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Protecting Sharks, Enforcing CITES: A Global Effort

Trade restrictions off to strong start

For further information, please visit:

pewtrusts.org/sharks

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By Joshua S. Reichert

Sharks are in trouble. About 100 million are killed in commercial fisheries each year, and the global trade in their fins and meat is unsustainable. These ancient and vulnerable animals cannot withstand this level of pressure; their populations have plummeted around the world.

Given the critically important role that sharks play in maintaining the health of marine ecosystems, these mortality rates have significant implications for ocean health worldwide.

But there is promising news. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), long considered one of the best tools to ensure that global trade does not threaten the survival of species, has enacted trade regulations for five commercially valuable shark species and all manta rays. Protection of these species has become a critical part of the Convention's work.

CITES now governs the trade in shark and ray products—such as meat, oil, and gill plates—of the listed species. Still, the fin trade remains the principle driver of shark declines, and that area is where the CITES listings are having the most significant impact.

Around the world, from China to Chile, countries are introducing measures to protect the newly listed species—from prohibiting their landing or trade to setting scientifically based sustainable catch limits—that will help halt declines and allow populations to recover. As nations implement these CITES trade controls, the world is beginning to better understand the threats facing all sharks and the need for strong protections to ensure that they maintain their key roles in marine ecosystems.

John E. Scanlon

John E. Scanlon is the Secretary General of CITES

For more information about CITES, please visit:
cites.org/eng

By John E. Scanlon

2015 marks the 40th anniversary of the entry into force of the Convention on International Trade in Endangered Species of Wild Fauna and Flora. The number of CITES Parties has grown from fewer than 20 in 1975 to near-universal membership of 181 Parties in 2015, soon to be 182. Today there are more than 35,000 species coming under CITES regulatory controls, and over 15 million trade transactions have been recorded in the CITES trade database. CITES remains as relevant today as it was in 1975.

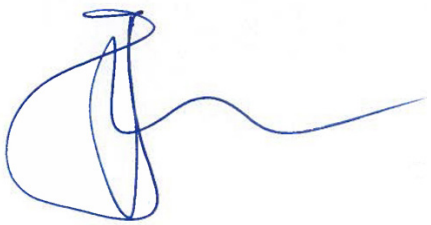
In 1975 no shark or ray species were listed under CITES. Today, CITES has eight species of sharks and all manta rays under CITES trade controls, as well as all sawfishes. These species include hammerhead, oceanic whitetip, and porbeagle sharks, along with all manta rays, which were listed at the 16th meeting of the Conference of the Parties held in Bangkok in 2013.

Sharks may seem to constitute a small fraction of the number of species of wild animals and plants listed under CITES; however, these recent additions set new challenges and opportunities for parties in ensuring that trade in commercially exploited aquatic species is legal, sustainable, and traceable, even for highly traded fisheries commodities.

The 181 Parties to CITES are making concerted efforts to effectively implement these recent CITES listings of sharks and manta rays, and this has been complemented by a global collective effort to support implementation that is unprecedented in the 40-year history of the Convention. This has included the European Union contributing 1.2 million euros through the CITES Secretariat to assist developing countries implement the new CITES listings of sharks and manta rays during the 2013-2016 period. The CITES Secretariat works in close cooperation with the United Nations Food and Agriculture Organization as well as with the regional fisheries management organizations and regional fisheries bodies, to ensure that CITES measures are complementary to their ongoing efforts, as well as to the sustainable fisheries management effort in general.

Other stakeholders, including government agencies, international organizations, academia, foundations and philanthropists, and non-governmental organizations, including The Pew Charitable Trusts, are all stepping up their own efforts in helping to develop various tools, resources, and expertise to assist developing countries manage trade in shark products.

As we look into the future, and perhaps into the next 40 years of the operation of CITES, we see the need for an ongoing and further enhanced global cooperative effort that deepens the engagement with everyone involved, from government decision-makers to local fisher communities. Through these collective efforts, these marine species can be better managed, with any trade being legal and sustainable, thereby ensuring the survival of these magnificent animals in the wild.



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Shark protections through CITES

In March 2013, Parties to CITES added porbeagle and oceanic whitetip sharks, three species of hammerhead sharks—scalloped, great, and smooth—as well as all species of manta ray to CITES Appendix II. Appendix II-listed species can still be traded legally but only if the trade does not cause a detriment to the species in the wild.

The protections went into effect on Sept. 14, 2014. Implementation requires a truly global effort. Countries such as Brazil, Colombia, Fiji, Indonesia, Peru, Sri Lanka, the United Arab Emirates, among others, have helped lead the way. CITES Parties around the world are working on an unprecedented scale to put the new protections in place and manage the sharks found in their waters. In addition, the Hong Kong Special Administrative Region, the hub of the global shark fin trade, has emerged as a leader in ensuring that trade in fins is regulated and the listings are enforced.

