

# Expanding The Bahamas Marine Protected Area Network to Protect 20% of the Marine and Coastal Environment by 2020: Gap Analysis Executive Summary

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## THE POWER OF MARINE PROTECTED AREAS

- An effectively managed network of marine protected areas is a powerful tool to preserve biodiversity and ecological processes;
- In 2016, The Nature Conservancy partnered with The Bahamas National Trust (BNT) and The Bahamas Reef Environment Educational Foundation (BREEF) to assist the Government of The Bahamas in meeting its commitment to the Caribbean Challenge Initiative (CCI) by protecting 20 percent of its coastal and marine environment by 2020;
- This gap analysis identifies gaps in the existing protected area network that are priority areas for establishing new Marine Protected Areas (MPAs);
- Although The Bahamas has made progress in meeting or exceeding the area coverage goal for many marine conservation features, there are approximately 20 features that fall short of nationally set targets:
  - Only half of the tidal creek habitats throughout The Bahamas are protected;
  - Less than 20% of all fish spawning aggregations occur within MPAs; and
  - Approximately 8% of sea grass habitat is represented in the network.
- Fifty-one (51) "Areas of Interest" were identified in this analysis and if declared would double the percentage of marine protected areas in The Bahamas;
- The Bahamas is likely to obtain the greatest benefit from the 51 "Areas of Interest" if it increases the percentage of Highly Protected Areas and focuses future efforts on the effective management of The Bahamas National Protected Area System.

The Bahamas has one of the largest marine territories of any country in The Caribbean covering more than 237,584 square miles (382,354.38 kilometers). The marine and coastal resources of The Bahamas—its coral reefs, beaches, fisheries and mangroves—help to define its people and culture, support marine biodiversity, and provide critically important ecosystem services. These resources also serve as an essential economic engine, supporting jobs, income and overall economic prosperity for Bahamians.

**But the marine and coastal resources of The Bahamas face increasing threats: unsustainable fishing, coastal development, invasive species, pollution and climate change.**

An effectively managed marine protected area (MPA) network is a powerful tool to preserve these essential resources. That is why in 2008, The Bahamas joined the Caribbean Challenge Initiative—committing to effectively conserve and

