

# Ecosystem characterization to support DRNA with identifying priority marine spaces and human uses for the North East Reserves



NOAA's Biogeography Branch, National Centers for Coastal Ocean Science  
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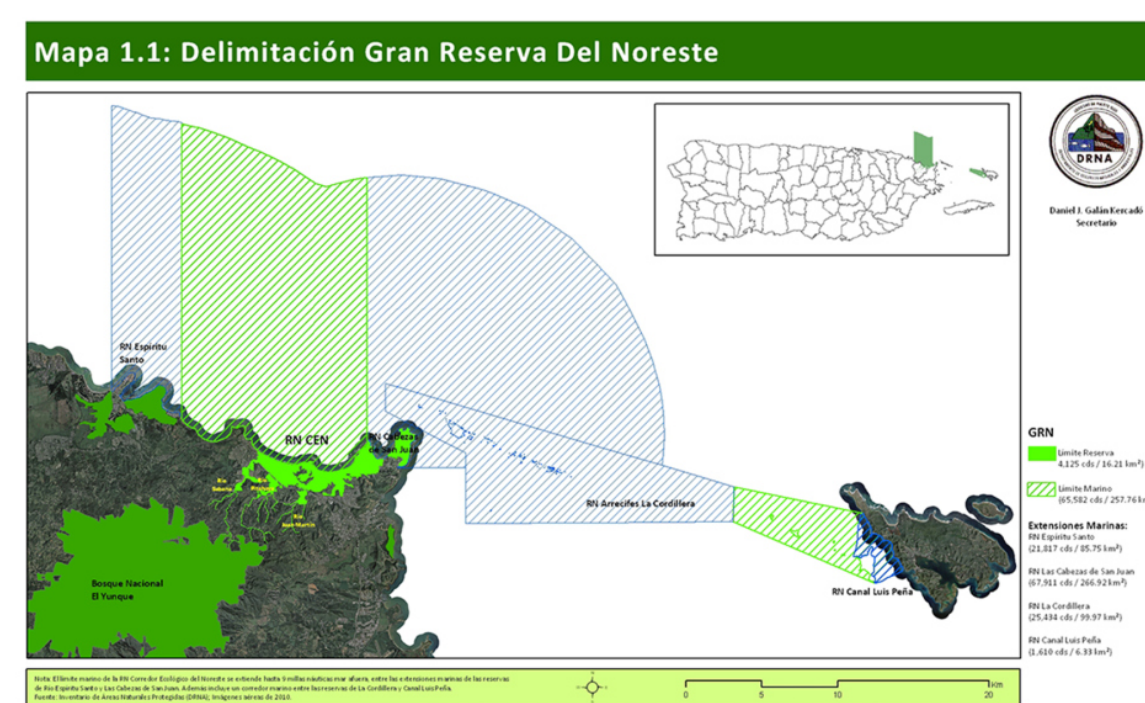


