



Over Fishing

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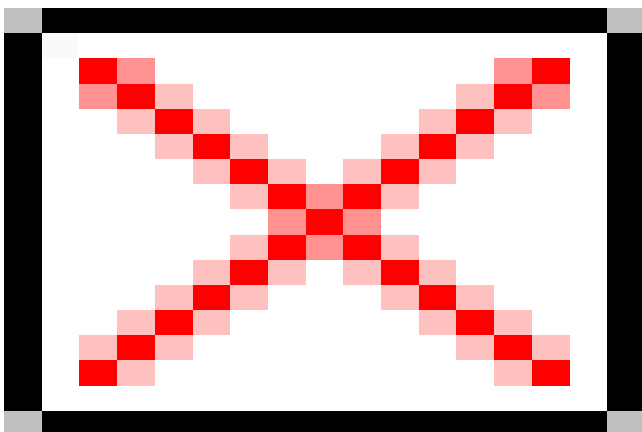
It has been estimated by the United Nations Food and Agriculture Organisation that over 70% of the world's fish stocks are either fully exploited or depleted. Most of the problems associated with overfishing have been caused in the last 50 years by the growing human population demanding food and rapid advances in fishing technology. There used to be hundreds of trawlers and fishing boats based at ports like Peterhead, Grimsby and Great Yarmouth, but these have now been replaced by huge factory ships which are able to stay out at sea for weeks at a time. These factory boats have all the equipment necessary either to freeze or tin fish caught by their hunting ships, so that they need to return to base only when their holds are full.

With the introduction of the new factory boats, there was a 7% growth in catches every year during the 1950's and 60's, but since then there has been little increase in catch size and many of the world's most important fisheries have closed down, with many more suffering so badly from overfishing that they are unlikely to recover.

As catches have gradually become smaller, so the mesh sizes used in fishing nets have decreased, allowing smaller and smaller fish to be caught. Many of these are too small to be used as food, so they are crushed to be made into either animal food or fertiliser.

Fishing using nets is indiscriminate. Any fish which get in the way of the net will be caught in it if they are too big to get through the mesh. For every one tonnes of prawns caught, three tonnes of other fish are killed and thrown away. 20,000 porpoises die each year in the nets of salmon fishermen in the Atlantic and Pacific Oceans and hundreds of thousands of marine creatures are killed each year by tuna fishermen.

How Commercial Fishing Works



Some sea fish live in the upper parts of the water. They are called 'pelagic' fish, and are caught by drift netting. This is where a net suspended from floats is stretched between two boats so that fish swim into it. Fish are unable to swim backwards, so once they are caught in the net, there is no escape unless they are small enough to fit through the net's mesh.

Fish which live lower down ? mid-water and bottom-feeders ? are caught by trawling, which involves dragging a large net through the water, catching whatever happens to be in the way. The size of the net holes is again very important, and it is vital for the conservation of fish stocks that nets with a very small mesh are banned, as these catch young fish before they have even had a chance to breed.

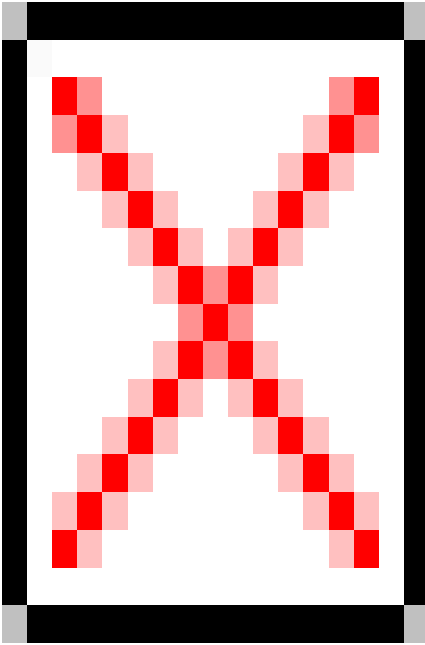
The ?Cod War? and Other Overfishing Incidents

In the 1970s a serious dispute broke out between British and Icelandic fishermen over the Icelandic cod fisheries. British trawlers continued to fish for cod despite a ban on fishing put into place by the Icelandic government, and there were confrontations between British and Icelandic trawlers, which became known as the ?Cod War?.