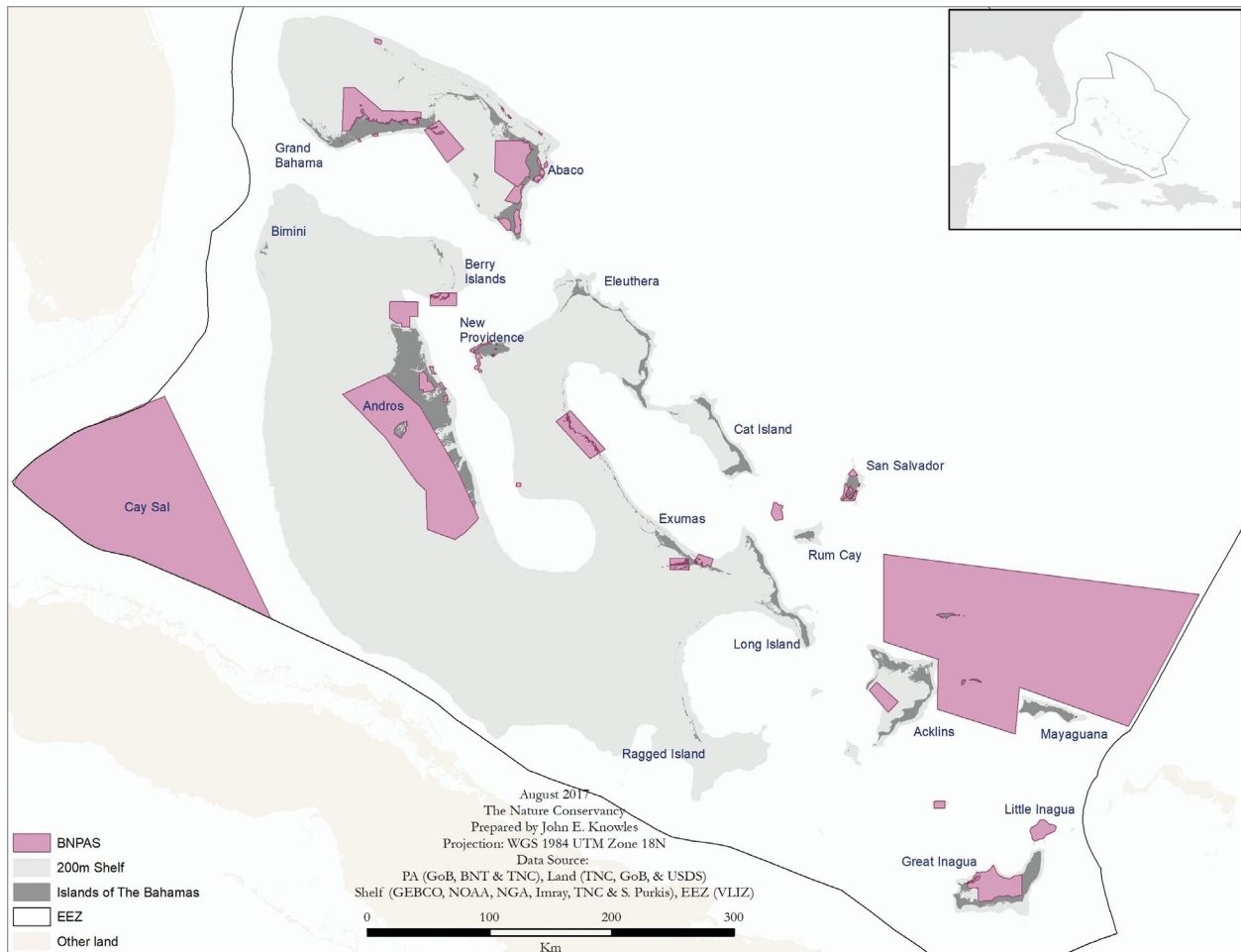


Figure 1: The Bahamas National Protected Area System (BNPAS)

manage at least 20 percent of its marine and coastal environment by 2020.

Currently, The Bahamas National Protected Areas System (BNPAS) protects approximately 10 percent of the country’s marine and coastal environment. See Figure 1. In order to support the Government of The Bahamas in meeting its commitment and identify priority areas for protection, The Nature Conservancy and its partners commissioned a national marine gap analysis.

## DETERMINING THE GAP

In 2016, The Nature Conservancy partnered with The Bahamas National Trust (BNT), The Bahamas Reef Environment Educational Foundation (BREEF) and other national stakeholders to implement the three-year project, *Bahamas Protected: Realizing the 2020 Goal to Effectively Manage & Expand Bahamian Marine Protected Areas*.

The goal of the gap analysis is to identify biodiversity and essential ecosystem goods and services not adequately conserved and managed by the current system of protected areas. Two national gap analyses have been conducted previously in The Bahamas. Here, the results of a third gap analysis are provided to identify gaps in the existing BNPAS that are priority areas for establishing new MPAs to increase coverage to realize the ‘20-by-20’ goal.

To do this, The Bahamas Protected team held three national workshops, consulted over 40 local and international scientists and field practitioners, and sought strategic advice from the National Implementation Support Partnership (NISP).

The results build upon previous work by:

**Expanding the objectives of the BNPAS beyond biodiversity protection to include climate change and socioeconomics (e.g. to support Bahamian livelihoods).**

In previous iterations, the objectives for the BNPAS were broad and did not factor in the threat of climate change. Through workshops and deliberation with the NISP, The Bahamas Protected working group developed SMART objectives—Specific, Measurable, Attainable, Resourced and Time bound—to inform the gap analysis:

- By 2020, bearing in mind the impacts of climate change, identify and protect diverse marine ecosystems and critically important species.
- By 2020, protected areas (marine and terrestrial) will contribute to maintaining and improving Bahamian livelihoods by maximising the benefits and minimising the costs of protected areas to local communities and stakeholders.

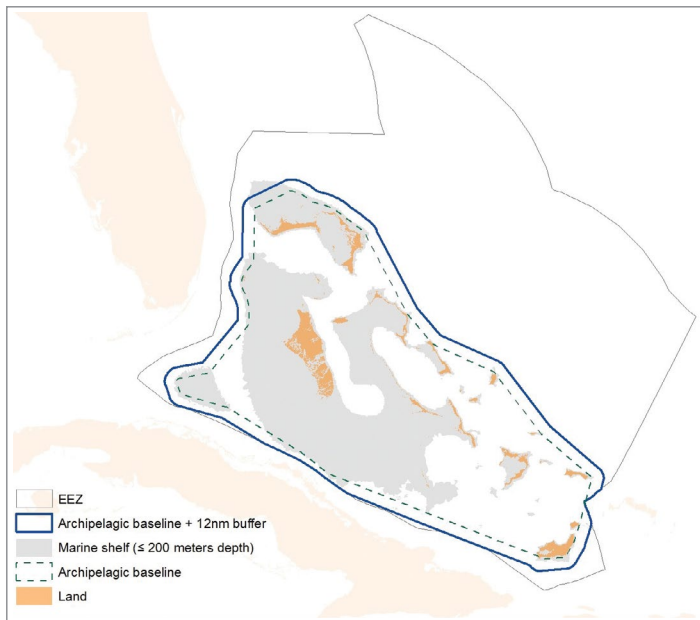


Figure 2: Planning area for the marine gap analysis: the territorial waters of The Bahamas (archipelagic baseline plus a 12-nm buffer).

