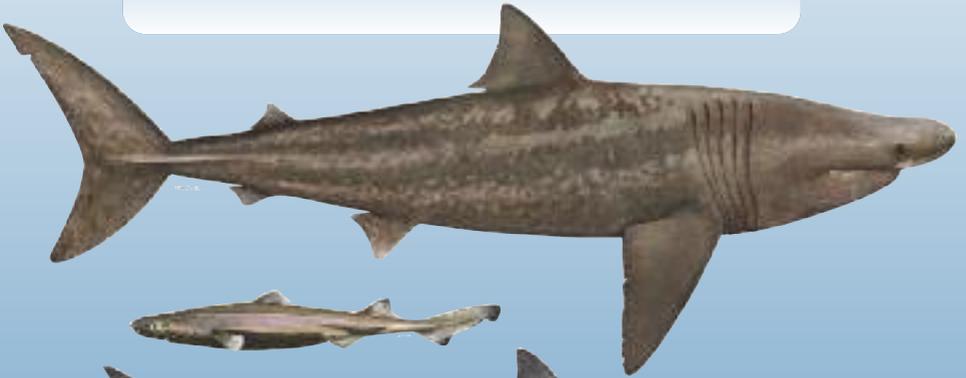


# The European Shark Guide



If you are heading for a European coastline this summer, the chances are you will be sharing the sea with some fascinating, but increasingly rare fish. That's not meant to alarm you. The idea that sharks pose a serious danger to humans is a myth.

## The threat to sharks

The fact is that this extraordinary group of fish is seriously threatened by human activities.

European sharks are judged more at risk of extinction than those in most other assessed regions of the world.

Europeans have a taste for shark meat that has driven several species to the brink. The shark's most famous feature – the fin – is also at the heart of the threat to sharks.

## You can make a difference

The EU banned shark finning in 2003, (please see page 9) but loopholes in the regulation seriously hamper enforcement. MEPs called on the European Commission to strengthen the shark finning ban nearly four years ago. In the coming months, the process for amending this critical regulation will finally begin in earnest.

The Shark Alliance, a coalition of NGOs dedicated to restoring and conserving shark populations, has produced this fact-packed guide to give you some insight in to the amazing world of sharks, and help MEPs to conserve these remarkable but imperilled fish.

*All information was taken and adapted from Shark Alert by Sonja Fordham and other Shark Alliance publications.*



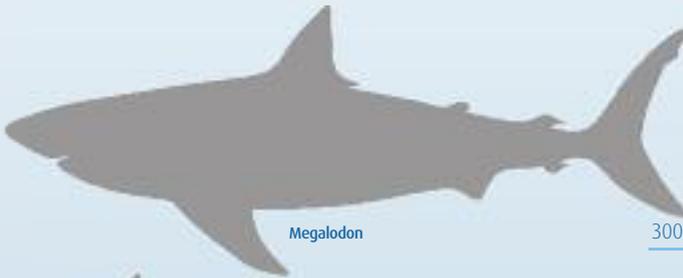
# Fascinating shark facts we think you'll like to know:



**Sharks, in some form, have roamed our seas for more than 400 million years, which means their ancestors inhabited the earth for nearly 200 million years before dinosaurs.**



**The Megalodon is an extinct, prehistoric shark of gigantic proportions.** It reached up to 21 metres in length and its huge teeth, at up to 18 cm, are the largest of any known shark species.



Megalodon

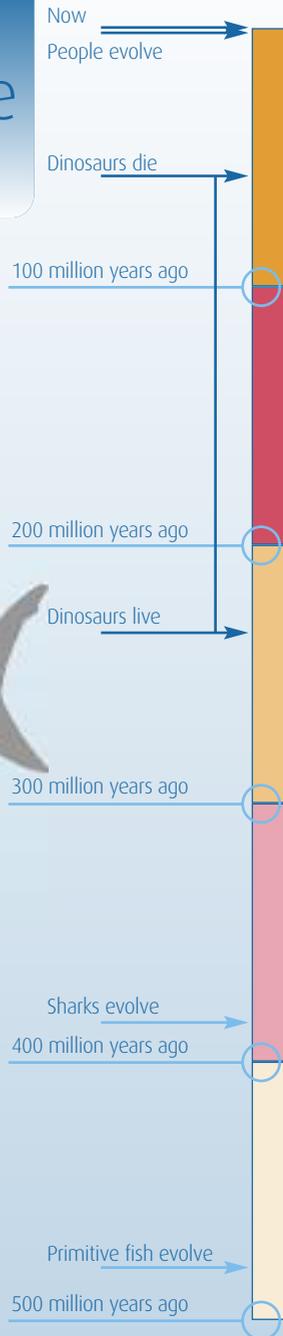
Great white



**Sharks are fish with skeletons made of cartilage instead of bone, but sharks' slow growth and late maturity mean that, in many ways, they have more in common with sea turtles and marine mammals than bony fish such as flounder or tuna.**



**Sharks and rays (including skates and sawfish) make up the Sub-Class of fish known as elasmobranchs.**





**Sharks, as a group, include a diverse array of species.** They range from less than a metre to 20 metres in length; they are found in most coastal regions, but also in the deep ocean and even in freshwater. Some sharks lay eggs, but most give birth to live, fully formed young.



**Sharks play a key role in maintaining a healthy balance in the marine ecosystem.** Many sharks are top predators feeding on other sealife (from squid to seals), while a few feed on plankton. Sharks in turn are preyed upon by other sharks and sometimes killer whales.



**The two largest species of shark are the whale shark and basking shark.** These can grow to 20 metres and 10 metres respectively. Both are so-called filter-feeders, feeding on plankton, and have tiny teeth.