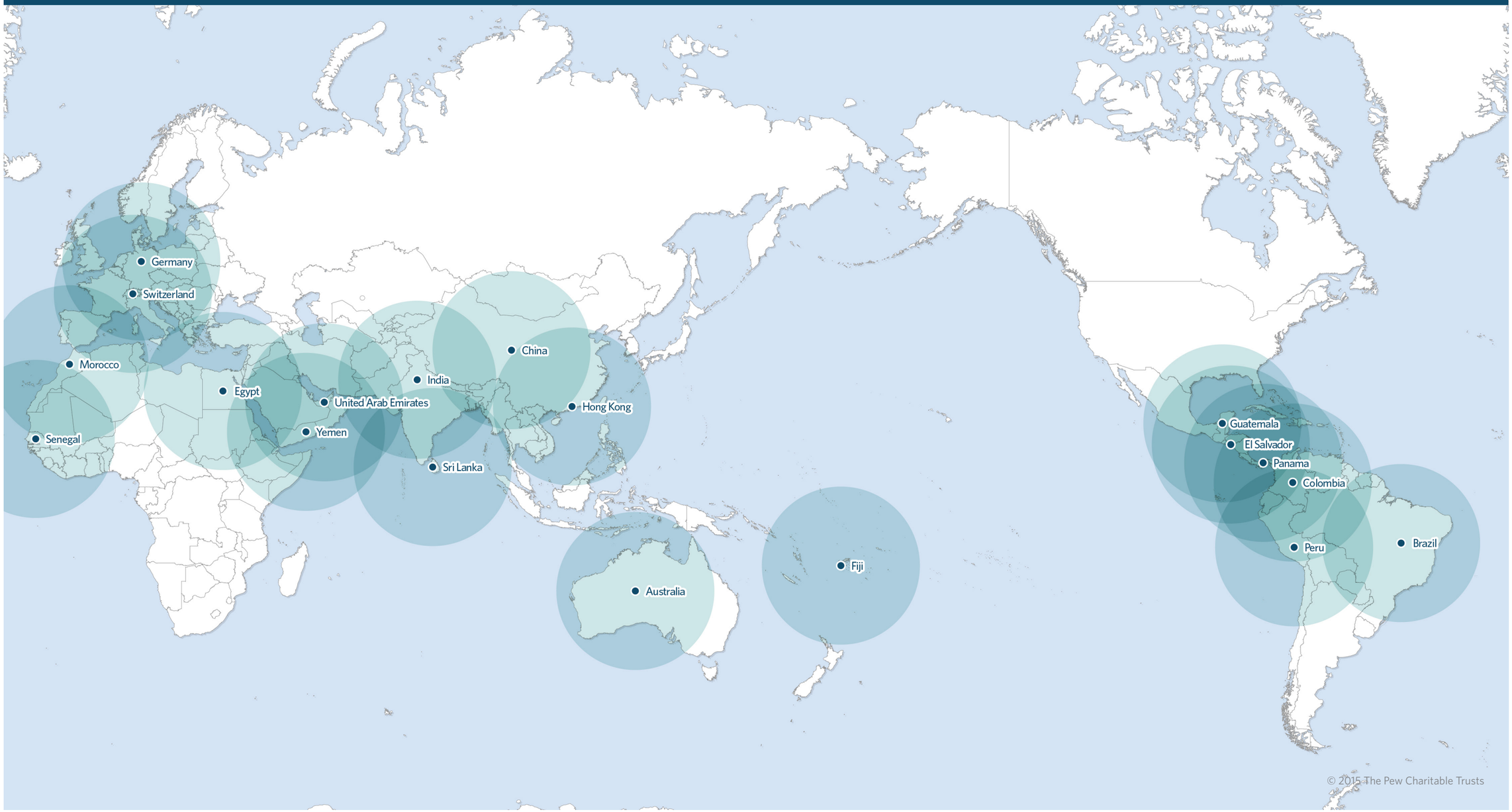
Chris and Monique Fallows


David Fleetham


Guy Stevens


Doug Perrine

Implementation Efforts Around the World



Workshops

An unprecedented global series of workshops has provided training and support to governments as they implement the listings. These sessions have offered guidance, training, and capacity building and have helped inform the fisheries, environmental, and customs officials involved in the day-to-day operations, all of which are essential to making CITES listings work. The following examples showcase some of those workshops.

Nadi, Fiji
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Recife, Brazil
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Roatan, Honduras
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Colombo, Sri Lanka
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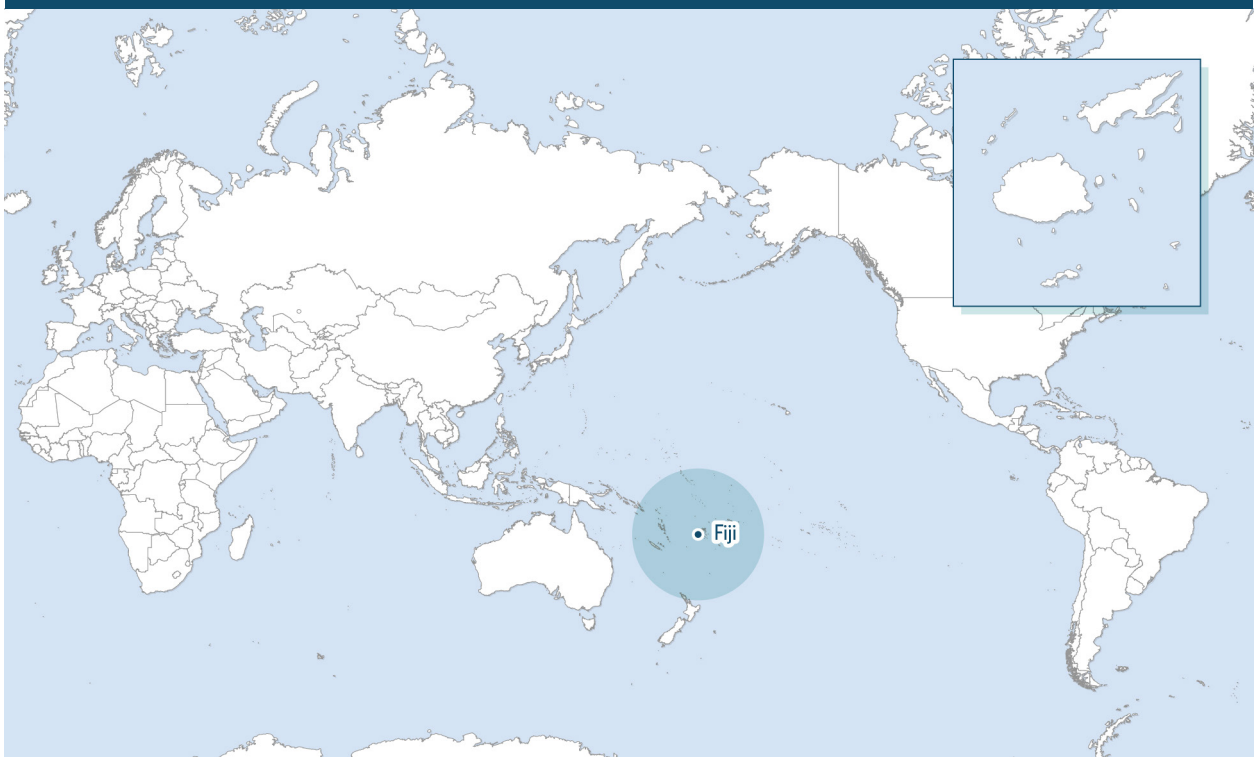
Fijian Pacific Regional Workshop



In the Pacific region, Fiji, working with Pew, convened a February 2014 meeting in Nadi that brought together all seven CITES Parties in Oceania—Australia, New Zealand, Palau, Papua New Guinea, Samoa, the Solomon Islands, and Vanuatu—plus one non-Party, Kiribati.

