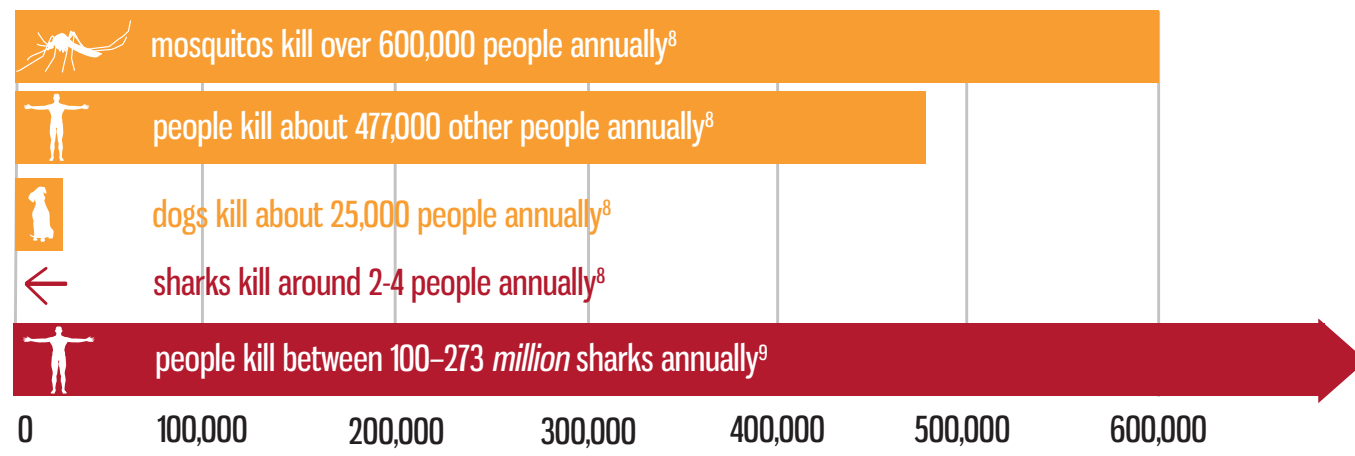


WHAT YOU NEED TO KNOW ABOUT THREATENED SHARKS

ARE SHARKS SCARY?

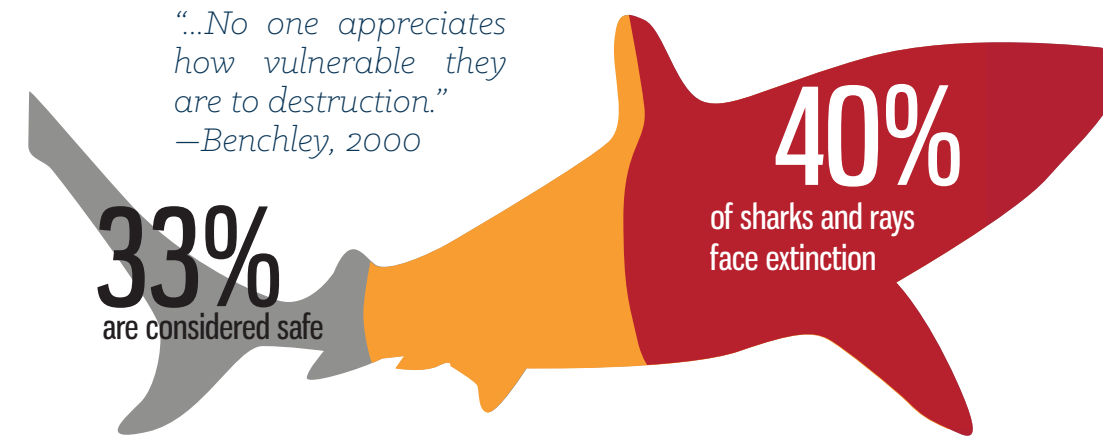
Sharks can seem terrifying in movies like Jaws, but in reality, they pose you very little threat (the same can't be said for the other way around). Peter Benchley, the author of Jaws, regrets writing the story that sparked fear and violence towards sharks, and dedicated the rest of his life towards their conservation.⁴