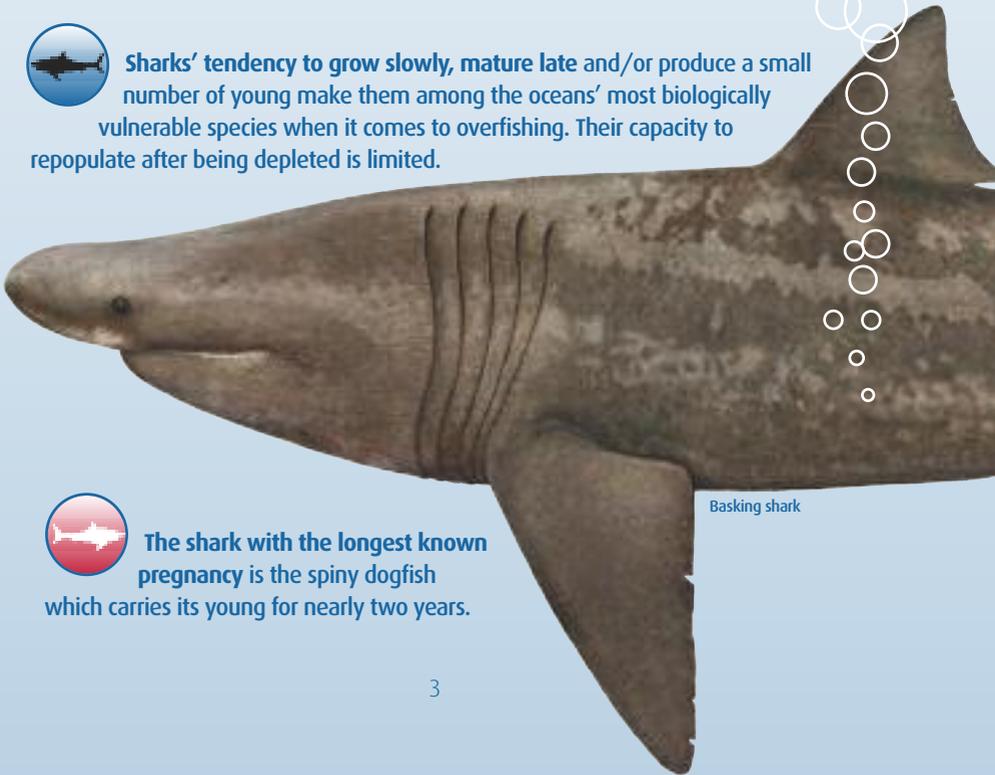
**The fastest shark is thought to be the shortfin mako shark,** which has been clocked at 69 kilometres per hour for short bursts.



**Sharks' tendency to grow slowly, mature late and/or produce a small number of young make them among the oceans' most biologically vulnerable species** when it comes to overfishing. Their capacity to repopulate after being depleted is limited.



**The shark with the longest known pregnancy is the spiny dogfish** which carries its young for nearly two years.



Basking shark



# Some European shark facts

You may think there aren't many sharks in European waters. Well, although their overall numbers have dwindled, there are still more than 130 species of sharks and rays in EU waters, some in coastal regions, some in the deep ocean.

Here are some of the species at risk from fisheries:

## Shortfin mako shark (*Isurus oxyrinchus*)

This wide-ranging shark, the world's fastest, cannot out-swim fishing vessels. A mako shark features in Ernest Hemingway's novel *The Old Man and the Sea*.



### FOOD

Bony fish such as mackerel or swordfish.

### FINS

Among the most highly sought of EU shark species, particularly by Spanish high seas longline fishermen. Fins and meat are used with meat being of particularly high value.

### THREATS

Global catches doubled from 1990 to 2003 in the face of no European or international catch limits.

### FOUND

Tropical and temperate open-ocean waters around the world, including the Mediterranean and the Atlantic Ocean from Norway to South Africa.

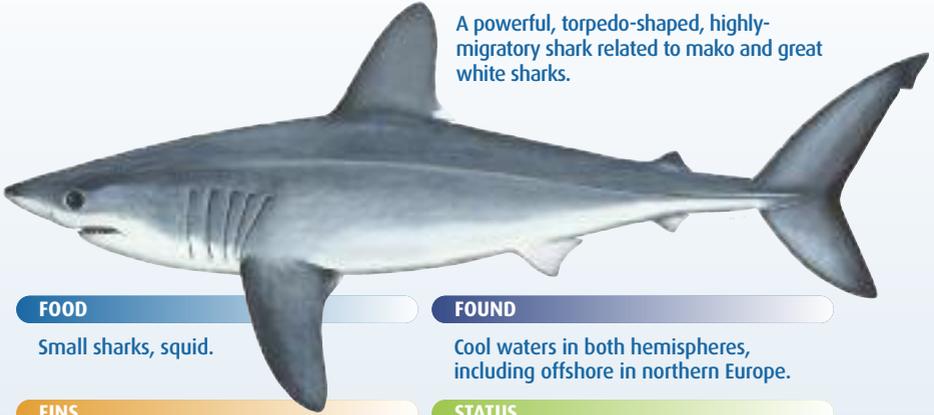
### STATUS

Critically Endangered in the Mediterranean Sea, Vulnerable in the Northeast Atlantic.

### COMPLICATING FACTOR

Scientists have recommended reductions in fishing, but lack the data needed to propose precise catch limits.

## Porbeagle shark (*Lamna nasus*)



A powerful, torpedo-shaped, highly-migratory shark related to mako and great white sharks.

### FOOD

Small sharks, squid.

### FINS

Fins valuable and sold to Asia while sought primarily for meat.

### THREATS

EU fishing ended this year after serious depletion; catches by other countries fishing in international Atlantic waters are still unregulated.

### FOUND

Cool waters in both hemispheres, including offshore in northern Europe.

### STATUS

Critically Endangered in the Northeast Atlantic and Mediterranean Sea, Vulnerable globally.

### COMPLICATING FACTOR

Its meat is among the most valuable of all shark species.

