

Student Information Sheet 9

Commercial Shark Fishing

Introduction

Sharks have been fished for thousands of years. In primitive societies, they were caught with wooden or bone hooks for their meat and livers. Their teeth could be used as weapons or tools. Over time, uses have been found for most parts of a shark's body. The skin can be used for leather for shoes or belts, jaws are taken as souvenirs, the flesh is eaten, the carcass can be used for fertilizers, the fins in soup and liver oil is a rich source of Vitamin A and has been used in medicines and cosmetics.

Why is there concern over fishing for sharks?

Sharks are often difficult to identify and so catches recorded by fishers in logbooks do not tell you what species it is. There has often been no recording of **bycatch** that is thrown away. The lack of information makes management of shark fisheries more difficult.

Most sharks and rays grow and reproduce slowly and are late to **mature** compared to bony fishes. This means that shark populations are at risk because of fishing and are slow to recover if over-fished. Sharks need careful management if shark fisheries are to be sustainable. Many shark fisheries throughout the world have brought about rapid stock decrease and collapse.

What fishing methods are used to catch sharks?

Gillnets



Shark gillnet vessel returning to port in southern Australia (© Albert Caton)

This is the most common fishing gear in shark fisheries. They are suspended vertically in the water near the surface or near the sea floor.



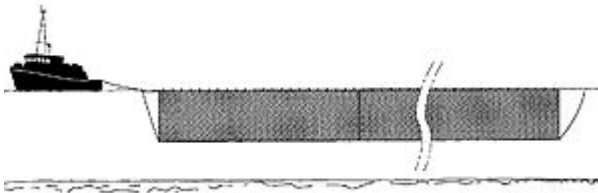
Shark gillnet vessel (© Albert Caton)

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The size of the holes in the nets depends on the **species** being fished. The nets are usually several hundred metres in length. They are left in the water for 2–6 hours and are then hauled in.



School shark-a species targeted by the Australian Southern Shark Fishery
(© Ken Hoppen)



Shark gillnet vessel with net deployed
(© Bureau of Rural Sciences, Australian Fisheries Resources, 1993)

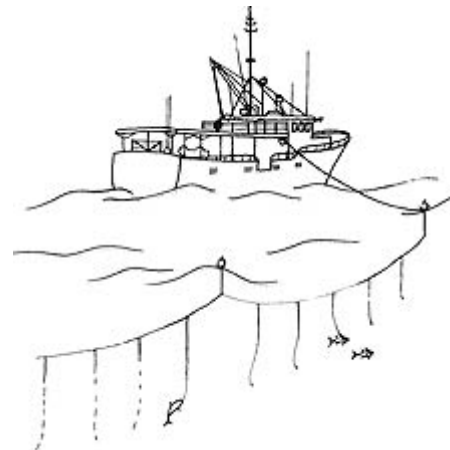


Shark gillnet vessel-storing the catch
(© Terry Walker)

Longlines

These are one line that can be several kilometres long. Baits are attached to the line at regular intervals as it is being set from a moving boat. Longlines can be set at various depths in the water.

Shark fishers generally set their lines on the sea floor with anchors to keep the line in place. Tuna fishers set their lines above the seafloor and although they do not target sharks they catch a lot as bycatch.



Pelagic longline vessel with line deployed
(© Bureau of Rural Sciences, Australian Fisheries Resources, 1993)

Trawling

Trawlers tow a net along the seabed. Trawlers usually target fish and prawns rather than sharks; however, they can be caught in high numbers as bycatch. Bycatch has been reduced by using special equipment that allows large animals to escape from the net.

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World catches increasing

Commercial shark fishing increased greatly in the 1930s and 1940s, but the status of shark populations did not get much attention until the late 1980s and 1990s. Global catches of sharks and rays increased from about 272 000 tonnes in 1950 to 828 000 tonnes in 2000. In 1997 India was the world leader in shark and ray fishing followed by Indonesia, Pakistan, USA, Taiwan, Mexico and Japan. Many of these countries have little or no management in place for their shark resources and almost nothing is known about the status of the fishery stocks.

Fishing for sharks increased greatly in the 1990s because of the high value of the fins used in shark-fin soup in Asian restaurants. Dried shark fin can cost several hundred dollars per kilogram. The high level of catches has raised international concern over the sustainability of shark fisheries.

Shark fishing in Australia

Fishing for sharks has a long history in Australia. Reports of the activities of the first white settlers, who arrived in Australia in 1788, show they supplemented their food resources by fishing. Sharks were caught and eaten, oil extracted from livers for uses such as lighting.

Southern shark fisheries

In 1927 a school shark fishery began in southern Australia. This has grown into Australia's major shark fishery—the Southern Shark Fishery. In 1972 the discovery of high levels of mercury (a poisonous metal) in sharks led to a ban on the sale of large school sharks in Victoria. Over the years 1970–2000, school and gummy shark provided nearly all the catch from the Southern Shark Fishery. The rest was sawshark, elephant fish and other species. The total catch was highest in 1987 at 4 228 tonnes.

Since then it has been decreasing with 2333 tonnes in 2001. School shark has been assessed as overfished for a number of years and management of the fishery has focused on reducing their catch. The main sharks targeted in other southern shark fisheries are whiskery shark, dusky shark and gummy shark.

Dusky and whiskery sharks are assessed as overfished. Other species caught in these fisheries are sandbar sharks, hammerhead sharks, wobbegongs and school sharks. Managers of these fisheries have also introduced restrictions to reduce catches of overfished species.



Longline vessel fishing out of Mooloolooba setting the gear (© Peter Ward)



School shark and gummy shark aboard vessel in Bass Strait (© Russell Reichelt)

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Northern shark fisheries

Sharks were fished commercially off northern Australia between 1974 and 1986 by vessels from Taiwan, their highest catch being about 10 000 tonnes in 1977. Australians began fishing commercially for shark in northern Australia in about 1980. The principal fishing method in the Northern Shark Fishery is gillnetting, with the most activity in waters off the Northern Territory. The main sharks taken are two species of black-tip shark. The total shark catch in the Northern Territory in 2002 was 656 tonnes.

The level of fishing by Australian fishers for the two black-tip shark species is thought to be sustainable. However, high catches by Indonesian fishers are putting these and other sharks at risk.

Other fisheries

Sharks are often a bycatch of many other fisheries. Some is retained for sale, but much of it is thrown away. Trawl fisheries such as the South East Trawl Fishery have a high level of shark bycatch. Recording of shark catch has been poor in these fisheries, but changes to fishery logbooks and the improvement of bycatch action plans are improving the recording effort. Dogfish, angel sharks, gummy sharks and school sharks are the main sharks caught in the South East Trawl Fishery.

Tuna longline fisheries catch large amounts of shark. The major tuna fisheries in Australia only allow 20 sharks to be landed by the boat per trip. Sharks usually caught by tuna longlines include blue sharks, bronze whaler sharks, porbeagles, makos, threshers and hammerhead sharks.

Alex Gaut (MESA) adapted this information sheet (which is suitable for primary school students) from the information sheet compiled for the general public by © Kevin McLoughlin (kevin.mcloughlin@brs.gov.au).

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