

Partnerships for Transboundary Protection: A Collaborative Program to Conserve Connectivity

Asociaciones para la Protección Transfronteriza: Un Programa de Colaboración para la Conservación de Conectividad

Partenariats pour la Protection Transfrontière: Un Programme de Collaboration à Conserve Connectivité

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EXTENDED ABSTRACT

Partnerships for Transboundary Protection (PTP) is an initiative within the National Oceanic and Atmospheric Administration (NOAA) that aims to build partnerships to link and align place-based and species conservation efforts within and beyond U.S. waters. The founding partners are the Office of National Marine Sanctuaries (ONMS, within NOAA's National Ocean Service) and the Office of Protected Resources (OPR, within NOAA's National Marine Fisheries Service). The PTP concept originated during discussions about compliance with Section 7(a)(1) of the Endangered Species Act (ESA), which requires Federal agencies to "utilize their authorities...by carrying out programs for the conservation of endangered species and threatened species" (16 U.S.C. § 1531 et seq.). In 2004, ONMS and OPR held a strategic planning workshop that identified the need to develop a long-term collaborative program, which has not been established until now. The PTP program fulfills the statutory requirement and meets the need for long-term collaboration by institutionalizing interoffice collaboration to achieve shared objectives and create links to meet conservation goals.

ONMS and OPR have distinct, yet somewhat overlapping, statutory authorities that aim to protect marine ecosystems. ONMS has authority to protect important places pursuant to the National Marine Sanctuaries Act (16 U.S.C. § 1431 et seq.), and OPR has authority to protect certain species pursuant to the ESA and the Marine Mammal Protection Act (16 U.S.C. § 1361 et seq.). These statutes have some overlapping components, and PTP provides a mechanism to coordinate conservation and protection of living marine resources and habitats that span jurisdictional boundaries. Furthermore, collaboration with foreign governments and non-governmental organizations is required to protect species and special places beyond the limits of U.S. domestic law and existing treaties. The PTP program provides a platform for domestic and foreign interagency and organizational collaborations to protect marine species and places. Such collaborations cross boundaries of states and countries and encourage agencies to use their statutory authorities for joint conservation of species and places.

The premise of PTP is connectivity-driven marine conservation. The cornerstones of connectivity are species, important places, legal authorities, and the human dimension. Biological connectivity can catalyze new human connections and strengthen existing relationships that aim to conserve shared living marine resources. Transboundary species, including highly migratory, regionally motile, and drifting pelagic organisms, provide natural opportunities for connectivity among local, state, Tribal, Federal, foreign, international, non-governmental, and academic organizations to coordinate efforts to protect the global marine environment. Such efforts focus on species and place-based protection and may also emphasize geographical regions, taxa, research efforts, stressors, capacity building, or diplomacy. The PTP program has the following goals:

- i) Improve coordination between marine protected area management plans and species recovery plans to increase protection of species under multiple jurisdictions,
- ii) Identify conservation strategies and mechanisms to conserve species and places that fall outside management and recovery plans, and
- iii) Identify, support, and enhance interagency and international collaboration that conserve marine species and places.

Some existing agreements, projects, and programs fall within the scope of PTP and provide good examples for additional concepts to protect other species and places. In the Wider Caribbean Region and beyond, a notable success story is that of the North Atlantic Humpback Whale Sister Sanctuary Program. A population of about 1,000 humpback whales feeds during summer through fall in the Gulf of Maine, and they mate and give birth in the winter in the Caribbean. The Stellwagen Bank National Marine Sanctuary started the program in 2006, and it now includes four other countries (Ward 2016). The U.S. has sister sanctuary Memoranda of Agreement focused on protection of the humpback whale with the Dominican Republic (2006), the French Antilles (2011), and Yarari (2016) where the whales mate and give birth; and with Bermuda (2012), which is in the middle of their migratory corridor (Figure 1). Similarly, a Memorandum of Agreement with Mexico is anticipated this year (2016). The program led to the establishment of the first international Marine Mammal Protected Area Network in 2015. Another successful outcome of these partnerships is the CARIB Tails program, which is a citizen science program for boaters that involves identifying and tracking individual humpbacks by photos of flukes that helps monitor recovery of the species.