## Spurdog or spiny dogfish (*Squalus acanthias*)



A slender, white-spotted shark that grows to about three feet long and travels in schools. Can live to 70 years of age.

### FOOD

Smaller fish such as herring or sardine, as well as other spiny dogfish!

### FINS

Not considered high quality for soup, but still significant portion of EU fin trade.

### THREATS

Persistent demand for meat (used for 'fish and chips' in England and smoked in Germany) fuels fisheries around the world.

### FOUND

Cool, coastal waters worldwide.

### STATUS

Critically Endangered in the Northeast Atlantic, Endangered in the Mediterranean Sea, Vulnerable in the Black Sea and globally.

### COMPLICATING FACTOR

Reproductive females, known to be pregnant for nearly two years, are targeted by fishermen due to their large size, leading to serious damage to population structure.

## Deep-sea gulper shark (*Centrophorus granulosus*)

A small, dark-brown shark with glowing, green eyes.



### FOOD

Smaller fish.

### FINS

Low value.

### STATUS

Critically Endangered off Europe (particularly Portugal), Vulnerable globally.

### FOUND

The deep ocean, between 200m and 1,200 metres below the surface.

### THREATS

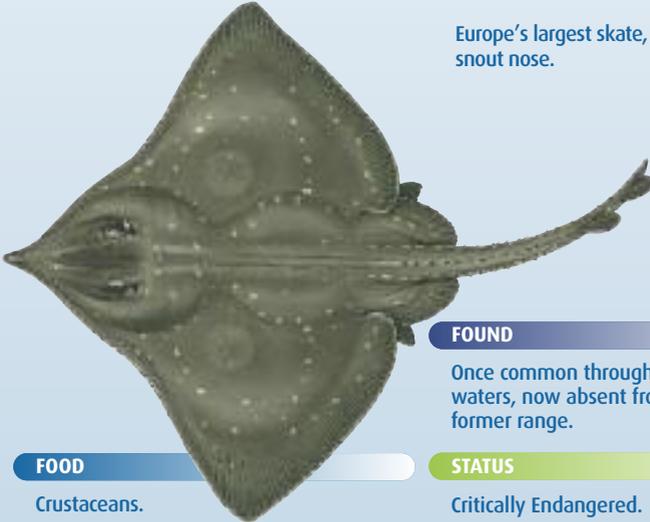
EU protections have loopholes in the face of strong demand for meat and liver oil.

### COMPLICATING FACTOR

Thought to give birth to just one pup every two to three years.

## Common skate (*Dipturus batis*)

Europe's largest skate, with a distinctive snout nose.



### FOOD

Crustaceans.

### THREATS

High capacity, unselective fisheries throughout its range.

### FOUND

Once common through European coastal waters, now absent from most of its former range.

### STATUS

Critically Endangered.

### COMPLICATING FACTOR

Although take has recently been prohibited in the EU their large size makes this species vulnerable to trawl nets as soon as it hatches from the egg case.

## Angel shark (*Squatina squatina*)



This flattened, heavenly species may well be doomed. It strongly resembles skate and rays and can bury itself in sand to hide from predators.

### FOOD

Crustaceans.

### FINS

Low value.

### STATUS

Critically Endangered throughout European waters, Vulnerable globally.

### THREATS

Incidental take in intense bottom trawl, net, and longline fisheries.

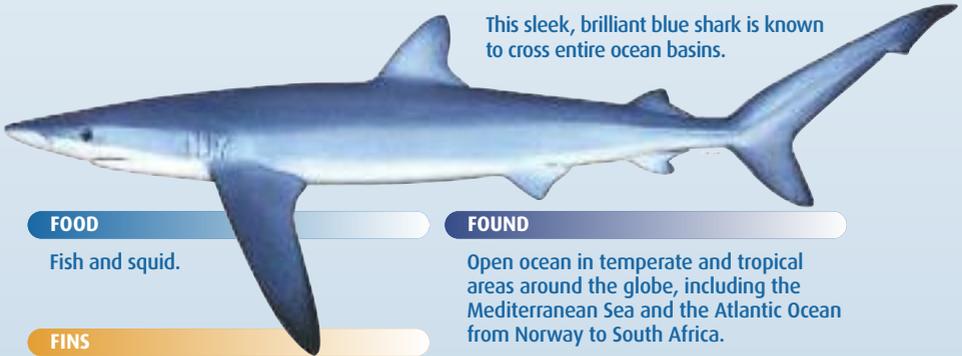
### FOUND

Once common in coastal waters of the Northeast Atlantic, the Mediterranean and the Black Sea, now rare and locally extinct in the North Sea and northern Mediterranean Sea.

### COMPLICATING FACTOR

New EU prohibitions on take don't prevent incidental take and are not strictly enforced in all Member States.

## Blue shark (*Prionace glauca*)



This sleek, brilliant blue shark is known to cross entire ocean basins.

### FOOD

Fish and squid.

### FINS

High take in fisheries mean fins dominant in trade to Asia, even if not highest value most highly sought of EU species, along with Mako.

### THREATS

Global catch increased by 50 per cent from 1990 to 2003 in the face of no European or international catch restrictions.

### FOUND

Open ocean in temperate and tropical areas around the globe, including the Mediterranean Sea and the Atlantic Ocean from Norway to South Africa.

### STATUS

Near Threatened in the Northeast Atlantic and Threatened in the Mediterranean Sea.

### COMPLICATING FACTOR

Blue sharks swim clear across the Atlantic and are increasingly a target of fisheries, particular those based in Spain. Many countries have to agree and act in concert in order to provide consistent, effective limits across this wide range.