Participants learned how to identify sharks, rays, and their parts—such as fins and gill plates—typically found in trade in their waters. They also explored how the CITES listings can complement regional management through fisheries bodies such as the Western and Central Pacific Fisheries Commission.

The countries taking part in the workshop developed a joint statement agreeing that non-detriment findings (NDFs)—the determination required to allow continued trade of a listed species—are unlikely for oceanic whitetip sharks and both species of manta ray because of their vulnerability. Participants also noted that NDFs are largely unnecessary because of existing management measures prohibiting retention of the species. The statement said that those species should be fully protected and that additional data must be collected to ascertain if sustainable trade of hammerhead sharks could continue.

Subsequently, the Australian Government developed a full NDF for hammerhead sharks and shared publicly the scientific advice to underpin the finding that allows for sustainable and legal trade in the species.

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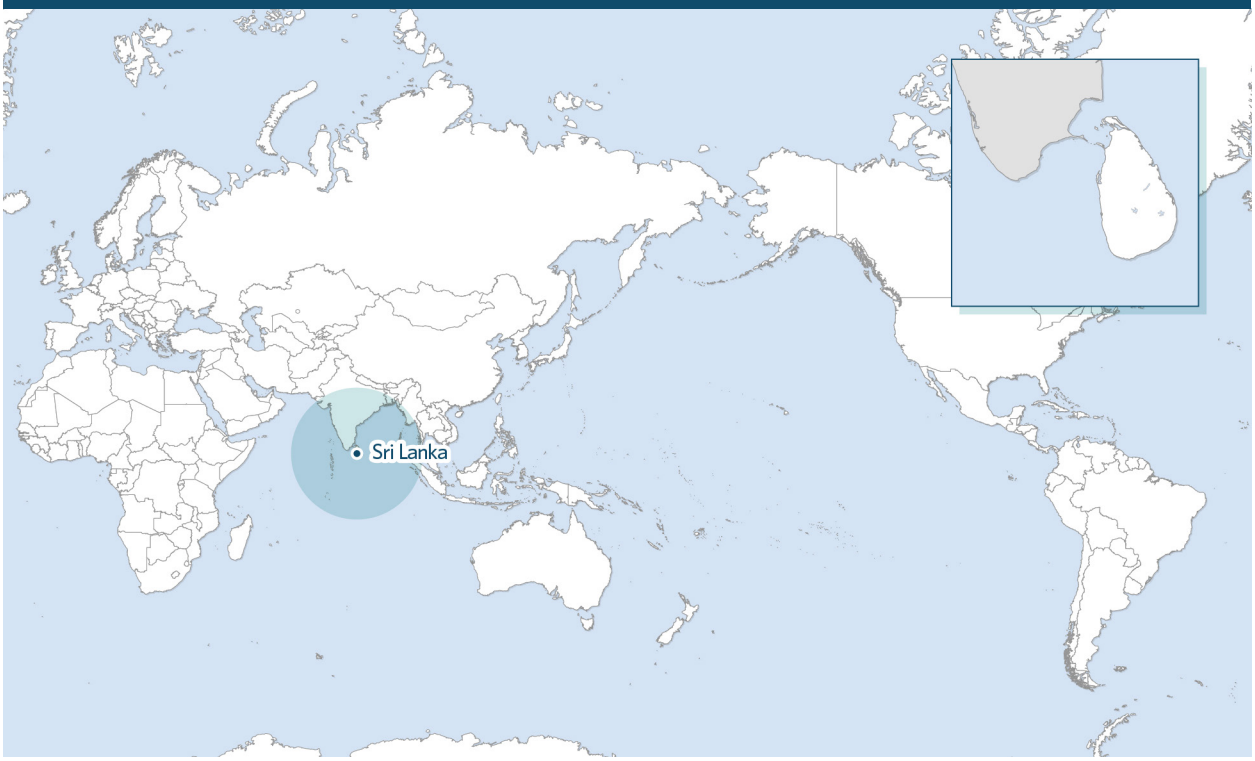
Sri Lankan South Asia Regional Workshop



The Sri Lanka Department of Wildlife Conservation gathered Indian Ocean countries and co-hosted a workshop with Pew in Colombo on July 30 and 31, 2014.

A panel of international experts instructed more than 50 participants representing government agencies from 12 CITES Parties in South Asia on implementation of the listings for sharks and manta rays. Attendees from Cambodia, India, Indonesia, Republic of Korea, Malaysia, Maldives, Pakistan, Seychelles, Singapore, Sri Lanka, Thailand, and Vietnam, along with representatives from non-Party Taiwan, Province of China, learned to identify listed shark and ray species and developed joint decisions to explore ways the countries can work together as a region on implementation.

Discussions at the meeting focused on how to develop NDFs that would allow sustainable trade to continue. International shark fisheries experts presented the options available to all governments to develop the assessments they will need to continue trading these species.

This level of international cooperation in global shark management is unmatched. It has helped to ensure that these shark and ray species are properly protected, and it started a process that will lead to a better understanding of the region's shark fisheries as a whole.