### Specifying a planning area that aligns with multiple national planning processes.

When this analysis began, discussions had been ongoing in The Bahamas about how to measure conservation success—but without consensus on a planning area, there was no way to report progress nationally.

After considering three different options, the NISP recommended that the territorial waters (archipelagic baseline plus the 12-nautical mile buffer) be used as the planning area for this marine gap analysis since it provides the best option both ecologically and politically. See Figure 2. This area integrates and recognizes the archipelagic nature of The Bahamas; it incorporates most of the <200-meter-deep marine shelf and some deeper habitats, most activities occur within this area; and it aligns with other national planning processes (this area is accepted by the UNCLOS and has been adopted by coastal zone management efforts).

### Defining the types of zones to consider in the analysis.

An important component of a well-designed MPA network is the existence of various levels of protection or protected areas with different objectives, with some more stringent than others in terms of resource extraction and access. Currently, less than 1 percent of The Bahamas National Protected Areas System is composed of Highly Protected Areas or Replenishment Zones—the highest level of protection for marine resources, which yield the most ecological benefits.

With this in mind, the NISP sought to achieve the goal of 20% by employing MPAs which are zoned to include different levels of protection. Highly protected areas would be included considering both the socio-economic and biophysical dynamics within The Bahamas.

### Using cutting edge science to apply biophysical, socioeconomic and governance principles to the marine protected area design to maximize the ecological and socioeconomic benefits of the BNPAS.

Design principles are guidelines that provide scientific advice on how to create a MPA network so that it will achieve its objectives.

Biophysical design principles take key biological and physical processes into account—covering concerns such as what types of habitats are represented, how well critical species are protected, and how likely an area is to adapt to climate change.

Socio-economic and governance principles are aimed at maximizing benefits and minimizing costs to local communities by incorporating valuable stakeholder participation in MPA design and management, and ensuring that MPAs align with local legal, political and institutional requirements.

### Incorporating new and refined spatial data layers.

The conservation features used in the analysis were identified by starting with those used in the last gap analysis, and adding additional features that were available in The Nature Conservancy’s spatial database or provided by scientific experts.

### Using innovative scientific approaches to maximize the benefits of the MPA network to adapt to climate change, enhance coral reef fisheries and benefit local communities

Coral reef fisheries and climate change information are important to consider when expanding the MPA network in The Bahamas. Since the spatial data layers required to take these factors into account in the marine gap analysis were not initially available, The Nature Conservancy supported two innovative scientific studies that model and map coral reef fisheries (fishing intensity, current and potential standing stock) and climate change (thermal stress and bleaching risk).

## RESULTS

After examination of various scenarios, 51 Areas of Interest were identified. These include the highest priority areas that The Bahamas Protected partners, the NISP and stakeholders can consider as focal areas for establishing new MPAs. These areas represent 8 percent of the planning area, are spread throughout the region and include high-priority conservation features, like critical species and healthy habitats.

Although The Bahamas has made progress in meeting or exceeding the area coverage goal for many marine conservation features, there are approximately 20 features that fall short of nationally set targets. See Figure 3. Below is a short discussion on selected features which illustrates the gaps between the current protection levels and the national targets set in 2014:

- Fifty percent (50%) of tidal creeks in The Bahamas are currently protected. However, progress to-date falls short of the national target, which is to protect 100% of these habitats.
- Less than 20% of all fish spawning aggregations are under protection. Figure 3 suggests there is a huge gap between the existing level of protection and national targets.
- Approximately 8% of sea grass habitat is represented in the network. However, sea grass provides important feeding and nursery habitats for many marine animals and plays a significant role in regulating climate change in the ocean.