There is now a 100-mile exclusion zone around Iceland, in which foreign boats are not allowed to fish, so Icelandic cod stocks are starting to improve, though it is unlikely that they will ever recover fully. Most cod on sale in Britain is sourced from Iceland and the Barents Sea.

In 2007, stocks of North Sea cod reached a historic low of 37,400 tonnes. Major conservation efforts including cuts in landing quotas have resulted in a 52% recovery in 2010 with an estimated stock of 54,200 tonnes. However, this figure is still well below previous figures - 250,000 tonnes in the 1970s, for example. Stocks caught by English and Welsh boats are said to have declined by as much as 86% since 100 years ago. The North Sea cod are still recovering and its too early to say they are sustainably sourced and okay to start eating again. The International Council for Exploration of the Sea estimates between 70,000 - 150,000 tonnes are necessary for a full recovery. Newfoundland cod has still not recovered from a collapse in stocks 20 years ago.

Tuna Fishing



Tuna are very large fish that can grow up to half a ton or more and swim at fast speeds of 50mph. They are big sturdy creatures with plenty of meat on them which is sadly the reason for their decline.

World catches of tuna have doubled in the last decade. Skipjack tuna is the most commonly used tuna in tins which is currently not at risk, although yellowfin and albacore tuna are also used. At particular risk is the bluefin tuna, a slow breeder, where stocks have declined by 85% since industrialised fishing methods began in about 1970. There are two types, the Atlantic/northern and the southern bluefin which is ranked on the [IUCN Red List](#)

as critically endangered. It is considered a delicacy in Japan and China where it is considered the best fish for sushi and is exported to many other parts of the world. The catch quota set by ICCAT (International Commission for Conservation of Atlantic Tuna) is set at the already high level of 12,900 tons overall, but this generous figure is still exceeded with the actual amount being caught at an estimated 60,000 tons each year. The World Wildlife Fund (WWF) had called for a quota of 6,000 tons.

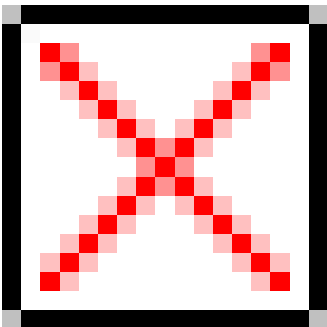
The fishing season for Atlantic bluefin tuna is May and June when they swim to the Mediterranean sea to spawn. Quotas are often ignored and the true catch not reported. In 2010 the European Commission (EC) closed the fishing season one week early in order to preserve remaining stocks. Blue Eye tuna the next best alternative to bluefin tuna are also noted as a vulnerable species.

On March 18th 2010 at the Convention on International Trade in Endangered Species (CITES), governments (namely Japan, Canada and many poorer nations) rejected trade bans for bluefin tuna. Nations with active tuna fleets such as Italy, France and Spain were also not in favour of an outright, immediate ban. Perhaps the main incentive for continuing this trade is financial. Japan consumes 1/4 of the world's tuna and one bluefin tuna was sold there in 2012 for a whopping £472,125.

In January 2012 the National Oceanic and Atmospheric Administration (NOAA) in America ruled that bluefin

tuna would not be protected under the Endangered Species Act, but that they do consider the species 'a concern'. Fishermen were relieved as there are some 5,000 commercial and 15,000 recreational bluefin fishermen from Maine to Texas. Although good news for the livelihoods of many fishermen this is bad news for the fish and isn't a sustainable practice. But others are hopeful that this new ruling will kick others, such as ICCAT, into action and spur new and tighter regulations on bluefin tuna fishing.