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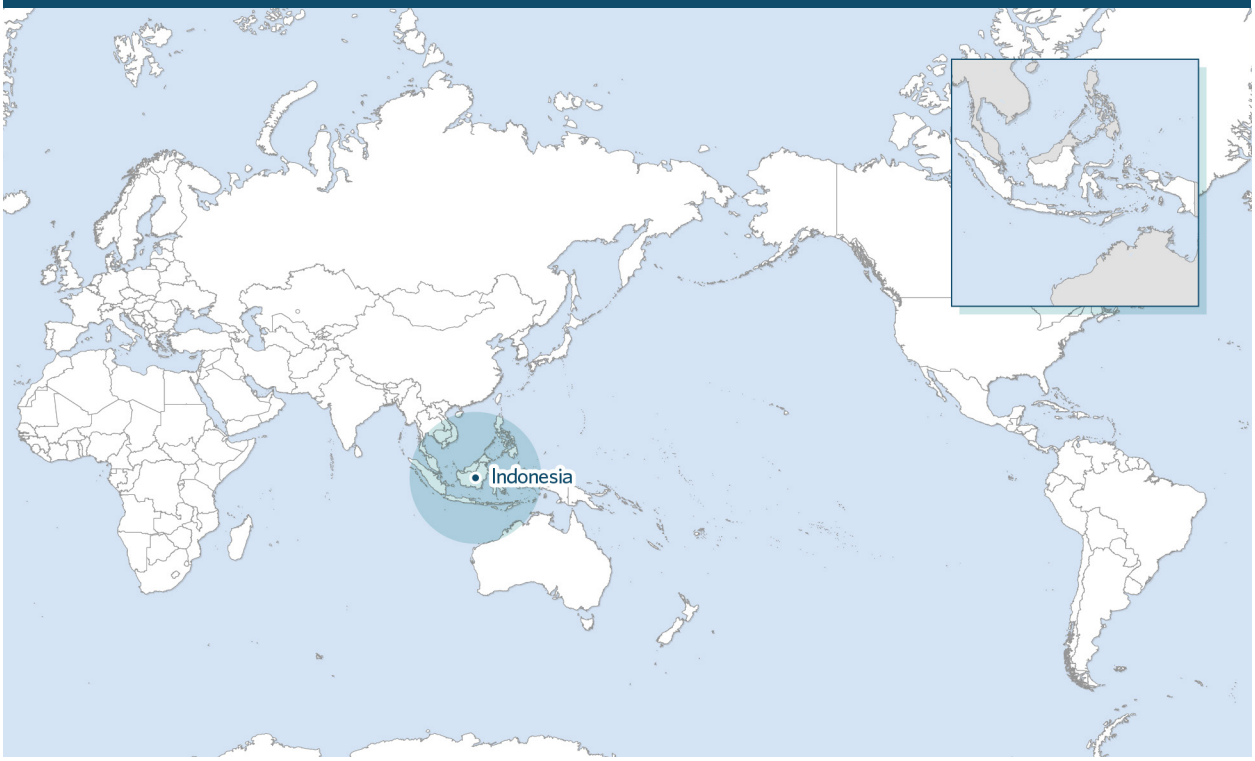
Legislation

In addition to the global series of workshops, countries have been working within their own borders to ensure that CITES requirements are met. In many cases, legislation that has been developed covers more than just CITES-listed shark species, as countries take steps to control their entire shark catch and trade.

Implementation of the CITES listings is building an international network of measures intended to better protect and manage sharks wherever they are caught. The following examples showcase some of the important legislative steps taken to implement those listings.

Shawn Heinrichs

Indonesia



In February 2014, just one year after both manta species were listed under CITES Appendix II, Indonesia declared its waters as the largest fully protected area for manta rays in the world—over 6 million square kilometres.

The Indonesian Government worked swiftly to ensure effective enforcement of these regularly traded species in the months after the announcement. The Indonesian Ministry of Marine Affairs and Fisheries intercepted two large illegal shipments of manta ray gill plates and handed out record fines and jail time for the offenders.

By taking steps to protect these iconic species, Indonesia emerged as a leader in the region in both implementation and enforcement efforts.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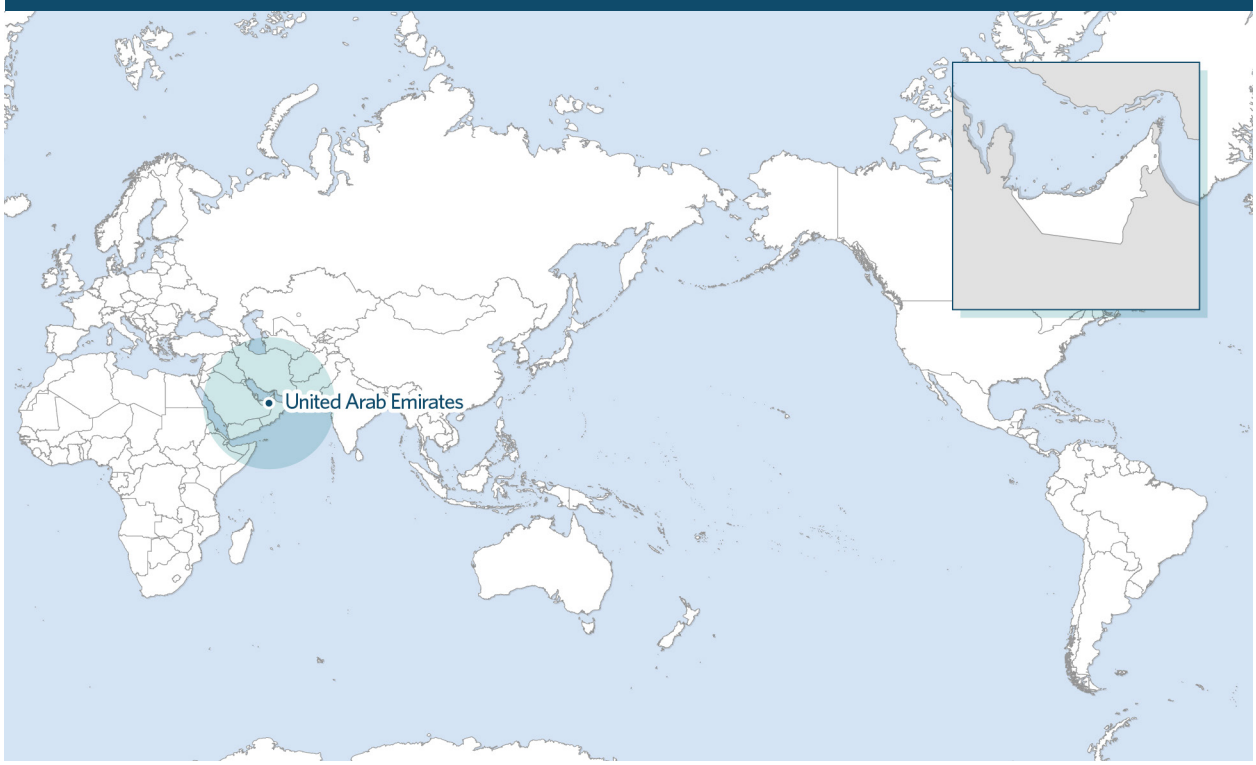
United Arab Emirates