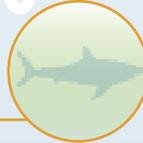
*Note: These status assessments are produced by the International Union for Conservation of Nature (IUCN) as part of its Red List of Threatened Species.*

# European sharks – Did you know?

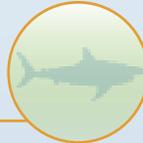
1) *European waters are also home to these wonderfully-named members of the shark family...the large-eyed rabbitfish, the velvet-bellied dogfish, the cuckoo ray, the little sleeper shark, the blue pygmy skate and finally...the guitarfish.*



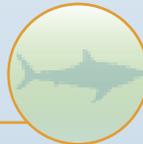
2) *Scientists estimate that some populations of the most commercially attractive shark species, including European spurdog and porbeagles, have declined by more than 90%.*



3) *Around half of the shark and ray species in European waters are considered threatened or at risk of becoming threatened under IUCN Red List criteria. These include spurdog, porbeagle, angel, hammerhead, shortfin mako and basking sharks.*



4) *Other European species that are valuable for their fins include hammerhead and basking sharks. Basking sharks are protected throughout the EU, but still taken illegally, particularly in Spain. Spain is the only EU Member State to prohibit landing of hammerheads.*



Little sleeper shark

# Facts about shark finning



Tens of millions of sharks are caught globally each year. A substantial share of that catch is taken incidentally by fishermen looking for such species as tuna, swordfish or cod. Sharks are also targeted for their meat (particularly for European markets), fins, and liver oil (prized by the pharmaceutical and cosmetics industries). Skin and teeth also have value.



## The market for shark fins

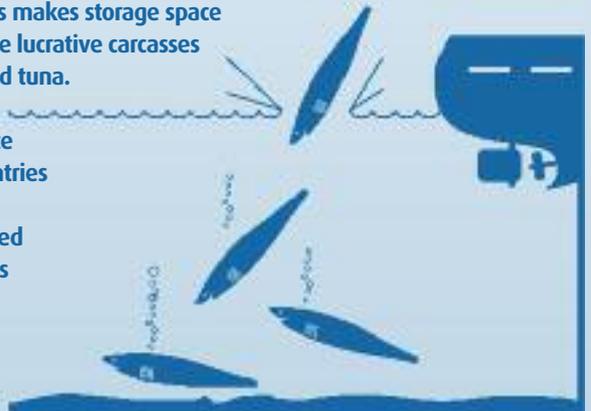
The fins are usually the most economically valuable part of the shark. These are used mainly in shark fin soup, a Chinese delicacy and status symbol. Demand for shark fins has surged in recent years, driven in large part by the increasing wealth of many Chinese. Top quality shark fins can fetch 500 Euros a kilo when dried – making them some of the most expensive fishery products in the world.



## What is shark finning?

Because fins are generally worth much more than meat, some fishermen have taken to the practice of shark finning, where they slice off the fins and discard the carcass at sea. This makes storage space on the boat available for more lucrative carcasses such as those of swordfish and tuna.

Outcry at this wasteful practice has led to bans by many countries and most international fisheries bodies. The EU banned finning in 2003, but loopholes mean fishermen can get round the prohibition.



# Why is the EU finning ban not working?

Most scientists agree that the simplest, most effective way to implement a finning ban is to require that sharks are landed whole with their fins still attached, to be processed on shore. Indeed, this practice is already in use in many countries around the world.

**There are three main weaknesses in the EU finning regulation.**



## 1) Special permits to remove fins at sea

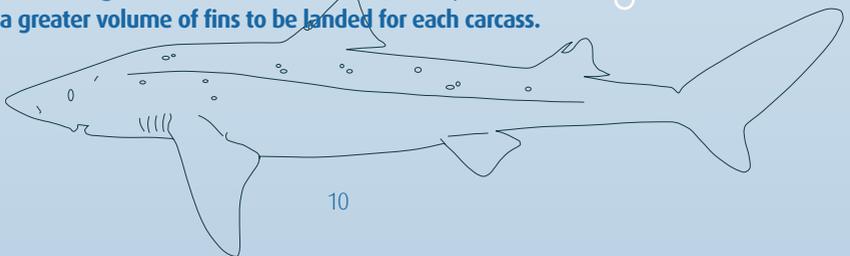
EU shark fishermen, particularly those from Spain, argue that they need to store shark fins separately from carcasses. So, in order to grant fishermen this flexibility, the regulation allows EU Member States to grant fishermen special permits to remove shark fins at sea.

Many countries have adopted a ratio system to check whether the weight of fins corresponds to the weight of shark carcasses on board (to ensure finning is not taking place). This ratio is based on a calculation of the weight of a shark's fins as a proportion of its carcass.



## 2) The lenient 5% rule

Most countries relying on ratios use the figure of 5%, but specify that this must be 5% of the 'dressed' shark (i.e. once the fish is gutted and beheaded). The EU also specifies a 5% ratio, but relates this to the 'whole' weight of the shark. This deviation complicates ratio enforcement (because sharks are no longer whole at time of measurement) and allows a greater volume of fins to be landed for each carcass.





## Dressed versus whole weight Explained

Let's assume a shark weighs 100kg when caught.  
(Illustration 1; 'Whole Shark = 100kg')

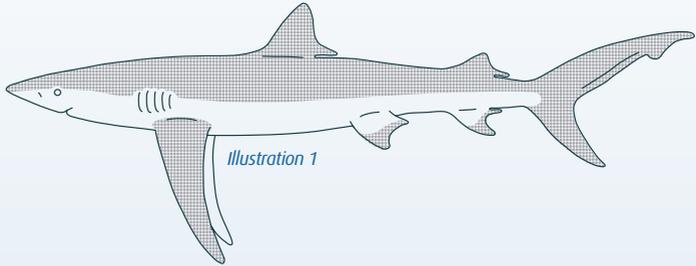


Illustration 1

Once 'dressed', it would weigh 40kg. Under US Pacific or Canadian regulations, this means that fins up to a weight of 2kg (5% of 40kg) can be landed for this carcass. (Illustration 2; 'Dressed Shark (gutted and beheaded) = 40kg, plus 2kg of fins).

