

Oceans

A WCS Progress Report





We Stand for Wildlife.SM

Nowhere else do threats to wildlife have a greater connection to humans than within the world's oceans. While more than 2.5 billion people rely on seafood as a critical source of protein, 20 million people suffer from malnutrition as a result of depleted fish populations. Global catch has been on the decline since 1996, and those most reliant on fish are losing access the fastest. Yet, there is a hopeful message: Conservation and management of marine resources can improve human health and local livelihoods, and simultaneously protect some of the world's most vulnerable species.

This WCS Progress Report provides our generous supporters with updates and insights on recent activities to protect our oceans and the irreplaceable array of marine life within them. Our tools are diverse—from real-time monitoring of marine species and commercial vessel traffic to community radio broadcasting. The data we collect not only fills critical information gaps, but also prompts action on all levels to restore and conserve marine wildlife for future generations.



Expanding Marine Protected Areas Through a New Fund

OCEAN HABITATS

WCS has established a new Marine Protected Area (MPA) Fund with a challenge grant from the Waitt Foundation to catalyze the protection of 3.7 million square kilometers of unprotected oceans, an area roughly the size of India, by 2020. Today, while close to 15 percent of land is set aside for conservation, only 3.5 percent of the world's oceans are protected, with less than 2 percent secured in full "no-fishing" zones. The resulting statistics are daunting: We have lost 95 percent of our ocean predators, a third of coral reefs are severely degraded, and the majority of the world's fisheries are overexploited.

With an active presence in 40 coastal countries, WCS will expand existing terrestrial protection outward towards the sea to facilitate greater coverage of coastal protected areas. This will bring the world more than halfway towards the United Nations Sustainable Development Goal of protecting 10 percent of the world's oceans by 2020. Such protection will slow down overfishing, reverse the decline of threatened species, and protect what remains of critical marine habitat for a more sustainable future. The new MPA Fund aims to raise a minimum of \$15 million, with \$5 million already committed from the Waitt Foundation over 5 years, contingent upon WCS raising matching funds of \$2 million annually.

Designating marine sanctuaries is an ecosystem-based approach that has proven successful. WCS's data show that these protected areas demonstrably improve sustainability in fisheries, help maintain ecosystem functions, and protect biodiversity and sensitive species and habitats. Moreover, they can help yield greater economic returns for fishers. Recent research by WCS scientists and partners published in *Nature* showed that the amount of fish in full no-take zones totalled up to 10 times the amount in areas that were fished. Furthermore, this same research demonstrated that unfished areas can recover to levels that approximate pristine conditions, restoring and protecting the oceans for future generations.

WCS is the leading expert in supporting the formation of MPAs, having provided the science to help establish the world's first MPA in the Bahamas in the 1950s, and to create MPAs in seven countries in the past two years alone. For this expertise, WCS was chosen by the Waitt Foundation in 2014 to conduct a feasibility analysis of 20 priority countries where marine protection is most viable and needed to meet the global targets. The analysis showed that expanding coastal protected areas by just 22 kilometers would more than triple MPA coverage and deliver 2.5 million kilometers of new ocean protections. 🌊



MPAs:

Slow overfishing

Reverse endangered species loss

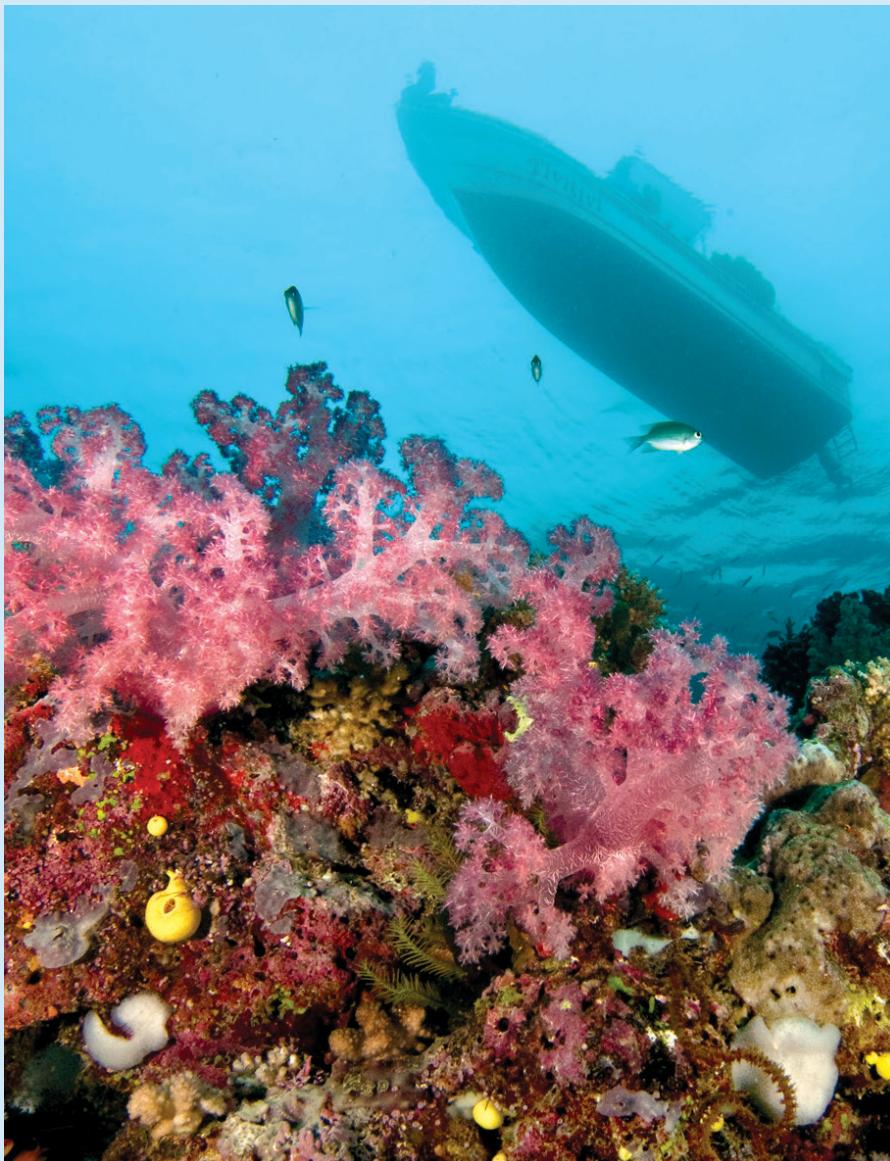
Conserve critical habitat

Creating MPAs in Chile, Fiji, and Congo

With the Waitt Foundation's generous support, WCS has started MPA initiative campaigns in three countries. At the Our Oceans Conference in Valparaíso in October 2015, the Government of Chile announced its plan to design a network of MPAs. The network will protect the waters of Patagonia, an ecoregion of southern Chile home to many marine species including the blue whale, humpback whale, and southern right whale, as well as sea birds and many other coastal species. WCS is now leading this collaborative effort, leveraging the country's political will to expand protection of its waters by more than 100,000 square kilometers.

In Fiji, WCS is working with the government and other partners to establish the first formal MPAs in offshore waters of the Vatu-i-Ra Seascape, an important center of marine biodiversity and fisheries biomass. The campaign will expand protection in Fiji's waters by more than 8 percent and include no-take areas across approximately 12,950 square kilometers of offshore waters. The recent events of Tropical Cyclone Winston have caused a hiatus on conservation and field work while the government focuses on recovery efforts. Currently, WCS Fiji is aiding immediate relief activities, but long-term planning for this MPA establishment will continue at a later date.

The Congo coast hosts significant numbers of vulnerable nesting sea turtles and provides habitat for many cetaceans, including migrating and breeding humpback whales and endangered Atlantic humpback dolphins. WCS is the only international NGO working on marine conservation in the Republic of Congo. Here, we are collaborating with local and international stakeholders to extend the only existing MPA, identify and design new MPAs, and establish a broad marine conservation initiative that includes the first cohesive management plan for Congo's vulnerable species and coastal resources. 🐡



THE VATU-I-RA SEASCAPE OF FIJI IS ONE OF THE MARINE ECOREGIONS THAT WCS IS HELPING TO FORMALLY PROTECT.



WCS Study Combating Blast Fishing in Tanzania

Coral reefs are among the most biologically diverse and productive of the world's habitats. More than 90 percent of coral reefs along the continental shores of the Indian Ocean are threatened by local or climate-related impacts, with more than one-third believed to be at high risk. Reefs occurring along the vast majority of the Tanzanian coast have become increasingly degraded from the use of explosives to catch fish. Shallow areas and reefs are frequently targeted for blast fishing because large concentrations of stunned fish

Recovery of coral reefs from a single, isolated blast takes 5 to 10 years, making it critical to protect reefs from further blasting.