In July 2014, the United Arab Emirates (UAE) made important strides to limit and regulate shark trade and fishing and to effectively implement its obligations under CITES. UAE's ports of entry are central to the global shark trade, making its Ministerial Decree No. 500 a landmark in shark conservation on a global scale.

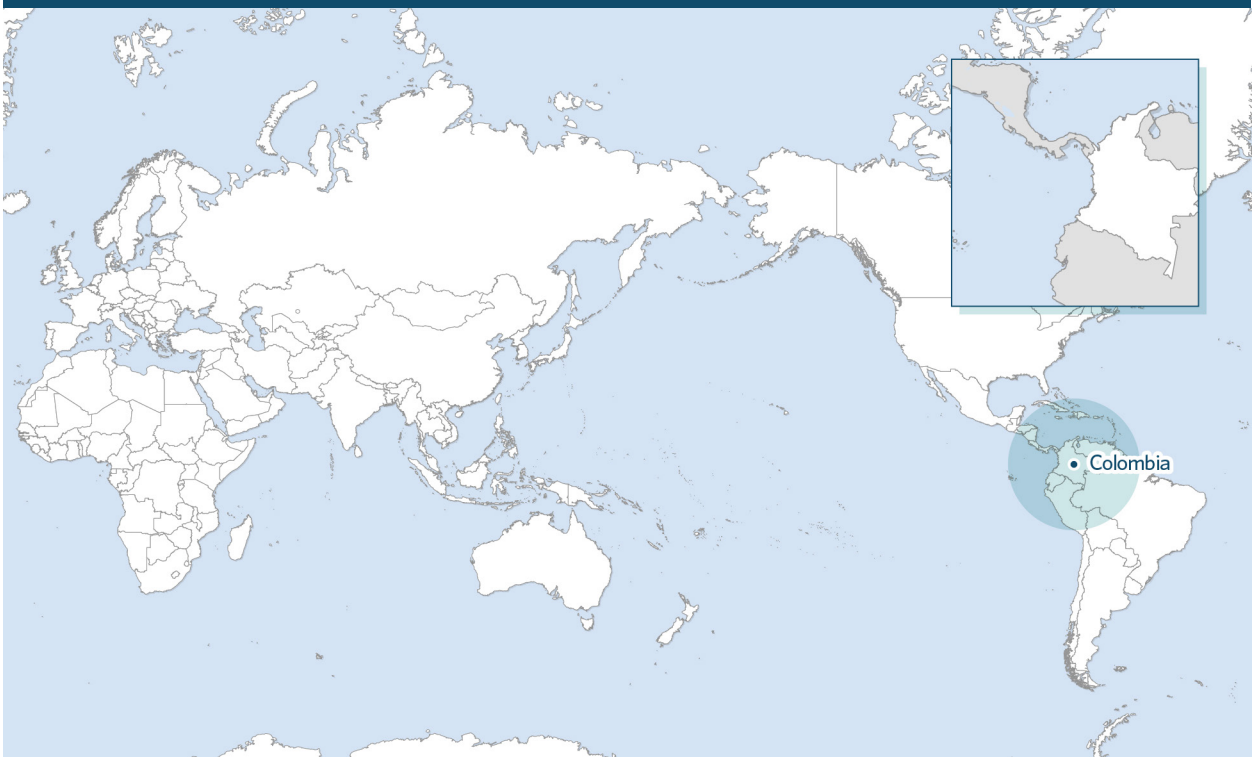
As a result of the decree, all three species of hammerhead, oceanic whitetip, and porbeagle sharks and both species of manta rays are now fully protected in UAE waters. The country's Ministry of Environment and Water created a strict framework for the importation and exportation of shark fins, requiring source-of-origin certificates that state the scientific name of the shark species as well as a health certificate, commercial invoice, and packing list for each shipment. No shark products of any sort can be exported from sharks caught in UAE waters; all exports and re-exports of shark fins are now banned from the UAE.

These steps to control and limit shark catch and trade are vital to global shark populations. As a major center for trade, UAE sets an important example for its regional and global neighbors.

Demian Chapman

Demian Chapman

Colombia



Colombia has also successfully implemented the recent Appendix II listings through domestic legislation. The Autoridad Nacional de Acuicultura y Pesca (AUNAP) prohibited targeted shark, ray, and chimera fisheries in its entire exclusive economic zone for all vessels flying the Colombian flag or for any vessel, regardless of origin, with financial ties to Colombian businesses. AUNAP has also banned wire leaders and prohibits the use and modification of bait aimed at attracting sharks, rays, or chimeras.