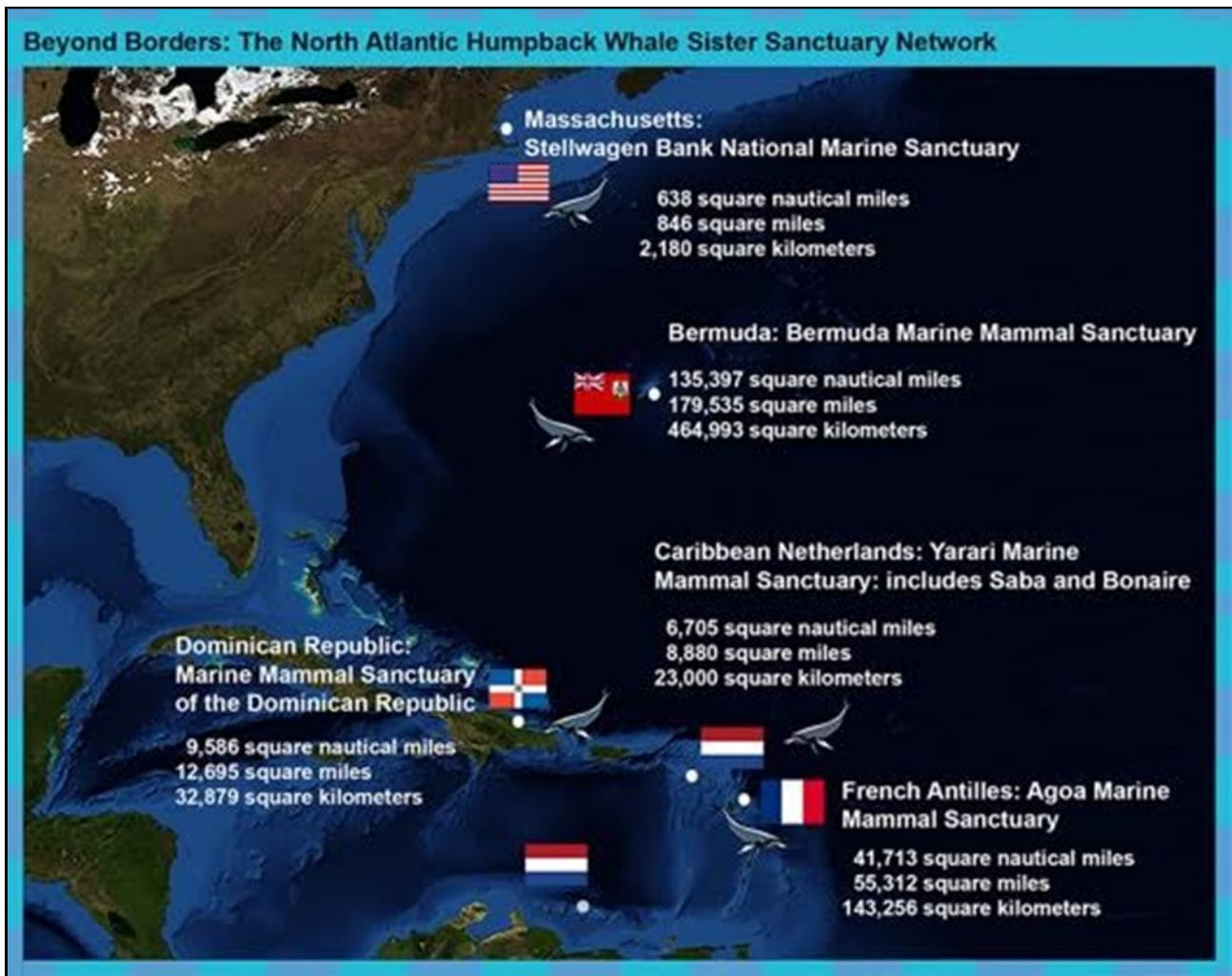


Figure 1. Partners of the North Atlantic Humpback Whale Sister Sanctuary Program.

As the PTP program gains momentum, several new projects have been proposed. One of the project proposals in the Wider Caribbean Region focuses on the protection of Nassau Grouper (*Epinephelus striatus*) spawning aggregations as a means to support population recovery. The IUCN (International Union for Conservation of Nature) listed the Nassau grouper as endangered in 2003 (Cornish and Eklund 2003), and NOAA listed the Nassau Grouper as threatened in 2016 (81 FR 42268). On November 3, 2016, the United States proposed the listing of the Nassau grouper in Annex III of the Specially Protected Areas and Wildlife (SPAW) Protocol (part of the Cartagena Convention). The proposal to the SPAW Scientific and Technical Advisory Committee was well received, and the proposal will be voted on at the Conference of the Parties in 2017. Overfishing caused population decline and ensuing reductions in the number and size of spawning aggregations. Some management measures have reduced fishing pressure, but the reduced number and size of spawning aggregations and the inadequate law enforcement support the recent listing. Several genetic analyses indicate that

regional gene flow is high partly because no physical barriers prevent long-distance dispersion of Nassau grouper larvae throughout the Wider Caribbean Region, but the possibility of genetic barriers among Nassau Grouper subpopulations support use of local management tools with regional standardization (Jackson et al. 2014). Additional research is warranted to determine the contributions of long-distance dispersal and local retention of larvae to the Nassau grouper population or metapopulation. Currently, fishery management approaches for the species are not consistent among countries. The project proposal aims to develop methodology for additional research on aggregation sites and to develop options or standards for spatiotemporal fishing restrictions on aggregations. Potential outcomes of the project would be restricted or disallowed fishing at aggregation sites during known spawning time periods, improved knowledge of use of aggregation sites, identification of unknown aggregation sites, and establishment of a Caribbean-wide network focused on Nassau grouper spawning aggregations. Appropriate partners for the PTP Nassau grouper project would be resource

management agencies from SPAW Protocol signatories that have spawning aggregations as well as academia and international organizations, such as the Gulf and Caribbean Fisheries Institute (GCFI) and the Reef Environmental Education Foundation (REEF).

Additional PTP project proposals in the Wider Caribbean Region include a connectivity and threat assessment for migratory species in the Gulf of Mexico, addition of conservation actions for transboundary management (e.g., genetic and acoustic research to determine extent of connectivity) of humpback whales to the North Atlantic Humpback Whale Sister Sanctuary Program, and identification of the distribution of ESA-listed corals beyond U.S. waters in the Caribbean. ONMS and OPR will continue to work together through the PTP program to identify project ideas and cultivate collaborators, and the PTP program also welcomes potential partners to present project concepts to link place-based and species conservation efforts throughout the region.

KEYWORDS: Partnerships, transboundary, Nassau grouper, connectivity

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