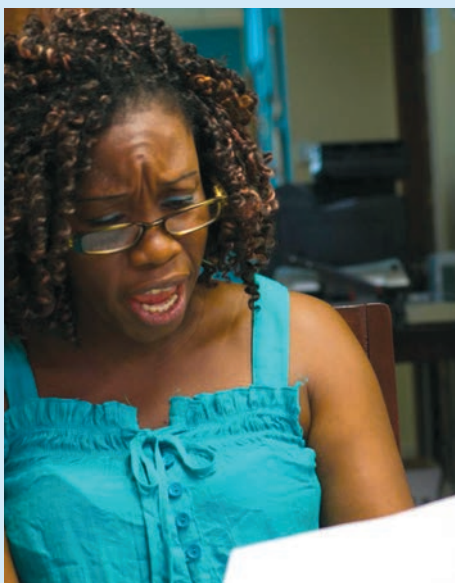
can be collected by hand or with nets after an explosion. The damage caused by a blast shatters all corals within 1 to 2 meters from the center of an explosion, typically killing most marine organisms, including invertebrates, within a 10 to 30 meter radius. Recovery of coral reefs from a single, isolated blast takes 5 to 10 years, making it critical to protect reefs from further blasting. In addition, shock waves from blasts may cause trauma to marine mammals and disrupt their communication, breeding behavior, and navigation. The region's most endangered cetacean, the Indian Ocean

humpback dolphin, as well as the Indo-Pacific bottlenose dolphin are both restricted to the habitats where blast fishing is most intense.

In the spring of 2015, while conducting acoustic surveys for cetaceans, WCS collected over 231 hours of acoustic recordings for more than 2,692 kilometers along the Tanzanian coast. A total of 318 blasts were detected, 39 percent of which were within 50 kilometers of the city of Dar es Salaam. The results demonstrated the extent of the destructive fishing problem, as almost the entire coastline of the country is affected.

Using the analysis of the data from this study, WCS has presented one of the first national assessments of blast fishing along Tanzania's coast. This highlighted hotspots where environmental impacts are likely to be greatest and where enforcement should be focused for maximum impact. WCS's data identifies where blast fishing is most prevalent, thereby assisting the government's Multi-Agency Task Team, a newly established environmental and wildlife crime force, to target their enforcement activities. In addition, WCS is now using fixed acoustic monitors in the most heavily impacted areas in order to provide the task team with information on whether their interventions are lowering blast fishing activity and how long those changes last. Through this long-term monitoring of blast patterns, WCS will help the authorities combat this illegal and destructive activity. ♡

DURING THE SURVEY, BLASTS WERE DETECTED ALONG THE ENTIRE LENGTH OF THE TANZANIAN COAST WITH VIRTUALLY ALL AREAS AFFECTED.



PUNTA FUEGO ACTOR IN ACTION AT THE STUDIO.

Conservation Radio Drama in Belize

Throughout the summer of 2015, Belizean listeners tuned in weekly to the first season of *Punta Fuego*, a new hit radio show focused on the story of a young fisherman, Richie, and his diverse cast of counterparts. Co-sponsored by WCS, the show is a unique approach to sharing knowledge, shifting attitudes, and promoting positive behaviors with regard to responsible fishing, marine-protected areas, and replenishment zones. The effort aims to foster more sustainable fisheries in Belize. By elevating the importance of ordinary Belizean fishers and sustainable fishing practices, *Punta Fuego* enabled the Belizean public to gain a deeper understanding of this industry. In 2011, this sector accounted for 25.95 million BZD in export earnings, representing 2.2 percent of Belize's GDP, and in 2012 supported nearly 3,000 fishers.

The challenges and conflicts that characters faced in each episode brought to life critical issues

pertaining to responsible fishing on an individual and community level. The storyline focused on building support for the expansion of replenishment zones and promoting innovative fisheries initiatives, such as managed access. Through the show's call-in portion, WCS brought in fishers as well as representatives from the Fisheries Department to discuss the various fisheries management tools utilized and answer questions from the public.

An evaluation conducted amongst fishers in 4 cities (Belize City, Dangriga, Sarteneja, and Hopkins) revealed that approximately 34 percent of the surveyed population listened to *Punta Fuego*. Furthermore, those who listened to the show demonstrated a higher degree of knowledge about Belize's fisheries regulations, ability to recognize the benefits of marine protected areas, and likeliness to share their knowledge with other fishers. *Punta Fuego* will return in June 2016 for a second season. 💙



A Conversation with Martin Callow

Martin Callow is the Marine Technical Advisor for the WCS Myanmar Program. Since joining WCS in 2008, he has helped lead the transformation of the Fiji program, focusing on community-based marine and coastal management. He has also helped establish WCS's presence in Europe. Martin has also supported fisheries efforts in Belize and Gabon, private sector engagement, and the development of a global strategy for sharks and rays.

What do you do at WCS?