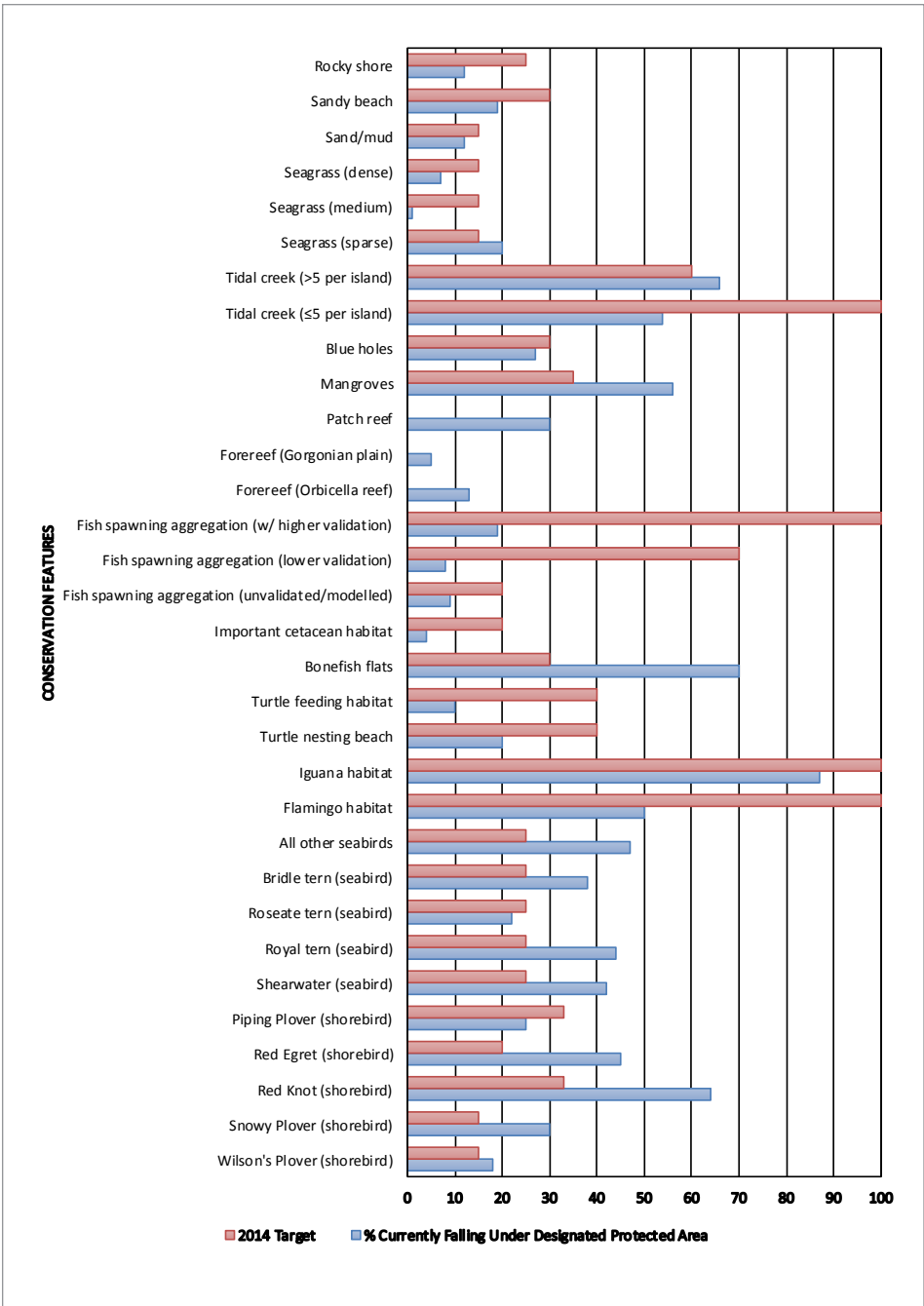


Figure 3: Comparison of national targets with percentage of conservation features under The Bahamas National Protected Areas System

### WHAT HAPPENS NEXT

To obtain the greatest benefit from these results, The Bahamas should consider increasing the percentage of Highly Protected Areas and focus future efforts on the effective management of the network.

The Bahamas can use this information to work with stakeholders in each Area of Interest to incorporate local knowledge for the expansion of the protected area system. It is hoped that this marine gap analysis provides valuable information and guidance that will facilitate the necessary steps to proposing and declaring new MPAs, to meet The Bahamas’ ‘20-by-20’ and related sustainable development goals.

### ACKNOWLEDGEMENTS:

Funding for this work was provided by The Nature Conservancy with grants from Oceans 5, the Lyda Hill Foundation (through the Mapping Ocean Wealth Project) and the China Global Conservation Fund.

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