Dolphin Safe



Tuna fishing received much publicity in the 1990s when a boycott led to changes in fishing practices to avoid catching dolphins which often swim alongside yellowfin tuna. They did this by fitting special hatches in the nets from which dolphins could escape.

To combat the sale of tuna likely to involve dolphin catching you can look out for the 'dolphin safe' logo on tins of tuna at the supermarket. But be wary - this doesn't guarantee sustainable fishing practices are in use. For more information see this report by Sea Forever -

[Dolphin-friendly tuna ? is it a meaningless label?](#)

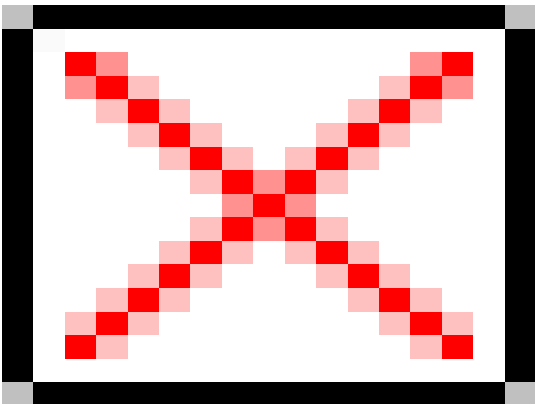
Skipjack tuna are more likely to be dolphin safe because they do not associate with dolphins. However the dolphin safe label does not guarantee the safety of other marine creatures such as sharks, rays and turtles. Between 60 - 70% of tuna are caught using the purse seine method. Usually they are lured by fish aggregation devices (FADS), floating devices which the tuna congregate under and the net is pulled up around them like a large drawstring bag. In fact 10% of the catch using this method are unwanted bycatch, amounting to 100,000 tonnes annually. Some of the bycatch is made up of sharks, many of which are threatened species. Their fins are cut off to sell to make a Chinese delicacy - shark fin soup. Without the FADS, this method can be specifically targeted to a school of one adult species and avoids much of the bycatch.

Longline fishing is a method used to catch more expensive kinds of tuna. This method involves putting out

ishing lines up to 100km long from which there are as many as one thousand shorter lines attached with baited hooks. This still indiscriminately kills untargetted marine life such as turtles (of which 6 out of 7 species are considered threatened) which are tempted by the jelly fish appearance of the bait. Abatrosses and other seabirds can also get caught on the hooks. An estimated 500,000 - 1.4 million sharks are killed every year this way.

The pole and line method and 'trolling' (where baited lines are dragged through the water behind a boat) are considered as the most sensible methods of fishing as it targets the adult fish, bycatch is much reduced and unwanted catches can be returned to the sea, alive. This is often the chosen method of smaller fisheries.

Shark and Chips. Are endangered sharks being sold in a fish and chip shop near you?



Did you know that people eat sharks in the UK? Probably not because they're not called sharks on the menu at the fish and chip shop. Every year tens of millions of sharks around the world are caught for our dinner plates in the United Kingdom, Europe, United States and beyond. But what are these mysterious creatures?

The sharks we refer to are known as spiny or piked dogfish, but menus call them 'rock salmon' 'rock' 'spurdog' or 'huss' because it sounds tastier! Millions of them are caught every year and this has given them a place on the IUCN's Red List of Endangered Species - and no animal wants to be on that! Spiny dogfish can grow up to 1.3 metres long and live in shallow waters across the world. They are slow growers and take about 10 years to mature into adults and live for 40, sometimes 70 years! Because they grow slowly and babies remain in the womb for 2 years it takes a long time for them to re-populate and their numbers are falling drastically.