With the prohibition of directed shark fishing and certain shark-targeting gears, Colombia has illustrated yet another way to meet the new obligations under CITES.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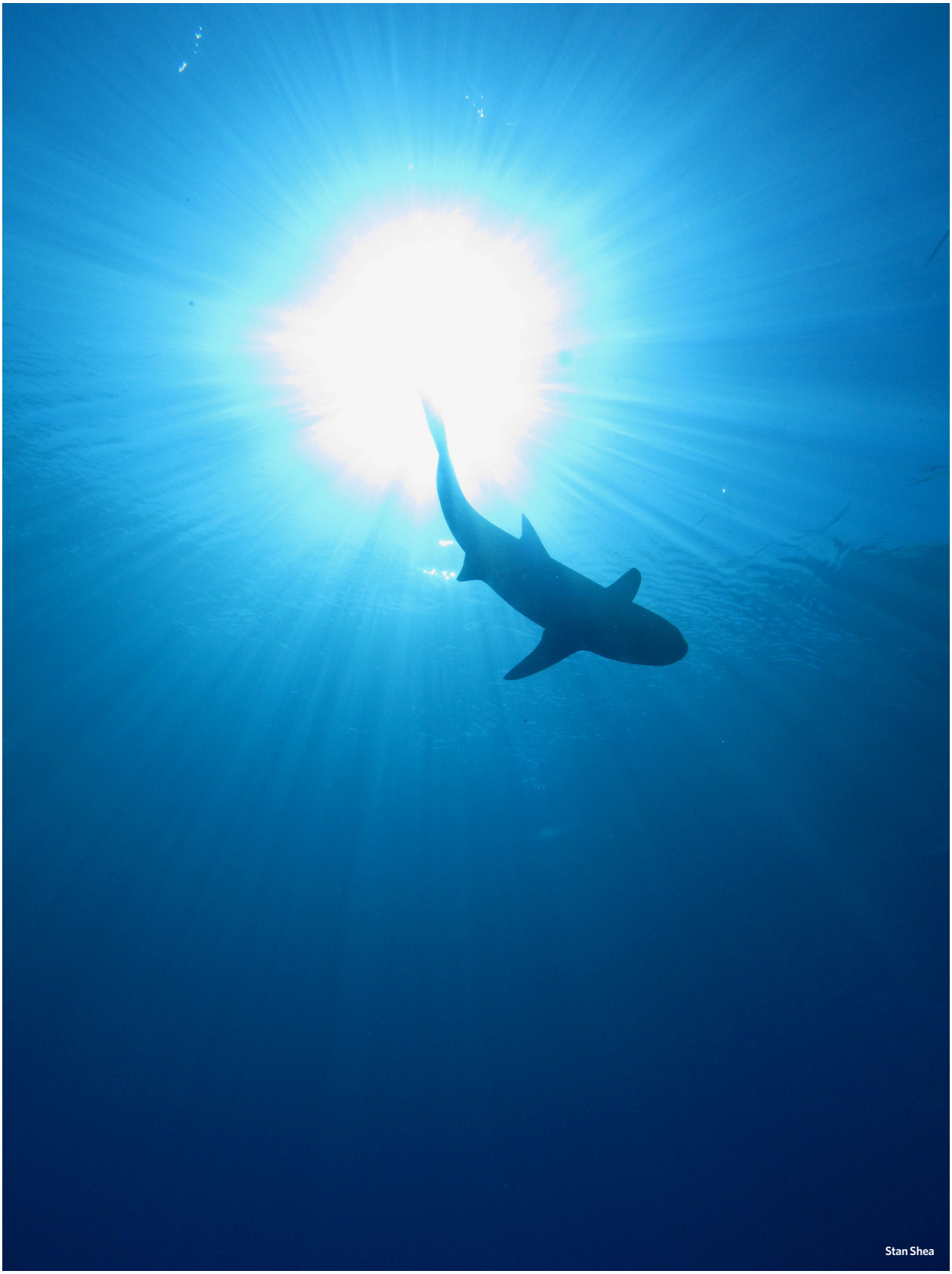
Shark sanctuaries

Some CITES Parties, including Palau, Maldives, Honduras, and The Bahamas, had taken action earlier that put them a step ahead in ensuring implementation of the listings.

They are among the 10 countries that have declared shark sanctuaries in their waters, effectively prohibiting a directed shark fishery. These countries benefit from the presence of living sharks, a valuable driver of ecotourism. Shark diving and watching, scientific efforts, film and photography, shark education, research, and other related industries are significant sources of revenue for many nations. In fact, a 2011 study of sharks in the Pacific island nation of Palau, home of the world's first shark sanctuary, found that an individual reef shark in the water is worth US$1.9 million over its lifetime because of the shark-diving industry, compared with $108 for a single reef shark brought to market. The study demonstrated that sharks are worth more alive than dead.

These countries with shark sanctuaries already have measures in place to protect sharks and in fact exceed the CITES requirements. But many still have attended regional workshops to showcase their legislation and assist other CITES parties considering similar measures.


Stan Shea

Enforcement tools

To help implement these new shark protection measures, a wide range of shark-specific enforcement tools have been developed to quantify catch, identify products in trade, and make sure the listings are properly enforced.

The CITES-listed shark species can be identified by fishermen when caught, and their fins and carcasses can be classified visually and genetically by traders and customs officials. That information can help governments develop strong enforcement protocols to prevent illegal trade.

These tools can be applied not only to the listed shark species, but also to many others that are regularly caught and traded.

Stan Shea


Shawn Heinrichs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New science on the shark trade

The five species of sharks listed on Appendix II of CITES in 2013 are globally distributed, large-bodied sharks with fins that are traded internationally in large numbers. To help wildlife inspectors and border control personnel enforce these listings, shark experts have created a visual identification guide designed to rapidly identify the first dorsal fins of these five shark species in their most commonly traded form (e.g., frozen or dried and unprocessed) from those of other species found in fishing ports, sold by seafood dealers, or traded across international boundaries.

Based on data collected by examining more than 500 dorsal fins and 900 pectoral fins from over 50 shark species, including all of the dominant species or species groups in the international fin trade reported in Clarke et al. (2006),[1] this guide describes the key morphological characteristics that can quickly and easily enable a provisional distinction of the first dorsal fins of these five CITES-listed species from non-CITES-listed species found in trade, based on color, shape, and size.

A further aid in enforceability of the Appendix II listings, molecular tools have been developed and are routinely used to accurately identify shark products found in trade to the species level that cannot be identified using morphology. These shark parts (including meat, processed and unprocessed fins, and even fin cartilage filaments taken from a bowl of shark fin soup) can be identified to the species level using various genetic protocols, most commonly through standard DNA bar coding and species-diagnostic polymerase chain reaction (PCR). The protocol employed will depend on how degraded the genomic DNA template being analyzed is, as well as time and cost constraints associated with basic genetic laboratories. However, the costs of materials are decreasing (approximately US$5 to $10 per sample) and can be conducted at any forensic laboratory worldwide.