MARTIN CALLOW: My role is to work with my Myanmar colleagues to lead the development and growth of a new marine program in Myanmar. While WCS has been in Myanmar for 23 years, our marine work here is new. We are focusing on four strategic areas: sustainable coastal fisheries; marine spatial planning and supporting MPA developments; marine mammals, sharks, and rays (global priority species groups for WCS); and working with the offshore oil and gas sector to safeguard marine biodiversity.

I am thrilled to be spearheading a new initiative in a country where so much

governmental transition is happening. We are hoping that the incoming National League for Democracy will have a strong interest in fisheries and coastal issues, which historically have been somewhat neglected. It's a very exciting and dynamic time to be here with the new democratic leadership in the country.

Are you optimistic that the positive political tone will help these transitions?

MC: One of the opportunities coming forward is through the decentralization of government from the national level to more of the states and regions. Community groups, coastal people, local governments, and the private sector have an opportunity to work more collaboratively for coastal conservation and fisheries management. This is very positive because that's what WCS does best—working on the ground with local people to support participative conservation management. We will be starting our partnership efforts in Rakhine—an area with significant small-scale fisheries, populations of coastal dolphins and dugongs (a marine animal similar to the manatee), and large, intact mangrove habitats. There we will focus on supporting recovery of fish stocks and conservation of these unique habitats and species.

What is your favorite WCS memory?

MC: They happen almost every day. If I had to pick, it would be being in Belize for the opening of the lobster fishery and sharing that experience with the local fishermen, who had entrusted their livelihoods with WCS under new fisheries management practices. It has been a real joy to see their trust rewarded through WCS and partners' ongoing efforts to support sustainable fisheries management.

Similarly, working with the communities in Fiji and witnessing the trust that our local teams generate in working with coastal people. Seeing conservation benefits secured to people is really special. Those are moments that you treasure as much as time spent with wildlife. It's the people that make conservation work. 💙



Conserving the World's Sharks and Rays

MARINE WILDLIFE

WCS has launched a collaboration with shark experts from around the world on a 10-year global conservation strategy for sharks and rays, as well as the design of a Global Sharks and Rays Initiative (GSRI) to implement this strategy. The strategy is a product of extensive data analysis and synthesis by experts from GSRI partner organizations: WCS, Shark Advocates International, Shark Trust, TRAFFIC, WWF, and technical advisors from the IUCN Shark Specialist Group.

Priorities for shark and ray conservation identified through the GSRI strategic planning process include:

- Saving shark and ray species
- Managing shark and ray fisheries for sustainability
- Ensuring responsible trade in shark and ray products
- Encouraging responsible consumption of shark and ray products

The GSRI's vision is for sharks and rays throughout the world to fulfill their ecological roles, sustain well-managed fisheries, and be valued by all for their critical contribution to ecosystem health and human well-being. The strategy also includes an overarching goal to improve the conservation status of sharks and rays by 2025—halting declines, preventing extinctions, and increasing global commitments to their conservation.

Sharks and rays are an irreplaceable part of the world's biodiversity and they perform vital ecological roles. However, these animals are at great risk. A recent analysis by the IUCN Shark Specialist Group estimated that one quarter of all species within this group are likely threatened with extinction. This

high rate of risk, caused primarily by overfishing, distinguishes this group of fishes as among the most threatened of the world's vertebrate groups. The GSRI's global strategy provides a roadmap for expanding commitments and prompting action to ensure the conservation of these vulnerable and ecologically-valuable fishes. Along with highlighting the need for more attention to rays, the strategy emphasizes that science-based limits on shark and ray fishing and trade are urgently needed to end overfishing and ensure sustainability.

The strategy was released during the Convention on the Conservation of Migratory Species meeting on Shark Conservation in Costa Rica in February 2016. For those shark and ray species listed in the CMS Appendices, WCS and partners called on member countries to ensure that several key steps are taken in line with the convention obligations, including: establishing strict national protections for all five endangered sawfish species and all manta and devil rays; and

One quarter of all species within this group are likely threatened with extinction.