Another concern for sharks worldwide is the demand for shark fin soup, which is a delicacy brought to many countries, including the UK, from China where it is a soup for special occasions. To make this special soup the s

Sharks are caught, their fins are cut off and then the rest of the body is thrown back into the sea to drown and suffocate. This cruel practice has been going on for years and has risen alongside the rise of industrial fishing practices in the last 60 years. Altogether it is estimated that 73 million sharks are caught every year, most for the shark fin trade, and now 30% of shark and ray species are declared threatened or near-threatened with extinction.

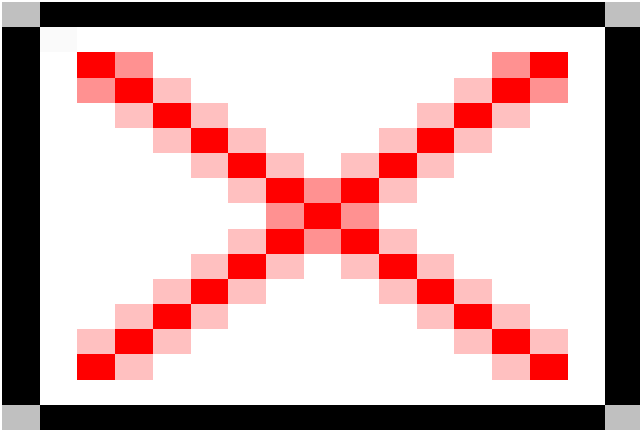
What can you do to help? You can avoid eating rock salmon or shark fin soup in restaurants, cafes and fish and chip shops. As a class at school you could write to your local Chinese restaurant and, if they sell shark fin soup, ask them to take it off the menu.

For more information see the [Stop Shark Finning](#) website.

More Examples of Overfishing

It used to be a matter of luck whether fishermen would catch any fish at all, as fish are difficult to find, but now modern radar technology has allowed them to be located much more precisely than was possible before.

In Peru, a small fish called the anchoveta was caught in huge numbers to be made into fish meal for animals. In 1970, more than 69,000 tonnes were caught, making it the biggest fishery in the world. One thousand five hundred boats were catching 100,000 tonnes of anchoveta every day. By 1972, the daily yield had risen to 180,000 tonnes! The fishermen ignored warnings from the United Nations Food and Agriculture Organisation that their catches were too big, and when a natural upwelling of warm water entered the normally cool, nutrient-rich waters the anchoveta inhabited, this, combined with a lack of breeding stock in the population was enough to cause the total collapse of the anchoveta fishing industry.



On the Dagger Bank, off the east coast of England near Great Yarmouth, overfishing caused the annual catch of herring to fall 30-fold in just 15 years. By 1966, only 10,000 tonnes of the fish were caught in the whole year. Further north, a ban was placed on herring fishing, and in 1977, a total ban was placed on herring fishing, throughout the North Sea. The ban lasted for six years.

These are just a few examples of how overfishing can seriously affect not only the fish stocks, but also the livelihoods of many people who depend on fishing as a job. There is a delicate balance to be struck between catching large numbers of fish so as to make more money and ensuring that there are enough fish left alive to be able to replenish stocks for future years. The temptation is to make as much money as possible, but this has to be weighed against the economic hardship that whole communities have suffered as a result of overexploiting their own fisheries, not to mention the grave consequences of overfishing for fish populations. See our

[Biodiversity](#)

factsheet to find out about how everything is connected in nature.

The Effects of Overfishing on Other Wildlife



The overfishing of a particular species does not just damage the population of that fish alone. It can have serious effects further up the food chain. Herring is a vital prey species for the cod. Therefore, when herring are overfished the cod population suffers as well. The sandeel is the main food for seabirds such as the puffin. Sandeels have been fished around the Shetland Islands since the mid-1970s, though catches were declining throughout the 1980s. At the same time, the colonies of seabirds nesting around Shetland declined, with some even falling to breed for several years.

In the Antarctic, fishing for krill is threatening to disrupt the delicate balance of nature in these waters. Krill are small, red shrimps, about 6cm long, found in huge numbers in areas of plant plankton, and they make up a

significant part of the animal plankton. Krill occur in huge swarms many kilometres across, and it has estimated that there could be up to 650 million tonnes of them in the Antarctic Ocean.