For efficiency, it is best to use a combination of visual ID tools and genetic identification protocols. The visual identification can be used to establish probable cause by which fins can be held for expert visual or genetic confirmation.

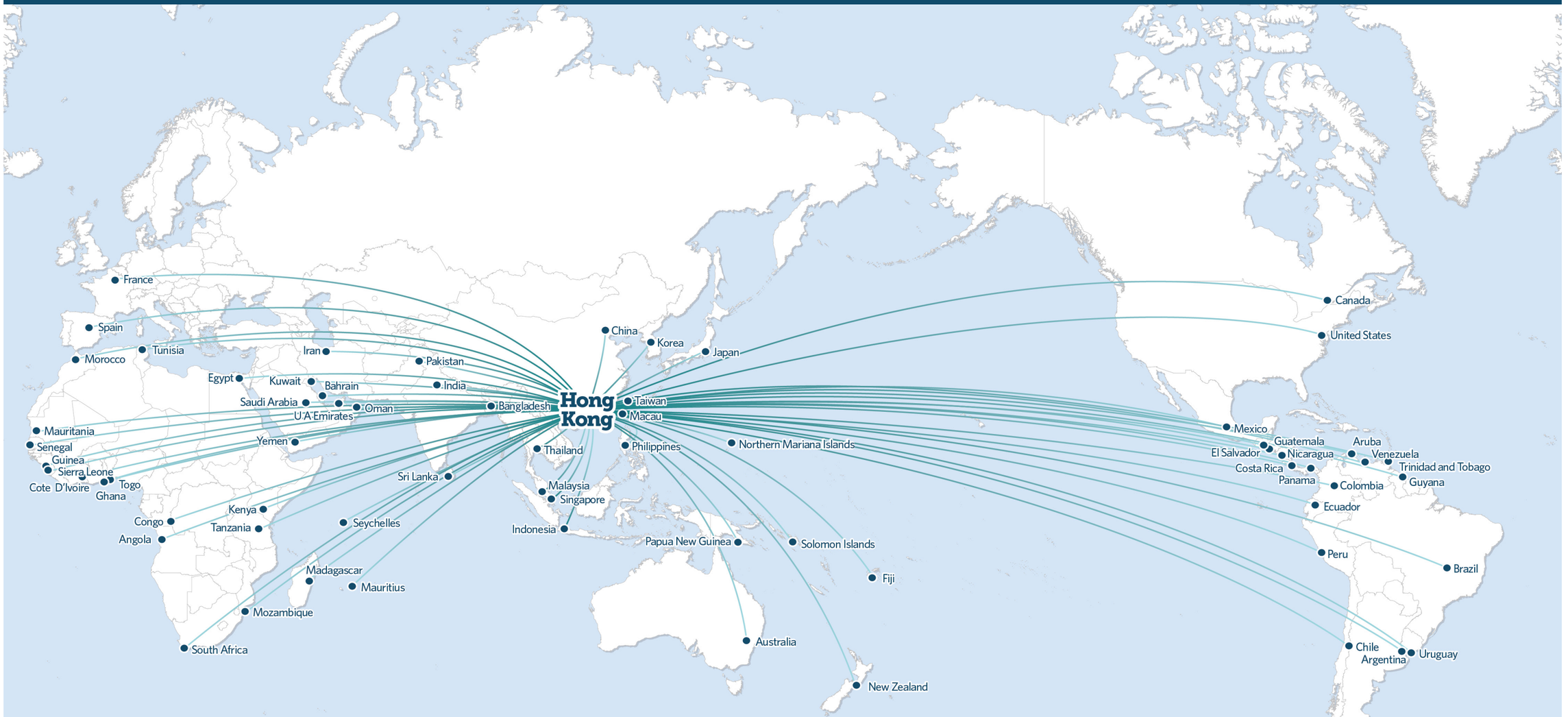
Since its creation, the shark fin ID guide has been used at CITES implementation trainings worldwide, providing fisheries, customs, and enforcement officials with the most up-to-date, comprehensive visual fin ID information. The guide is also available as a downloadable app for ease of use on smartphones or tablets (including Apple and Android devices) in the field. Molecular approaches for identifying shark species have been developed and applied in East Asia, North America, South America, and Oceania, providing useful information on the fin trade and law enforcement. Enforcement cases involving seized shark fins have already been prosecuted in several countries based on investigations enabled by the guide and/or genetic testing.

Work is underway to further support the implementation of these recent CITES Appendix II listings by expanding the shark fin ID guide to include other fin types and information on additional commonly traded species absent from prior morphological analyses.