You have a **1 in 3,700,000** chance of being killed by a shark, but **1 in 218** chance of being killed by falling over.⁷ **YOU ARE SCARIER THAN ANY SHARK.**

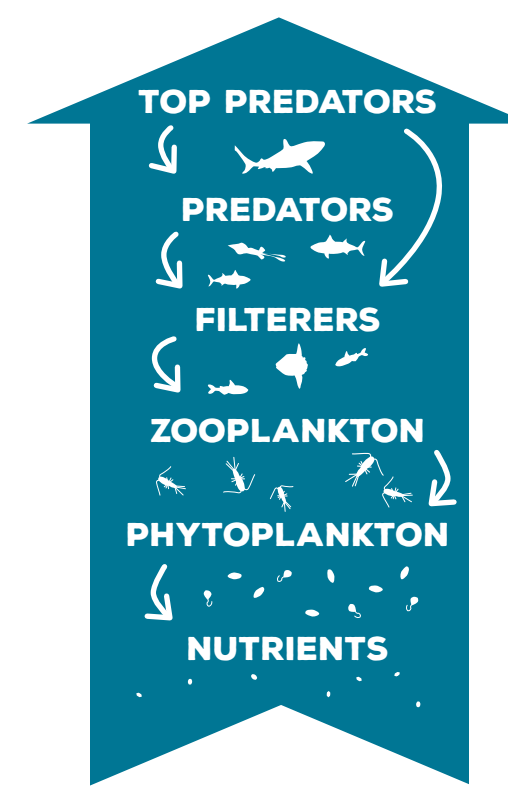
POPULATION DECREASE!

Sharks and rays have recently experienced an alarming decline in population. The IUCN (International Union for Conservation of Nature) published an article in 2013 stating that of all shark and ray species, both of which belong in the subclass Elasmobranchii, 40% are threatened with extinction, and only 33% are considered safe.⁸



Threats such as overfishing, habitat loss, and bycatch continue to cause shark populations to decline. Conservation action must be taken.

THE TRUE VALUE OF SHARKS:



Many sharks are apex predators. This means that their presence is vital to the health of the marine ecosystems they inhabit, just like a lion's presence is necessary in the savanna. Without top predators like sharks and lions, an ecosystem will cease to function and many species will be negatively affected. Sharks are also highly commercially valuable. While the legal global market for shark products is estimated at a declining \$630 million per year, ecotourism revolving around sharks is a quickly growing market, estimate at about \$312 million a year, and projected to grow to \$780 million in 20 years, if there are sharks left. Let's make sure there are sharks left.⁹

Figures to the left are not represented to scale.

IUCN CATEGORY DEFINITIONS⁵

LEAST CONCERN

LC When it has been evaluated against the criteria and does not qualify for the other categories.

NEAR THREATENED

NT Close to qualifying for or is likely to qualify for a threatened category in the near future.

VULNERABLE

VU Considered to be facing a high risk of extinction in the wild.

ENDANGERED

EN Considered to be facing a very high risk of extinction in the wild.

CRITICALLY ENDANGERED

CR Considered to be facing an extremely high risk of extinction in the wild.

EXTINCT IN WILD

EW Known only to survive in cultivation, in captivity or as a naturalized population (or populations) well outside the past range.

EXTINCT

EX When there is no reasonable doubt that the last individual has died.

Over 40% of shark and ray species are threatened with extinction⁶

MAJOR THREATS:

OVERFISHING

Overfishing is the largest reason shark and ray species become threatened with extinction. Sharks are most commonly fished commercially, recreationally, and for trophies. Overfishing occurs when more is caught than a population can recover from.