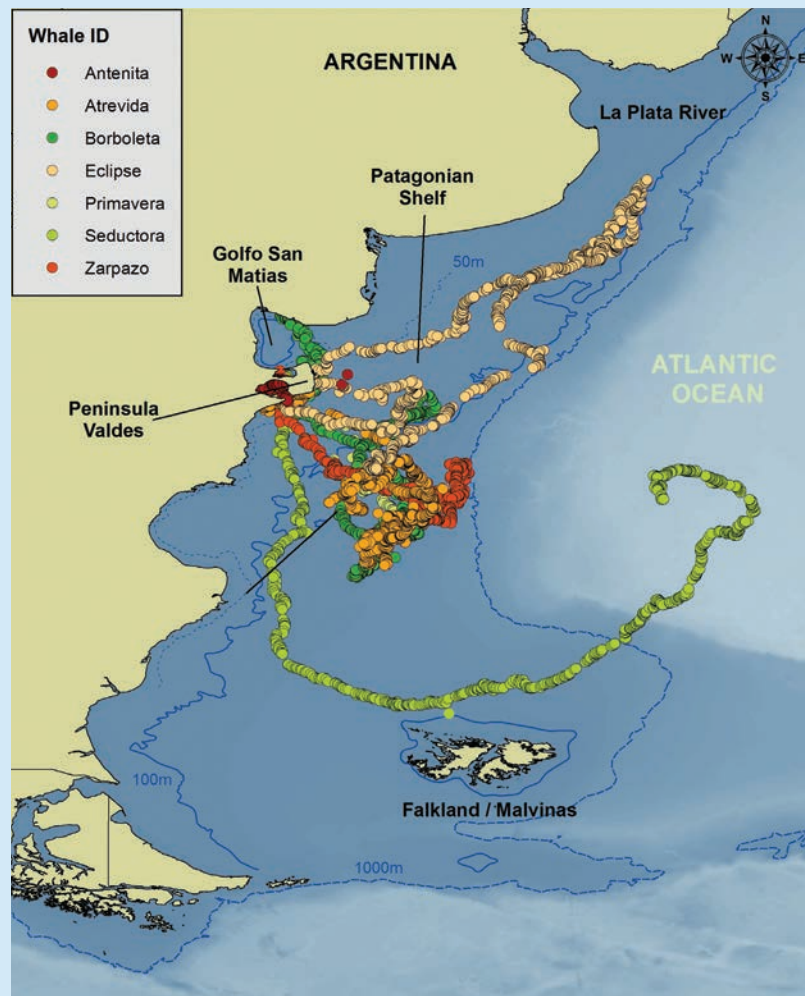
adopting national and regional fishing limits for heavily-fished, highly migratory sharks such as mako, hammerhead, and thresher sharks.

Sharks and rays face a precarious future, with serious consequences for marine and freshwater ecosystems, and the human communities and livelihoods that depend on them. The holistic *Global Priorities for Conserving Sharks and Rays: A 2015–2025 Strategy* (wcs.org/GSRI) represents an unprecedented, coordinated initiative to brighten that future. 💙

Tracking Southern Right Whale Movements and Links to Unsolved Deaths

In 2014 and 2015, WCS successfully affixed 12 southern right whales with satellite tags in the Golfo Nuevo of Península Valdés, Argentina in an effort to evaluate potential threats causing a recent high death rate among these animals. Over the last decade, southern right whales have died in unprecedented numbers near their nursing grounds in Argentina, with a large number of deaths being calves. The satellite data transmitted from the tags has provided first-time information on the migratory paths and locations of feeding grounds in the South Atlantic. More than 41,000 kilometers of movements and migrations from Península Valdés and key feeding areas throughout the southwestern Atlantic were mapped. From the study, WCS has identified three previously unknown areas that are likely southern right whale feeding grounds, located: along the Patagonian shelf near Península Valdés; in areas north of the Falkland Islands, also known as the Malvinas Archipelago; and in the waters around South Georgia.

As previously planned, WCS is testing stranded southern right whales for disease, contaminants, and genetic relationships to identify mothers or families that are more susceptible to losing calves. WCS will also supplement the migration studies by investigating the issue of seagull attacks on southern right whales, as well as reviewing tourism in and around whale habitat in the waters of Península Valdés. 💙