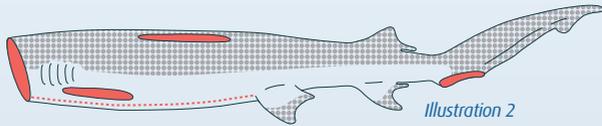
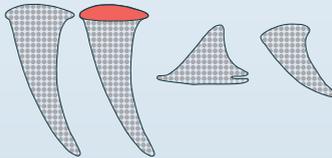
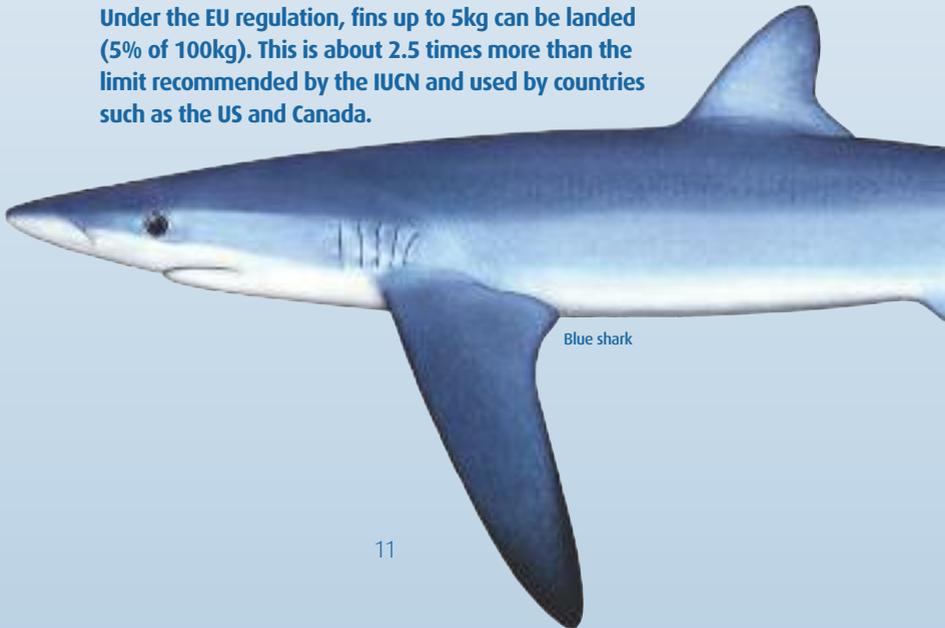


Illustration 2

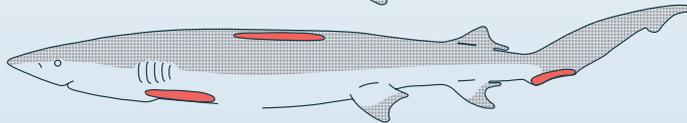
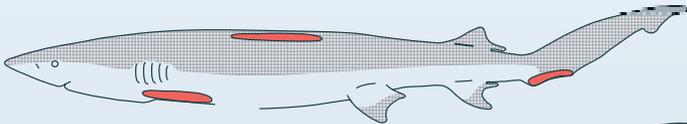
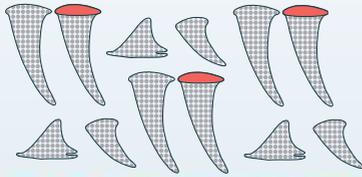
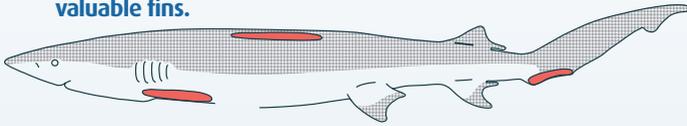


Under the EU regulation, fins up to 5kg can be landed (5% of 100kg). This is about 2.5 times more than the limit recommended by the IUCN and used by countries such as the US and Canada.



Blue shark

The end result of this higher EU fin ratio is that it is possible for fishermen here to fin and discard two out of every three sharks they catch without exceeding the ratio limit, by just cutting off the sharks' most valuable fins.



Currently, only Spain and Portugal now grant fin removal permits to their vessels. Recently, Germany and the UK have stopped issuing these permits while Cyprus has expressed interest in starting to grant them. Spain issues the most permits, enough to allow nearly two-thirds of its longline fleet to avoid the EU finning regulation. Spain remains among the largest exporters of shark fins to Asia, and has opposed attempts to tighten the finning regulation.



### 3) Separate landings

There is one further weakness in the current legislation; European boats with special fishing permits are allowed to land fins and carcasses separately in different ports. The combination of all these factors means that proper enforcement of the current EU finning ban is practically impossible.

# How to close the loopholes

The European Commission is looking at different ways of tightening the finning ban. One option is to reduce the maximum fin-to-carcass weight ratio from 5% of whole weight to 5% of dressed weight, as MEPs called for in their September 2006 Resolution.

Increasingly, however, scientists, conservationists and regulators are agreeing that prohibiting the removal of shark fins at sea altogether is by far the best method of enforcing finning bans.

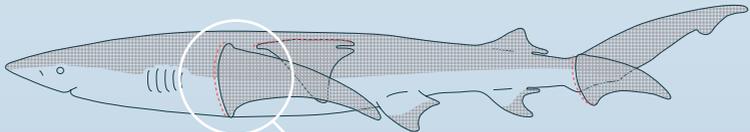


## Costa Rica – An example of best practice

There is a simple solution to the storage problem, which is already in use elsewhere in the world. This has become known as the “fins naturally attached method”.

Costa Rica was one of the first countries to ban shark finning. Costa Rican freezer longliners catch sharks in much the same way as Spanish and Portuguese freezer vessels. As in the EU, shark fins and carcasses from Costa Rican fisheries are sold to different markets: the meat ends up in local outlets while the fins are sent to Asia.

To overcome the storage issue, Costa Rican fishermen developed a method for partially cutting sharks’ fins (about three-quarters of the way through) and laying them flat along the carcass. This technique allows the fishermen to process and freeze sharks on-board without cutting the fins off.