Sharks are caught for fins, meat, oil, cartilage, skin, and teeth to be used for products from cosmetics to supplements to trophies.¹⁷

COMMERCIAL FISHING

The global shark-product market is estimated at about \$630 million,⁸ with, in 2011, an estimated 26 to 73 million sharks caught per year.¹⁸



LONGLINE
© 2009, Pacific Sport Marine Institute
Longlining entails one long line from 1-50 miles long, that's strung with smaller, baited lines. High bycatch risk.¹⁹



GILLNET
© Brian J. Sherry / National Geographic Stock / WWF
Curtains of nets suspended with buoys and weights. Fish swim into it and become entangled. High bycatch risk.¹⁸



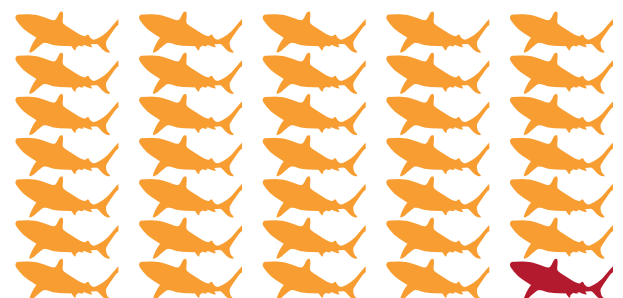
POLE OR TROLL
© Natalie Webster, American Alabaca Fishing Association
Many poles and lines on a vessel baited for a variety of targets, tuna to sharks to bottom-dwellers. Lower bycatch risk.¹⁸



BOTTOM TRAWL
© Monterey Bay Aquarium
Bottom trawls are nets dragged over the ocean floor to catch fish. High bycatch risk,¹⁸ decimated angel shark populations.

RECREATIONAL FISHING

Recreational fishing wasn't substantial until after the 1975 movie Jaws, when the sport picked up and it began to have an environmental impact. While many recreational fishers lobby against commercial fishers out of concern for their hobby, in 15 years of a 21 year span, recreational fishers caught more fish than commercial fishers.¹⁹



Each shark represents roughly 400,000 sharks.

SHARK FINNING

Shark finning is cutting off the fins of a shark, and typically throwing the rest of the shark back into the ocean to slowly die. As a delicacy, fins can be up to 20 to 250 times more valuable than the body meat.²¹



SOME POPULATIONS HAVE DECREASED 60-70% DUE TO SHARK FINNING.²¹

BYCATCH



© Brian J. Sherry / National Geographic Stock / WWF

Bycatch: "the portion of a commercial fishing catch that consists of marine animals caught unintentionally".
—Miriam-Webster.com

50 MILLION sharks caught as bycatch annually²¹

Sadly, bycatch is one of the most significant causes of population decline in sharks species, especially endangered species already legally protected. Sharks are frequently accidentally caught by many methods of commercial fishing, such as gillnets, bottom trawlers, longlines, and more. Many do not survive the encounter.

Shark bycatch used to be considered undesirable and useless. However, as the demand for shark products has grown, not all sharks are thrown back

upon being caught. These sharks are typically finned, as fins fetch a high price on the international market.²¹ Between this and bycatch mortality, bycatch is a serious issue for sharks.

US \$500 PER LBS FOR SHARK FINS²²

BYCATCH AND BOTTOM FEEDERS

Bottom feeding sharks and rays are especially affected by bycatch from bottom trawlers and longlines. Angel sharks, for example, are a critically endangered species of shark. They've declined an alarming **80%** over their last three generations, and continue to decline as a result of bycatch.²³

HABITAT LOSS

Sharks are very vulnerable to habitat loss; anything that affects organisms lower down on the food chain inevitably affect them as well. Sharks also frequently suffer habitat loss in their nurseries and pupperies.²⁴

TOXINS AND POISONS

Toxic chemicals from dumping or run-off can compromise a shark's ability to reproduce successfully, such as the toxic methyl mercury, and neurotoxins.²⁴