## Objectives

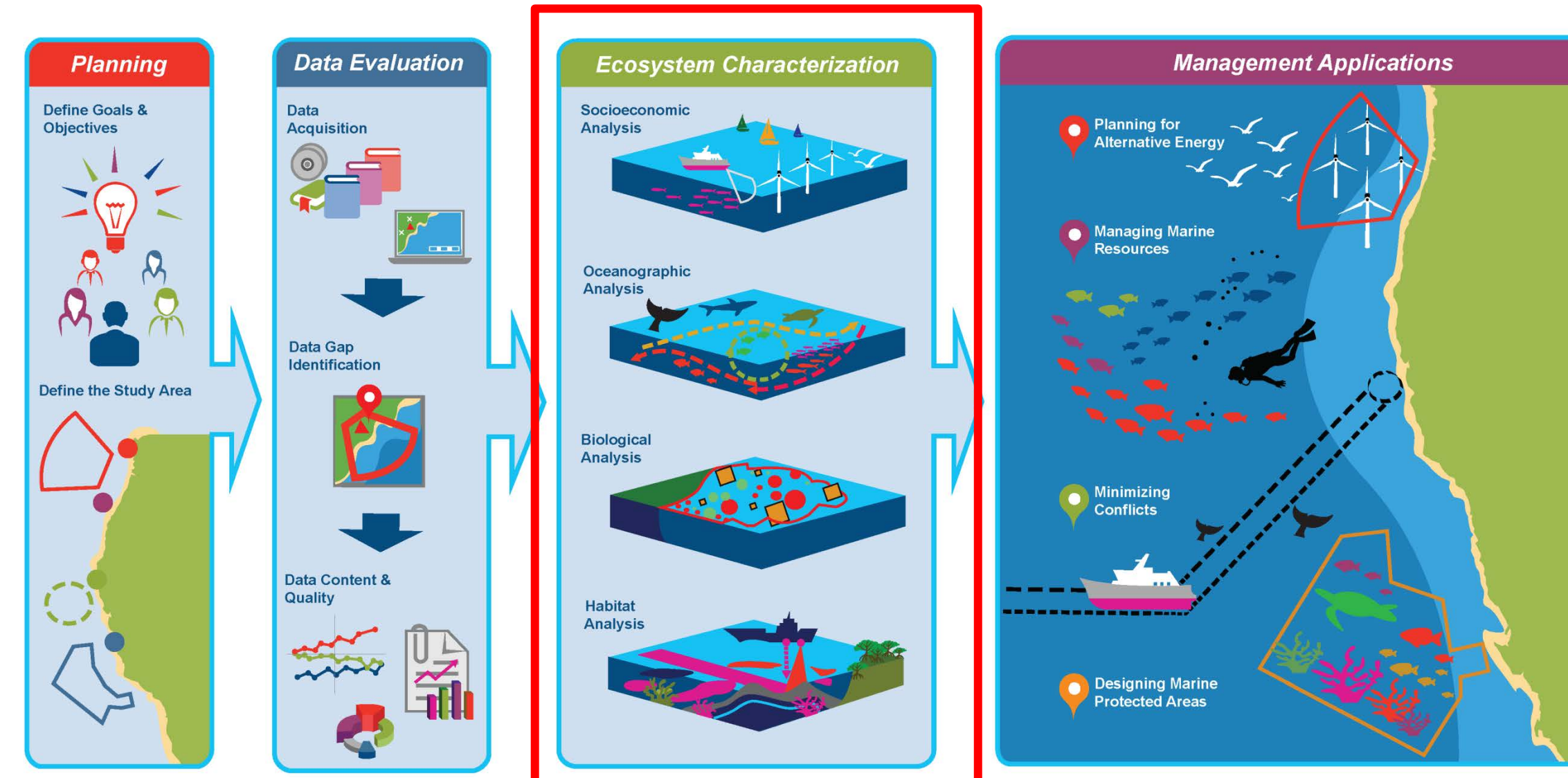
1. Compile a comprehensive spatial database to characterize the ecosystem and provide a robust data-driven foundation for the development of an effective management plan
2. Integrate socioeconomic, physical oceanographic, biological and seafloor habitat patterns to identify ecological priority areas (local and national) and examine the overlap with human uses to map and evaluate areas of potential threat
3. Build an online map tool to support MPA managers with ecosystem-based decision making and increase community awareness of the broader regional ecosystem

## Project area

The Northeast Ecological Corridor Reserve is the first reserve of its kind in Puerto Rico. Its successful implementation and management are important to the people of Puerto Rico. The area is used for a wide range of activities and also encompasses areas with important biodiversity value.