# Shark finning – Did you know?

1) *Shark fin soup is a Chinese status symbol. Best quality fins can sell for 500 Euros a kilo.*



2) *Spain is among the world's largest exporters of shark fins to Asia.*



3) *The EU currently permits a 5% fin to whole carcass weight ratio, approximately double the IUCN standard of a 5% fin to dressed weight ratio. This means that it is possible for EU permitted fishermen to fin two out of every three sharks without detection.*



4) *The 'fins naturally attached' method is now used in several Central American countries, as well as some fisheries in Australia, the United States, and South Africa.*



Smooth hammerhead

# The campaign for change



## Public support

In February of this year, Shark Alliance representatives delivered a petition to Spanish authorities signed by more than 90,000 people urging Spain to end its opposition to strengthening the EU ban on shark finning and instead lead the EU towards a more effective finning regulation.



## Policy Action

European fishery managers are in the process of strengthening the EU finning regulation, as pledged in the 2009 Community Plan of Action for Sharks.

Over the next year, we urge you to watch out for and respond to the following steps toward amending the EU finning regulation:

- 1) An upcoming initiative in support of strengthening the EU regulation banning shark finning
- 2) The European Commission's options document for the public consultation process, expected to begin in late summer and run for at least eight weeks; and
- 3) The Commission's final proposal for regulation revisions, expected to be delivered to the European Parliament for review in early 2011

As MEPs,  
your role  
in closing loopholes  
in the finning  
regulation  
is vital.



Indeed, the future  
of these  
valuable yet  
vulnerable species  
depends on it.



# SHARK ALLIANCE



[www.sharkalliance.org](http://www.sharkalliance.org)

The Shark Alliance is a global, not-for-profit coalition of non-governmental organizations dedicated to restoring and conserving shark populations by improving shark conservation policies.

The Shark Alliance is focused on securing the following:



Shark fishing limits in line with scientific advice and the precautionary approach, including stronger policies to prevent shark finning;

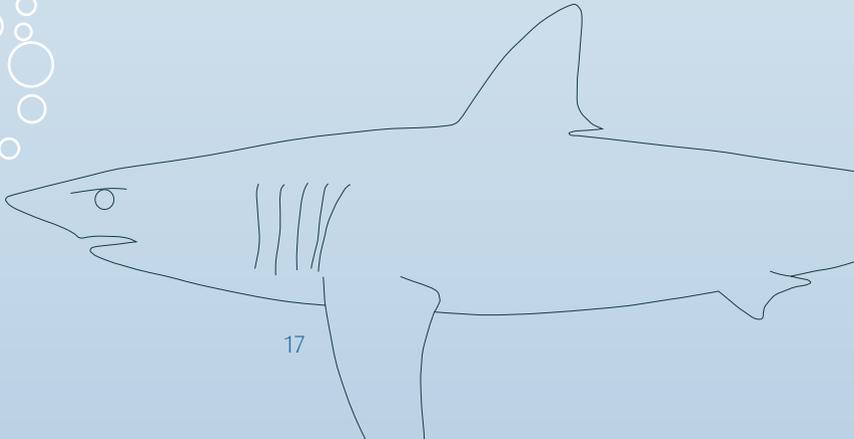


Safeguards and conservation guidance for sharks through the Convention on International Trade in Endangered Species (CITES);