HABITAT DESTRUCTION

Many estuaries and pupping habitats for sharks are destroyed by urban development, water pollution, or other man-made topographical changes.²⁴

PLASTIC POLLUTION

As the tons of plastic in the ocean decomposes, plastic particles enter the food chain. This poisons all organisms and gathers in higher concentrations in sharks, as it builds up in each level of the food chain.²⁴

OUR FAVORITE SHARKY FRIENDS:

GREAT WHITE SHARKS

Carcharodon carcharias

VU

Though great white sharks are perhaps one of the most iconic shark species, relatively little is known about their biology and behavior. They are most at risk from commercial and sport fishing, aquarium display, beach meshing, revenge killing, and loss of habitat.¹⁰

WHALE SHARKS

Rhincodon typus

VU

Despite being the largest species of fish alive today, whale sharks pose little to no danger to humans; they're gentle filter feeders. Whale shark products are commercially valuable, but their value to ecotourism is soaring. Soon, they will be more valuable alive than in products.¹¹

TIGER SHARKS

Galeocerdo cuvier

NT

The tiger shark is commercially fished, and also suffers from being the victim of bycatch. It is a relatively fast-growing species, at least as far as sharks grow, but it cannot sustain the pressure put on its population: continued demand may put this species at real risk.¹²

BASKING SHARKS

Cetorhinus maximus

VU

The basking shark is the second largest fish swimming in the sea, and is a filter feeder like the whale shark. Though protected in some areas, unsustainable commercial fishing has decreased its populations. Basking sharks are very vulnerable due to their slow growth.¹³

GREAT & SCALLOPPED HAMMERHEAD SHARKS

Sphyrna mokarran & *Sphyrna lewini*

EN-CR

Both the great and scalloped hammerhead sharks are endangered. Great hammerheads are threatened most significantly by finning, commercial fishing, IUU (illegal, unreported, and unregulated) fishing, and bycatch in areas where it's legally protected. Several sub-populations are critically endangered¹⁴. Scalloped hammerheads face a very similar predicament. They are caught at all stages of life, making it very difficult for the species to repopulate after it is so

heavily commercially fished. They suffer from IUU fishing as well.¹⁵ Great and scalloped hammerheads have face alarming population drops in many subpopulations, for example:

79% decline in great hammerhead catch from 1978-2003 in the Southwest Indian Ocean.¹⁴
98% decline in scalloped hammerhead population in the Northwest & Western Central Atlantic between 1972-2005.¹⁵

COMMONPLACE THINGS THAT CAN HARM ENDANGERED SHARK POPULATIONS

BUYING UNSUSTAINABLE SEAFOOD

Eating seafood caught with methods that result in shark bycatch is harmful.

LITTERING AND DUMPING

Pollution harms sharks by decreasing areas where they can successfully reproduce, as well as poisoning them with toxins.

CONSUMING SHARK PRODUCTS

Shark teeth, oil, supplements, pet food, shark meat or fins can all contribute to harming shark populations.

HEAVY CARBON FOOTPRINT

A heavy carbon footprint harms the ocean's ecosystem, affecting precarious shark populations.

HOW YOU CAN HELP



DONATE TO ORGANIZATIONS

The World Wildlife Fund
The IUCN
The Monterey Bay Aquarium
National Resources Defence Council



SUSTAINABLE CHOICES

Use the Seafood Watch App to determine if the seafood you want to buy is sustainable!
Watch your carbon footprint



VOTE

Be aware of legislature in your area. Make sure your representatives know that people care about sharks.



BE VOCAL

Tell your friends, your family, ask restaurants if seafood is sustainable. Corporations need to know you, the consumer, cares. Make a fuss.



EDUCATE YOURSELF

Use the internet, books, anything, and learn more about shark conservation.



PROTECT THE OCEANS

Supporting any marine conservation will also support shark conservation. Avoid causing pollution.

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