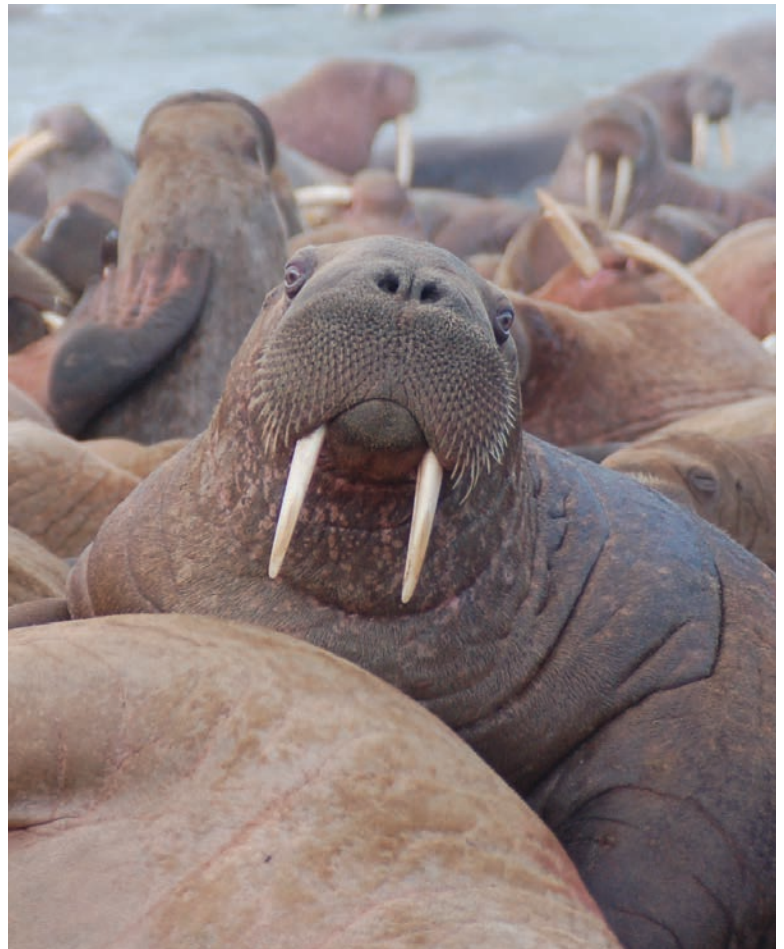
MORE THAN 41,000 KILOMETERS OF MOVEMENTS AND MIGRATIONS FROM PENÍNSULA VALDÉS TO KEY FEEDING AREAS THROUGHOUT THE SOUTHWESTERN ATLANTIC WERE MAPPED IN 2014 AND 2015.



Spotlight on the Arctic

Arctic Beringia is a wild place like no other. Here, tundra and coastal habitats provide a home for iconic wildlife, such as bowhead and beluga whales, walrus, seals, and polar bears. Indigenous cultures rely upon the region's wildlife and environment for their health, food security, and cultural vitality. Today, Arctic Beringia is in an unprecedented era of transition. Compounded by rapid climate change, burgeoning industrial development and profound cultural changes are altering the natural rhythms of the people and wildlife that have evolved in tandem to thrive in this climate.

Since the geographic region encompasses a complex suite of governments and indigenous political entities, effective conservation here requires both cross-cultural and multi-lateral stewardship activities. The following three stories illustrate how WCS is mitigating the impacts of climate change and commercial activity in the region through scientific research, management strategies, and collaboration at the local, national, and international levels.

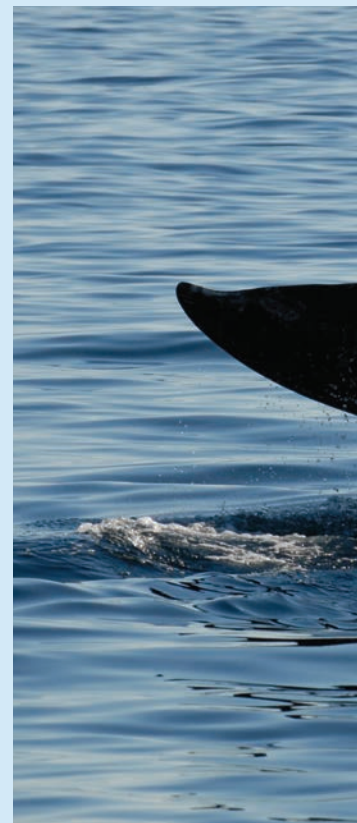


Listening to Whales and Shipping Noise

To investigate and mitigate the impacts of increased industrial activity in Arctic Beringia, such as shipping and oil and gas development, WCS initiated a multi-year project for collecting and assessing data on marine mammal populations. Because of their excellent hearing abilities and dependency on sound for basic biological functions such as foraging and reproduction, marine mammals are particularly susceptible to the increase in environmental noise generated by the growing activity in the region. A collection of baseline information on whale populations in addition to other biological, environmental, and human-generated sounds in the Bering Strait will allow us to assess changes to this ecosystem, identify potential conflicts between developers and marine mammals or indigenous subsistence activities, and help develop and implement effective mitigation measures.