Kathleen Ho

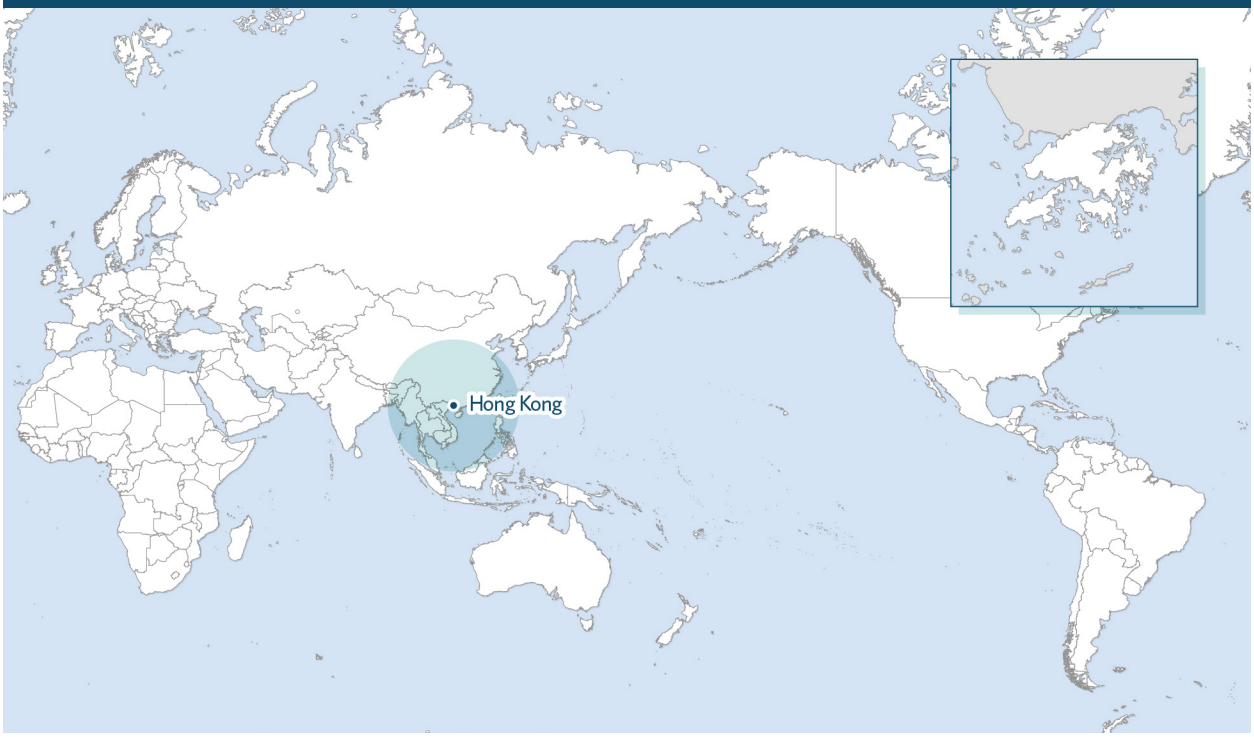

The Pew Charitable Trusts

Global Shark Fin Trade: 2014 Exports to Hong Kong SAR



These listings have for the first time put controls on the previously unregulated and unsustainable global trade in shark fins. Countries now have to consider which shark species' fins they are exporting, and importing countries need to inspect fin shipments when they arrive.

Hong Kong SAR



Implementing CITES in the global trade hub

Over 50 percent of the annual global shark fin trade passes through Hong Kong SAR, making effective implementation of the CITES listings there particularly important.[2] Hong Kong SAR imported 5,759 metric tons of shark fin and other shark products in 2014, according to data from its Census and Statistics Department.

Hong Kong's Agriculture, Fisheries, and Conservation Department (AFCD) has been at the forefront of global efforts to implement the new listings, ensuring that Hong Kong SAR is fully compliant with CITES obligations.

On top of strong domestic legislation to implement the listings, AFCD has run more than a week's worth of workshops, helping train customs and enforcement officials on how to visually identify fins from the listed species. The agency is also supported by the Government Laboratory, which has developed genetic testing protocols to confirm whether fins come from listed species.

The importation of shark fins into Hong Kong SAR is being monitored, and CITES-listed species are being allowed in only when their exports were authorized by exporting countries. Fins from these species traded without permits are now confiscated upon arrival in Hong Kong SAR.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Resources available

CITES website shark portal

A dedicated portal was set up on the CITES website to help CITES Parties and stakeholders share information and experience, as well as to help the public learn more about the CITES listing of sharks and manta rays (http://www.cites.org/prog/shark). This includes a shark identification materials database, guidance on how to develop NDFs, details of relevant meetings already held or upcoming, and an archive of national and regional reports, studies, posters, and multimedia.

The portal also contains a variety of other resources from CITES and the United Nations Food and Agriculture Organization for implementation of shark and ray listings.

Guidance on NDFs

According to Convention guidelines, Parties can continue trade of Appendix II-listed species if the Scientific Authority of the State of export has determined that "such export will not be detrimental to the survival of that species" (Article IV.2[a]).[3] This can be achieved through the development of an NDF to ensure that the exports of products from listed species are not harmful to the status of the stock.

In 2014, the German Federal Agency for Nature Conservation, the International Union for Conservation of Nature, and TRAFFIC produced detailed guidelines on the development of NDFs to advise governments seeking to export CITES-listed shark species. Australia's Department of the Environment also published its NDF for the five recently listed shark species as an example for other countries looking to develop their own.

Through these publications, Parties have a multitude of tools at their disposal should they desire to continue trade in these species in a sustainable manner.

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牙排翅
春翅
海虎翅
大牙排
海虎翅
沙虫炮筒
Stan Shea

Conclusion

The fisheries management, trade, and habitat protections afforded to sharks remain insufficient, and their populations continue to decline worldwide.

However, there is hope.

The global efforts to effectively implement CITES Appendix II listings for some of the world's most depleted shark and ray species have shown that they can be properly protected and managed wherever they are found.

The world's governments are working together to ensure that the tools needed to regulate shark catch and trade are being developed and effectively utilized. Now shark products can be visually and genetically identified, and sustainable quotas and strong protections set.

CITES Parties have demonstrated that CITES management of the shark fin trade is effective and leads to strong domestic and international shark conservation actions. It is clear that CITES Appendix II listings are complementary to fisheries management measures. Together they can ensure that these species are sustainably managed.

The shark fin trade is now better understood, and for the first time it is regulated. The benefits are being delivered for sharks and rays around the world.

Chris Newbert/Getty Images

Jim Abernethy

Jim Abernethy

Endnotes

1 S. Clarke et al., "Identification of Shark Species Composition and Proportion in the Hong Kong Shark Fin Market Based on Molecular Genetics and Trade Records," *Conservation Biology* 20 (2006): 201–211, doi:10.1111/j.1523-1739.2005.00247.x.

2 The Pew Charitable Trusts, "Navigating Global Shark Conservation: Current Measures and Gaps" (2011), http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Report/Navigating%20Global%20Shark%20Conservation_Current%20Measures%20and%20Gaps%207%206%2012.pdf.

3 CITES Non-Detriment Findings Guidance for Sharks Species, 2nd revised version (October 2014).


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