mako, Tope and other shark species are sometimes called *bienmesabe* (good taste) and Blue Shark is usually called "pickled fish." In Italy, smooth-hound is *palombo*, and *smeriglio* refers to Shortfin Mako and other sharks.

International trade by EU nations in shark and dogfish meat has been growing quite steadily for over a decade. The importance of shark meat on the EU market, relative to other shark products, is reflected in the fact that, of all the shark products imported into and exported from the EU, only the meat is specifically recorded as "shark" in EU trade statistics. Eurostat data from 1988-1994 illustrate that EU countries import far more dogfish and shark meat than they export. From 1988-1994, the EU imported an average of over 37 000 mt of dogfish and shark per year, while it exported only 13 325 mt a year. Also, the EU imports more dogfish than other shark

species. Of the total imports of dogfish and shark of over 261 400 mt from 1988-1994, dogfish comprised 55% of the total.

Italy is the largest importer of dogfish and other sharks in the EU, while France is the largest importer of dogfish. Germany is the most important exporter of dogfish, and the UK is the largest dogfish supplier, followed by Denmark. Italy is the most important importer of sharks generally, while Germany is the largest EU exporter of sharks, followed by the UK and Spain.

Shark fin TRAFFIC's market surveys in Italy, France, Germany, the Netherlands, Belgium, the UK, Ireland, Greece and Cyprus verified the availability of various imported shark fin products in Asian restaurants and shops catering to Asian consumers. Shark fin products most frequently marketed in Europe include canned fin soup; dried, processed fin cartilage with the skin and flesh removed; and whole fin. Product labels stated these items have been manufactured in Singapore, Surinam, Hong Kong, Indonesia and China. Norwegian traders export Piked Dogfish, Porbeagle and Basking Shark fins to Asian countries. German fish processors export Piked Dogfish and Porbeagle fins as byproducts of meat processing, and UK Piked Dogfish processors export fins via a broker to the Far East.

Shark cartilage Shark cartilage products, which are marketed as health supplements, appear to constitute a fast growing market in Europe. TRAFFIC found cartilage products in the UK, France, Belgium, the Netherlands, Germany, Italy, Spain and Greece. These appear to have been imported as finished products or as processed cartilage for manufacture and distribution within Europe. Sellers explained that shark cartilage is distributed to pharmacies and health products outlets and to homeopathic doctors and other health practitioners. In addition, the use of shark cartilage by the veterinary practice is reportedly on the rise in Europe.

Shark liver oil and squalene The European market for shark liver oil and squalene products also appears to be growing. TRAFFIC found products containing shark oil or squalene in Belgium, the UK, France, Germany the Netherlands, Greece and Iceland. TRAFFIC identified several establishments in France that use shark liver oil and squalene in the manufacture of cosmetic and pharmaceutical products, including a factory in southern France that processes shark liver oil used in perfumery.

Shark skin and leather Shark skin and leather are traded in the UK, Spain, Germany, France and Italy. In France, shark and ray leather is used in the manufacture of luxury items such as handbags, wallets and jewellery. Ray skin, known as *galluchat*, is also used to cover furniture and in clothing design.

Other shark derivatives Curio or marine specialty shops throughout the EU sell or import shark products such as teeth and preserved jaws.

Conclusions and recommendations Against this backdrop -- gaps in the knowledge about sharks themselves, a lack of understanding of their fisheries and trade, and the effects these are having on particular species or stocks, and the unregulated and unmanaged nature of these fisheries and trade -- there is a lack of understanding by the public about what cartilaginous fishes are and why they should be conserved. Unless the public becomes enlightened about the ecological importance of sharks to marine ecosystems, the harmless nature of most species and the current potential threats to their conservation, governments will hardly be motivated to improve the management of shark fisheries and trade and provide the necessary funding for research, training and other initiatives.

The lack of detailed information on many shark species in Europe and their associated fisheries makes it extremely difficult if not impossible to assess the extent to which sharks are being affected by European fisheries. However, from available information, the Piked Dogfish appears to be adversely affected by overfishing in Europe, particularly in France, Norway, Ireland and the UK. In the last few years, European demand for Piked Dogfish has been met with an increasing percentage of imports from the USA; virtually all the Piked Dogfish landed in the USA is exported to Europe.

Without species specific information, the assessment of any management and conservation implications of the growing fisheries and trade of sharks will remain extremely difficult. To address the many deficiencies with respect to monitoring and controlling the fisheries of and trade in shark, skate and ray species, TRAFFIC Europe recommends the following to conserve and manage sharks.

1. Species-specific and consistent data to monitor the catch, landings and trade in sharks are urgently needed. National governments, the Food and Agriculture Organization of the United Nations (FAO), International Council for the Exploration of the Sea (ICES) and other international organizations must improve the collection, management and reporting of data on shark catches, landings, production and international trade. To assist countries in data collection and reporting, FAO and other international fisheries bodies should develop a single set of internationally accepted, standardized guidelines for distribution to national governments. The guidelines should serve as a reference document for the preparation of these national reports.
2. It is essential that European shark stocks and fisheries be managed to prevent fisheries from negatively affecting populations. For example, the EU should adopt a comprehensive management plan for shark species in the Northeast Atlantic and Mediterranean

regions. The plan should be formulated by shark scientists and ICES, and apply the precautionary approach to shark management. The US management plan could serve a model on which to build. The European plan must allow for the management of Piked Dogfish and skates and rays. Reducing shark bycatch should be a primary objective of the management scheme. The EU should seek the cooperation of the non-EU nations in the Mediterranean Sea and the Atlantic Ocean in implementing the management plan for species that range into the waters of third countries. European countries should ensure that their national fisheries legislation adequately addresses shark management.

3. The status and development of established and emerging shark fisheries and markets in Europe should be monitored closely. To understand the full value of these fisheries, the end markets (e.g. food, perfume, cosmetic, pharmaceutical, and leather industries) have to be taken into account. Efforts to quantify the income generated by existing shark fisheries, the products marketed in Europe and other funds, such as revenue generated by shark exhibits in museums and aquaria, should be undertaken to facilitate the establishment of management control systems.

Public education and awareness-raising initiatives aimed at clarifying the top predator's role in the marine ecosystem, and at dispelling the negative images associated with sharks should be initiated, or strengthened to motivate commercial and recreational fishers, research scientists and governments to formulate effective management plans for shark species and the sustainability of the fisheries.