Our team has made significant progress on the analysis of two recorders that were deployed in the summer of 2013 and fall of 2014, which were recovered during the

fall of 2013 and summer of 2015, respectively. Over 47 hours of animal activity were recorded on each instrument, revealing the presence of vocalizations from killer, beluga, bowhead, minke, and humpback whales, as well as bearded seals and walrus. The detection of these marine mammal vocalizations, in addition to the data collected from five additional recorders during summer 2015, will be used to develop an automatic detection method. These methods will reduce the amount of time required to process data from multiple recorders, and could be used in the Bering Strait region to help alert mariners about the presence of marine mammals. Analysis of observed patterns will reveal which areas are most important to these marine mammals, and how environmental changes influence their behaviors. WCS will integrate these results in wider management and recommended mitigation strategies to protect whales and minimize impacts from increased noise. ♡



Engaging Local Communities to Mitigate the Impacts of Shipping

WCS is engaging communities in northern Alaska to protect marine ecosystems, develop best practices for shipping activities, and foster local understanding of wildlife and their threats. Local communities rely on their nearshore marine areas for food and livelihoods. WCS is collaborating with local fishermen and indigenous hunters to deploy acoustic monitoring units, reflecting the region's keen interest in ensuring the long-term health and conservation of marine mammals.

As part of our approach to conservation in the Arctic, WCS successfully supported the creation of the Arctic Waterways Safety Committee in 2014, a coalition of local stakeholders who advocate for policies that minimize impacts to subsistence resources in the Arctic's waterways. Preparations for the Arctic Waterways Safety Plan have begun, which will be the principle source of information for mariners in the United States Arctic to reduce the impact of ships and industrial activities on marine mammals and the indigenous communities that have relied on them for thousands of years. 🐋



Ship Traffic Control for Marine Mammals

In partnership with researchers and practitioners from the National Oceanic and Atmospheric Administration, U.S. Coast Guard, Space Quest, Google, and SkyTruth, WCS helped advocate for analysis on the potential use of an automatic tracking system to protect whales and other marine mammals from shipping threats. This recent study shows how the Automatic Identification System (AIS), a maritime vessel communication and navigational system, can be effective in helping protect the safety of not just people, but marine species such as whales. AIS can be used to identify areas where whales have a greater chance of being struck by vessels. They can also identify specific vessels, and determine which vessels are noisier and will consequently be likely to have the biggest noise impact on marine mammals.

Understanding vessel traffic in relation to marine conservation is critical in the Arctic as ships increasingly ply these icy waters. Combined with acoustic monitoring of marine mammals, WCS will continue to lead this use of AIS to identify regions where shipping lanes and important mammal habitats and migrations overlap as well as the sources that disrupt marine mammal behaviors and migrations. 🐋



New York Aquarium Helps Create a Mid-Atlantic Regional Ocean Plan

The National Ocean Policy was established in 2010 by a Presidential Executive Order calling for federal agencies to work more effectively with states, tribes, and stakeholders on a regional level to better manage the nation's oceans and coasts. The Executive Order called for the establishment of the Mid-Atlantic Planning Body to coordinate and implement regional ocean planning with state, federal, tribal, and Fishery Management Council representatives.

WCS's New York Aquarium is contributing to the development of the regional ocean action plan by providing scientific expertise and advocating for the identification and protection of core habitats from New York to Virginia for sensitive marine mammal, fish, turtle, and bird species. Areas that we hope will be identified include inshore and offshore migratory pathways like those traversing the

continental shelf break and the Hudson Canyon, just off the coast of New York City.

The Aquarium will work with decision makers as well as the commercial and recreational fishing industries, conservation groups, and others to ensure that only human activities that are compatible with wildlife and habitat protection occur in these areas. The process of creating and implementing a Mid-Atlantic ocean plan will also include opportunities for public participation during the summer of 2016. Raising public awareness and engagement is critical to securing protection for these valuable ecological areas. The New York Aquarium is a powerful platform for large, local audiences, including visitors and online activists, to convene on important conservation issues and call on decision makers to ensure ocean health. ♡

Leveraging Innovative Partnerships to Ban Microbeads

The New York Aquarium has been elected to the newly launched Aquarium Conservation Partnership's (ACP) Executive Committee. The ACP membership currently consists of 18 aquariums, and was established at the annual Association of Zoos and Aquariums meeting in September 2015 to collectively advocate for ocean conservation policy. The New York Aquarium is one of six organizations leading the coalition, along with the Monterey Bay Aquarium, National Aquarium, Seattle Aquarium, Shedd Aquarium, and South Carolina Aquarium. As part of this two-year pilot project, the ACP will focus on ocean issues at the federal, state, and regional level, beginning with action around plastic pollution.

The potential of this partnership has already been proven by the Microbead-Free Waters Act of 2015, which Congress passed and the President has signed into law. Each aquarium leveraged scientific marine research and its millions of aquarium members and visitors in support of this important legislation. As part of the Executive Committee, WCS helped disseminate scientific studies showing the negative impacts of plastic pollution to key decision makers, including President Obama and members of Congress. This engagement helped secure passage of this bill into law, thereby restricting the use of plastic microbeads on the federal level.

