

Scientists estimate more than 100 million sharks killed annually

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Pictured are dried shark fins for sale in Hong Kong. Credit: Debra Abercrombie

(Phys.org) —The number of sharks killed each year in commercial fisheries is estimated at 100 million, with a range between 63 million and 273 million, according to the research "Global Catches, Exploitation Rates and Rebuilding Options for Sharks," published in the journal *Marine Policy* on March 1, 2013. The article was co-authored by Dr. Demian Chapman, assistant professor in the School of Marine and Atmospheric Sciences and assistant director of science at the Institute for Ocean Conservation at Stony Brook University.

The authors warn that the rate of fishing for shark species, many of which grow slowly and reproduce late in life, exceeds their ability to recover. Consequently, the authors wrote, "Global total shark mortality,

therefore, needs to be reduced drastically in order to rebuild depleted populations and restore marine ecosystems with functional top predators."

The paper, also co-authored by scientists from Florida International University, the University of Miami, Dalhousie University and the University of Windsor in Canada, calculates estimates by adding landed catch data reported to the United Nations Food and Agriculture Organization to estimates of unreported landings, finned sharks, and other discards of dead sharks.

According to the research, this significant population decline is a result of a combination of a global boom in shark fishing—usually for their valuable fins—and the relatively slow growth and reproductive rates of sharks. The catch of sharks in commercial fisheries for their fins, meat, liver oil, cartilage, and other parts remains largely unregulated in most of the world, driving some populations toward extinction. The researchers recommend that protective measures for sharks be scaled up significantly to avoid further depletion and possible extinction of some of the world's top predators.

This paper was published a few days before the convening of the 16th Meeting of the Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in Bangkok, Thailand. CITES is widely considered one of the best tools for protecting vulnerable species from extinction, and proposals for international trade regulation of several species of sharks will be considered during this meeting.

International trade regulation of several shark species to be considered at CITES Meeting Representatives of 177 governments from around the world are expected to attend the 16th Meeting of the Conference of the Parties to the Convention on International Trade in Endangered Species

of Wild Fauna and Flora (CITES) March 3-14 in Bangkok, Thailand.

CITES, which was agreed to in Washington, DC, in 1973, offers protection to more than 30,000 animal and plant species around the globe. It has been instrumental in preventing their extinction and is generally recognized as one of the most effective and best-enforced international conservation agreements.

Proposals to regulate the international trade of five species of sharks and two related manta rays have been submitted and co-sponsored by 37 countries for consideration at the meeting. The proposed shark species—the oceanic whitetip, porbeagle, and three types of hammerhead—are among the most valuable and vulnerable sharks in international trade. A positive result will limit international trade of shark fin and meat and manta gill rakers and help reduce the threat of overfishing facing these species.

Dr. Chapman will attend the CITES meeting to give presentations about a shark fin identification guide he co-developed. Also, as a shark expert and co-author of two recently published scientific papers about sharks, Dr. Chapman will be available to speak with the news media and others as these shark species are being considered for international trade regulation. This guide is intended to help enforcement and customs personnel in the provisional identification of the first dorsal fins of these five shark species. In law enforcement situations, this could provide probable cause to hold questionable fins, so that expert opinion could be sought or genetic testing could be conducted to confirm the field identification. This guide is intended to help enforcement and customs personnel in the provisional identification of the first dorsal fins of these five shark species. In law enforcement situations, this could provide probable cause to hold questionable fins, so that expert opinion could be sought or genetic testing could be conducted to confirm the field identification.

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The shark fin identification guide, developed by Dr. Chapman and marine biologist Debra Abercrombie, is intended to help enforcement and customs personnel in the provisional identification of the first dorsal fins of five shark species of concern. These species—the oceanic whitetip, porbeagle and three species of hammerhead sharks (scalloped, smooth and great)—are globally distributed and large-bodied, and their fins are traded internationally in large numbers. In law enforcement situations, this guide could provide probable cause to hold questionable fins, so that expert opinion could be sought or genetic testing could be conducted to confirm the field identification.

More information: [www.sciencedirect.com/science/ ...
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Provided by Stony Brook University

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