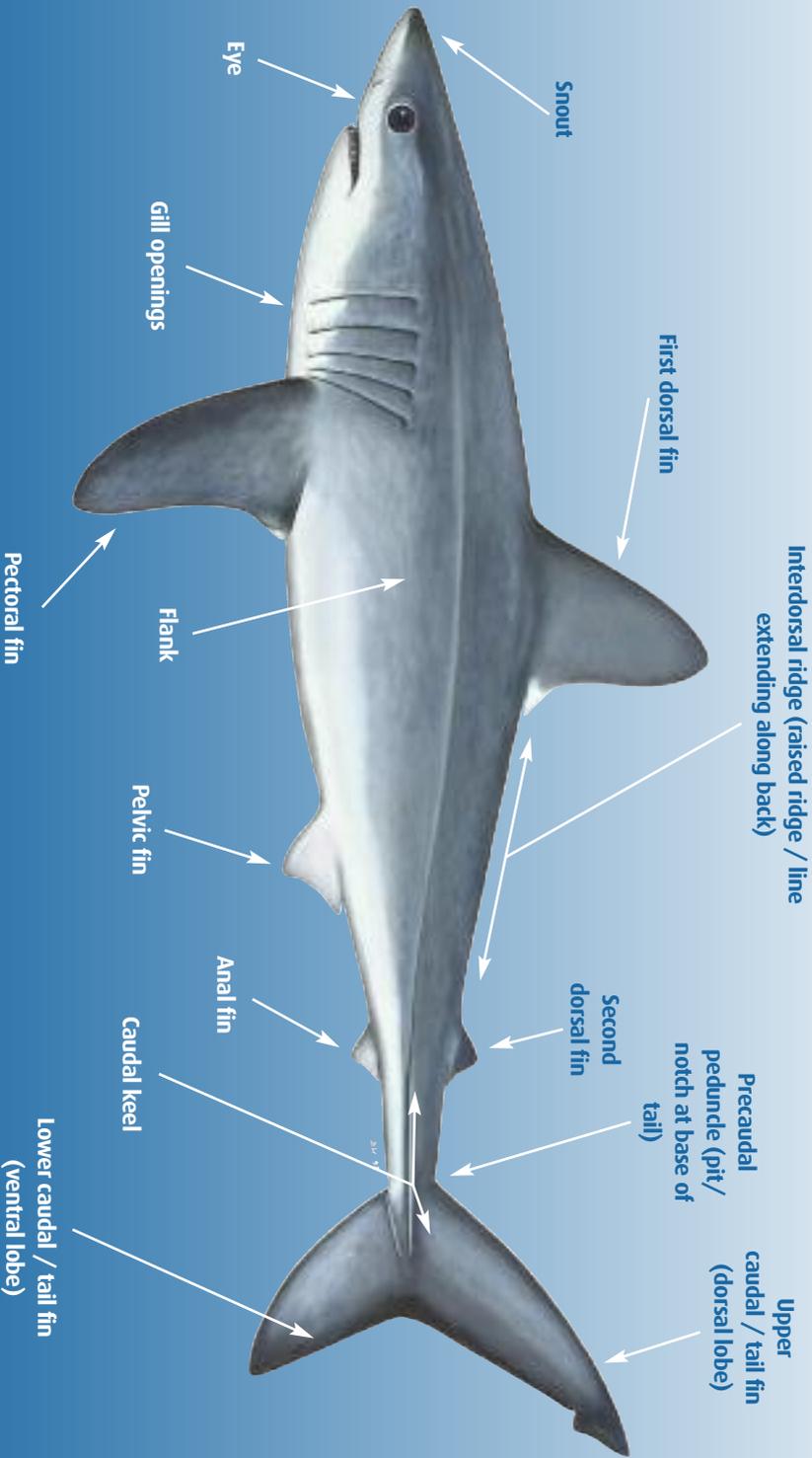


A United Nations Resolution that includes ambitious timelines for implementation of the International Plan of Action for Sharks and lays out consequences for inaction.

To discover more about the Alliance visit:  
[www.sharkalliance.org](http://www.sharkalliance.org)



Anatomy of a shark



# The shark trivia quiz



**Q1:** Which handy sounding species doesn't really exist?  
(A) sawfish (B) hammerhead shark (C) screwdriver skate (D) shovelnose ray



**Q2:** The deepest dwelling shark is thought to be the?  
(A) Chilean catshark (B) Portuguese dogfish (C) Chinese lanternshark  
(D) Canadian clubshark



**Q3:** Sharks are fished for food and fun in which European Sea(s)?  
(A) The Baltic Sea (B) The Mediterranean Sea (C) The Black Sea (D) All of the above



**Q4:** Which species might be missing from an underwater safari?  
(A) giraffe shark (B) tiger shark (C) leopard shark (D) zebra shark



**Q5:** Which of the following names is NOT used to describe a shark-like ray species whose fins are prized for shark fin soup?  
(A) banjo shark (B) guitarfish (C) fiddlefish (D) cello ray



**Q6:** Female spiny dogfish sharks do which of the following?  
(A) nurse their young for six months (B) sustain labor for three weeks (C) stay pregnant for two years (D) kill their partners immediately after mating



**Q7:** Which once common species is at serious risk of extinction?  
(A) common skate (B) common sawfish (C) common guitarfish (D) all of the above



**Q8:** Which of the following does not describe a group of "chimaeras", close relatives of sharks?  
(A) rabbitfish (B) elephantfish (C) ratfish (D) gerbilfish



**Q9:** Which Arctic shark species, known to eat seals, has been fished for its huge liver, its potentially poisonous meat, and for sport?  
(A) The Greenland shark (B) The Norwegian shark (C) The Finlandia shark (D) The Iceland Shark



**Q10:** Which EU Member State has been the driving force behind attempts to list spiny dogfish and porbeagle sharks under the Convention on International Trade in Endangered Species (CITES)?  
(A) Spain (B) Germany (C) UK (D) Greece

# Trivia quiz answers



**Q1: C.** There is yet to be a skate named after a screwdriver. Conservation tools are failing all the world's sawfish, most shovelnose rays, and at least two species of hammerhead sharks. All are considered by the IUCN to be threatened with extinction.



**Q2: B.** The Portuguese dogfish has been reported at depths of up to 3700 meters. This chocolate brown species has been heavily fished for its liver oil and meat off Europe. Limits on fisheries came only after this exceptionally slow-growing shark was deemed Endangered by the IUCN.



**Q3: D.** Sharks live and are fished in all these places. Although depleted, spiny dogfish (or spurdog) still support some commercial and recreational fishing in the Baltic and Black Seas. The Mediterranean shark diversity is much wider, but many species have suffered steep declines and still enjoy few protections. Conservationists call the Mediterranean the world's most dangerous place to be if you're a shark.



**Q4: A.** There is no such thing as a giraffe shark, but why not stick your neck out for conservation of the other three? Tiger, leopard and zebra sharks are all used by humans for meat, fins, and sport; too often, catch restrictions are lacking.



**Q5: D.** Guitarfish, fiddlefish and banjo sharks are all names for shark-like rays of the Family Rhinobatidae. Mediterranean guitarfish are at serious risk from overexploitation.



**Q6: C.** Spiny dogfish (or spurdog) are currently tied with the African elephant for the longest gestation period for any animal on earth. This slow growth and few offspring make spiny dogfish exceptionally vulnerable to overfishing. Fisheries targeting pregnant females off Europe have seriously damaged the population.



**Q7: D.** All three once common species are classified by the IUCN as Threatened with extinction. Off Europe, some populations of "common" skate have already been wiped out by unselective bottom fishing while the "common" sawfish is assumed to be regionally extinct.



**Q8: D.** There are no gerbilfish. Rabbitfish, elephantfish and ratfish are all types of chimaeras, close relatives of the sharks also characterized by cartilaginous skeletons and vulnerability to overfishing. Increases in chimaera fishing have recently been noted in Denmark and France.