Following the success of the Microbead-Free Waters Act, the New York Aquarium will continue working with the ACP in addressing other ocean challenges, including threats to sharks and important marine habitats, such as New York's Hudson Canyon. ♡



RESEARCHERS FROM THE AQUARIUM'S NY SEASCAPE PROGRAM TAGGED 10 NEW SAND TIGER SHARKS IN 2015.

Shark Nursery Discovered in New York

New York Aquarium scientists recently discovered a nursery area for sand tiger sharks in Long Island's Great South Bay. Over the past four years, our researchers used acoustic and satellite tags, devices that enable remote tracking of marine animals as they swim through their environment, to collect a wealth of information on sharks in local waters. The data confirmed the existence of the nursery in Great South Bay, one of the rich estuaries found along Long Island's south shore. The Great South Bay provides sand tiger sharks up to five years in age with a place to feed and grow. The nursery also gives juvenile sharks protection from predators, including larger sharks.

The discovery is important because the sand tiger shark has been heavily depleted by overfishing and is listed as a "Species of Concern" by the U.S. National Marine Fisheries Service. Because a female shark gives birth to only one or two pups every two years, this sand tiger shark population will need years to rebuild. Protecting the nursery will help promote sand tiger shark recovery in the coastal waters of the eastern United States. Recreational and commercial fishing for sand tiger sharks is prohibited in Great South Bay and in all state and federal waters. However, like most coastal and offshore waters in New York, a great deal of boating, recreational fishing, dredging, and other human activities take place in the bay,

posing potential threats to these sharks and other marine wildlife.

This marine research is an initiative of the NY Seascape Program based out of the New York Aquarium to study and protect the more than 40 species of sharks and rays that frequent New York waters. In 2016, the NY Seascape team will expand their efforts with more shark tagging, health

The discovery is important because the sand tiger shark has been heavily depleted by overfishing.

studies, and habitat assessments. They will address questions such as how much of the bay is used by these sharks, the number of young sharks in the bay each summer, and what the sharks are eating. Public outreach is already underway to help improve the conservation status of sand tiger sharks and other local sharks and rays.

Sharks will be the central focus of *Ocean Wonders: Sharks!*, the 57,000-square-foot exhibit currently under construction at the New York Aquarium. Visitors to the expanded Aquarium will see new interactive exhibits with 100 marine species that thrive in the New York seascape, including sharks and rays, and will learn how to make everyday choices to protect them. ♡

First Real-time Acoustic Monitoring of Whales in New York

In early spring, the New York Aquarium successfully deployed a high-tech acoustic monitoring buoy with the Woods Hole Oceanographic Institution (WHOI), our partner in a joint venture to monitor the presence of whales. This study will equip us with data to protect whales in the extremely busy waters of the New York Bight.

While similar buoys have been deployed by WHOI off the coasts of Massachusetts and Maine this year, the real-time technology is being used for the first time in the waters of the New York Bight—a region encompassing more than 41,000 square kilometers of coastal and ocean waters between Montauk, New York, and Cape May, New Jersey. Little information exists on how whales are affected by ship traffic and ocean noise here.

Despite having some of the busiest shipping lanes in the world, the New York Bight is also home to seven species of great whale, including the humpback whale and the world's largest animal, the blue whale. One of the world's rarest whale species, the highly endangered North Atlantic right whale, also migrates through New York waters. The fin, sei, minke, and sperm whales have also been seen or heard in the waters of the New York Bight. All whale species rely on their acoustic environment to socialize and navigate, and they are vulnerable to the impacts of underwater noise, ship strikes, and fishing gear entanglements.

The buoy is located 35 kilometers south of Fire Island's west end between 2 major shipping lanes entering New York Harbor, and stretches about 1 meter in diameter with a mast standing about 2 meters above the ocean surface. Sound is recorded and processed from a unique acoustic instrument that sits 38 meters below on the sea floor in a weighted frame. Information about detected sounds is transmitted from the instrument up to the buoy through patented "stretch hoses," and to the shore through a satellite system.

WCS and WHOI scientists will use the data to formulate new strategies for safeguarding the area's whale populations and coordinate with state and federal agencies to protect whales and their most important habitats. The New York Aquarium will make the analysis available to the public as part of its digital engagement to raise awareness about the diversity of marine wildlife of the New York Bight, a critical step towards conserving our region's natural riches. 💙



WHALES FOUND IN NEW YORK WATERS:

Humpback whale

Blue whale

North Atlantic right whale

Fin whale

Sei whale

Minke whale

Sperm whale



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