Since the early 1980s, six countries, including Japan and the former USSR have been harvesting krill, which is the main food for the great whales, and which also supplements the diets of seals, penguins, squid and fish. We have no idea what effects this will have on the populations of animals which feed on krill. The natural balance in the Antarctic has already been upset by the over exploitation of the great whales, and heavy fishing of krill may well worsen the situation.

What can be done?



Properly maintained fisheries could and should be a renewable and possibly even endless supply of protein. At present, short-term economic pressures are preventing sensible long-term planning for a sustainable yield (only taking out as many fish as can be replaced by reproduction the following year.)



Quotas should be set on catches, based on scientific estimates for the size of the fish stock. Correct mesh size should be used in all nets to ensure that fish of the right age are caught, and to prevent as much as possible accidental catches of other fish. International agreements limiting catches are necessary to safeguard fish stocks for the use not only of humans but for marine animals as well. With these measures in place, fishing could continue without damaging stocks, and we could employ the world's richest source of protein to everyone's advantage.



Tins of tuna should not only be marked as dolphin friendly, but wider considerations should be taken into account such as the method of fishing, the use of FADS and overfishing. There should be independent observers on board the ships all the time to check that they are sticking to the rules!



Marine reserves which currently cover only 1% of the world's oceans should be expanded to cover, some argue, up to 40%.

What you can do:



You can join the River Cottage team in their fight against over fishing by signing up to their campaign -

www.fishfight.net/



Check the Marine Stewardship Council's

[website](#)

to see which fish are sustainably caught and look for their stamp of approval when buying packets of fish, or you can search particular fish

[here](#)



The USA is the world's biggest consumer of tinned tuna followed by the UK (consuming 700 million tins in 2006). If you buy tuna, choose the most reputable brand. Sainsbury's followed by CO-OP tuna were ranked by Greenpeace as the most responsible in where they source their tuna from. See how they ranked the tins

[:](#)

www.greenpeace.org.uk/oceans/time-and-tuna-are-running-out



Look for dolphin

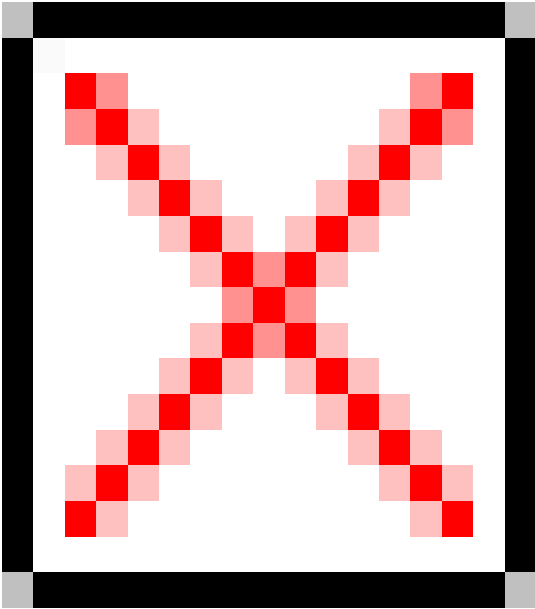
safe

tinned tuna rather than only dolphin friendly. The dolphin safe label awarded by the Earth Island Institute has the strictest monitoring system of fishing methods with an independent observer on board vessels over 400 gross tons. Dolphins must not be chased or harmed in any way, intentionally or otherwise.



[Operation Blue Rage](#)

- Bluefin Tuna Defense Campaign by Sea Shepherd



For more information see:

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[Greenpeace report ?Tinned Tuna?s Hidden Catch?](#)

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[The Shark Trust](#)

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[Save the Bluefin Tuna](#)

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[Saving sharks and tuna](#)
- National Geographic

Related factsheets -

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