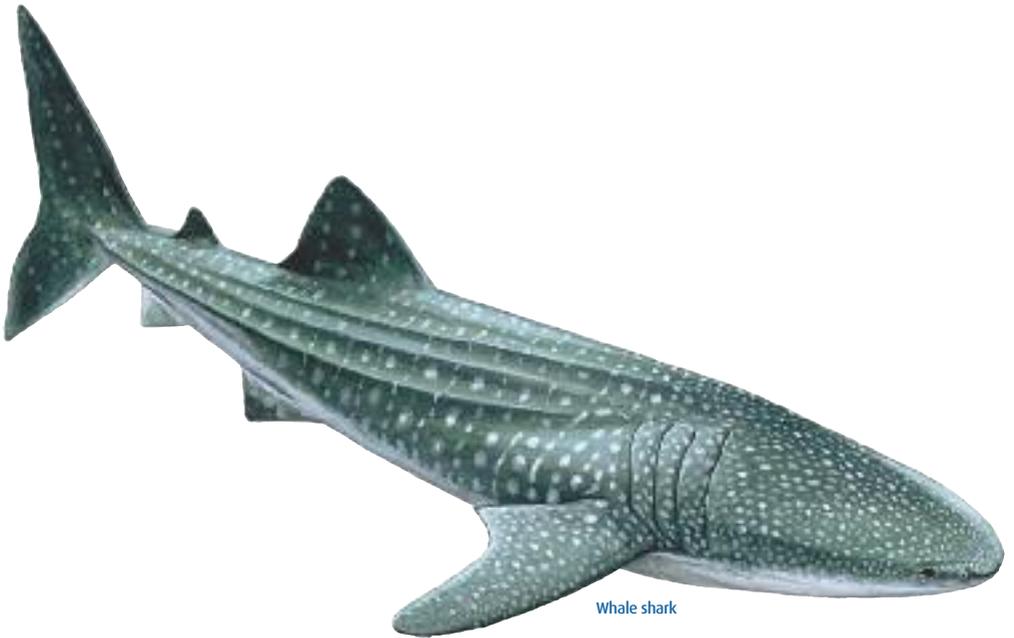


**Q9: A.** The livers of Greenland sharks have been the driving force for Norwegian takes of the species while Icelanders bury and rot the meat to prepare a traditional dish. In recent years, Greenland sharks have been the subject of recreational fishing trips promoted to tourists as extreme sport.

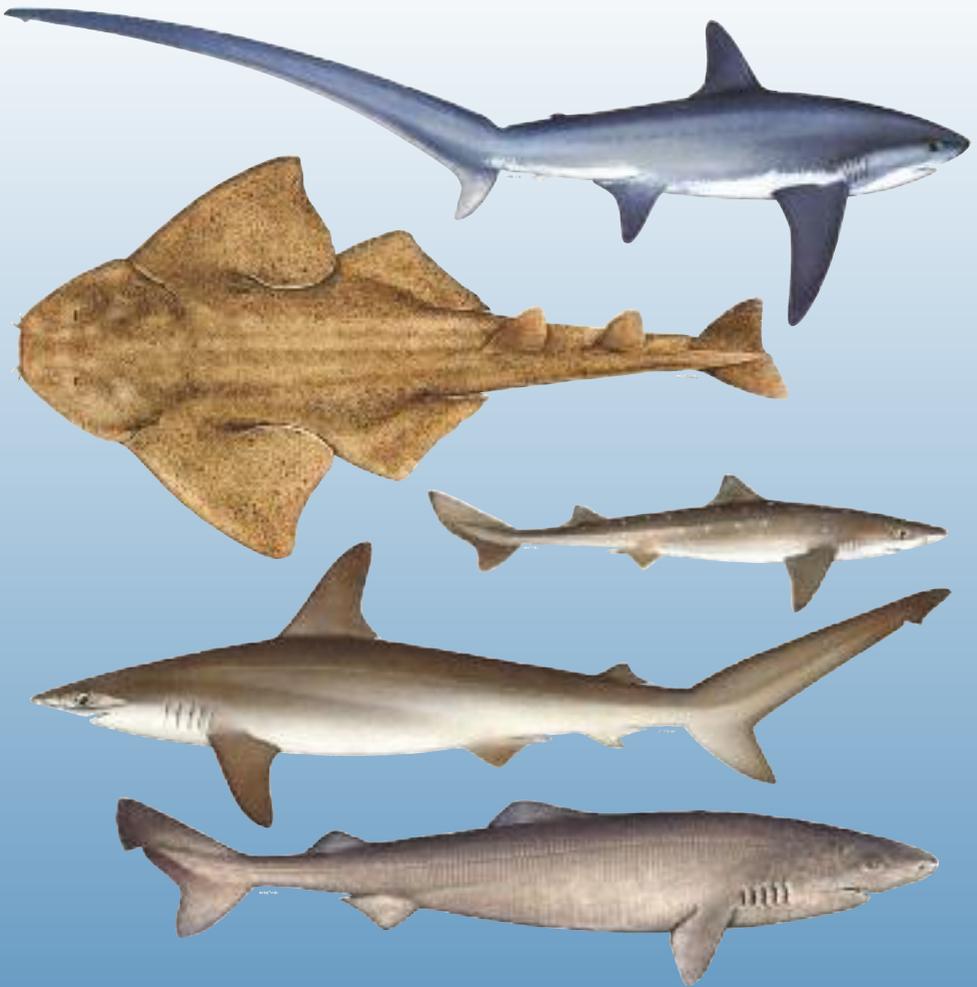


**Q10: B.** Germany has championed spiny dogfish and porbeagle protections at the last two Conferences of the CITES Parties in 2007 and 2010 (although the proposals were defeated). Spain led the EU delegation to the 2010 meeting while the UK successfully proposed CITES listing for the basking shark at the 2002 meeting.

# We hope you enjoyed The European Shark Guide



Whale shark



**The Shark Alliance is a global, not-for-profit coalition of non-governmental organizations dedicated to restoring and conserving shark populations by improving shark conservation policies.**

**c/o The Pew Charitable Trusts  
Square du Bastion 1A, 1050 Brussels, Belgium  
Tel: +32 (0)2 274 16 20 info@sharkalliance.org**