## Biogeographic Assessment Framework

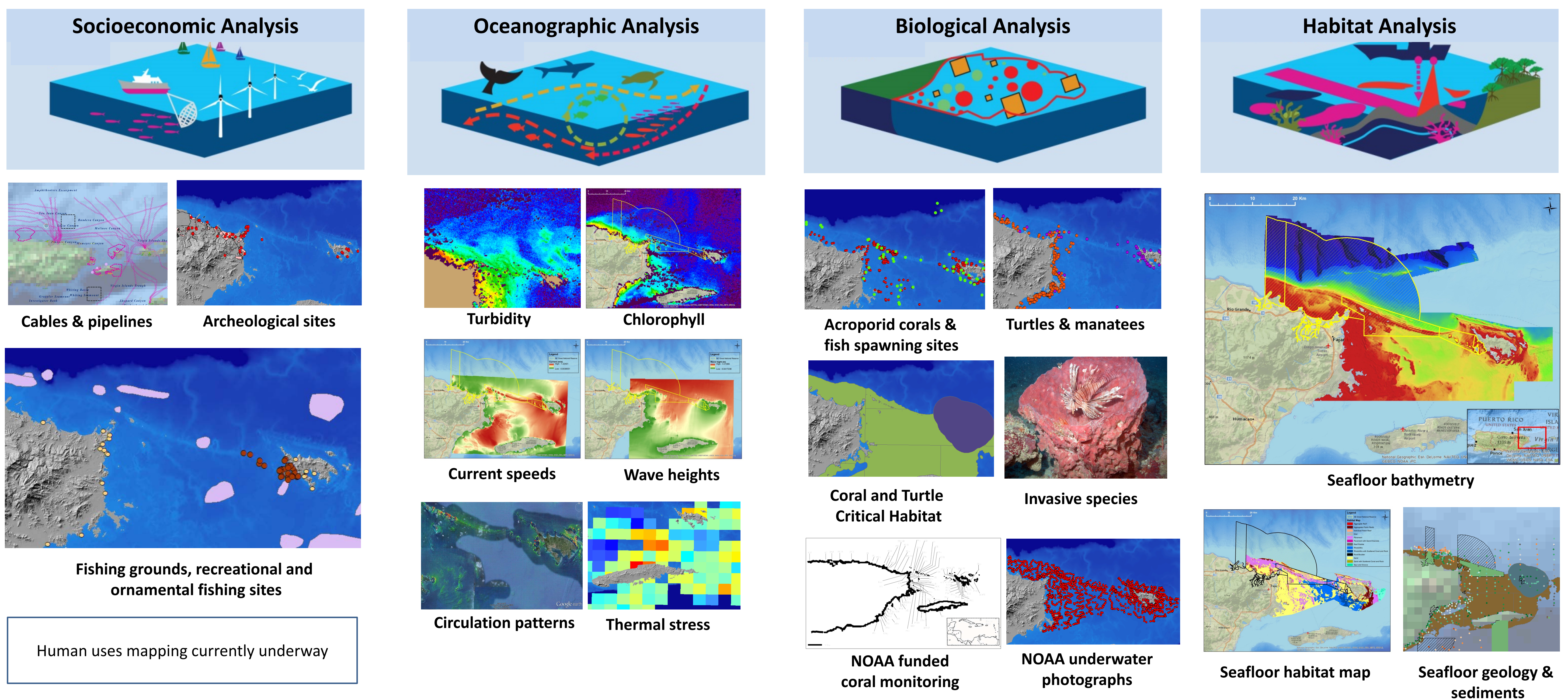


## General Approach

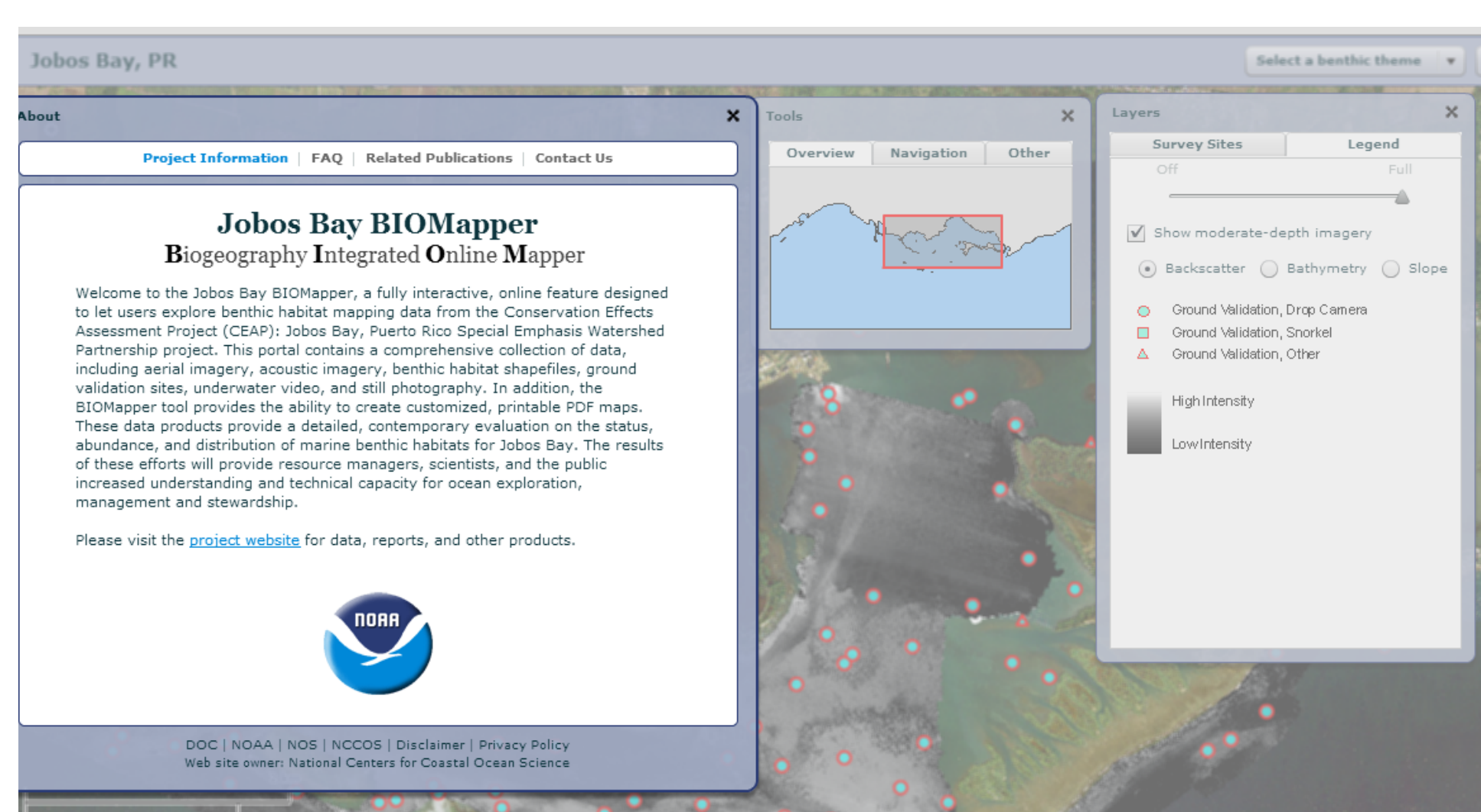
A comprehensive and detailed spatial database is central to modern marine management and required to support effective decision making in the management of multi-use marine protected areas. Identifying and characterizing areas of special concern will ensure that appropriate levels of protection and mitigating activities can be incorporated into the management plan. The Biogeographic Assessment Framework (BAF)\* was developed for information synthesis in support of marine spatial planning. This project applied the Biogeographic Assessment Framework to compile, evaluate, integrate and analyze a broad range of multidisciplinary data to characterize the ecosystem patterns and processes across the entire project area.

## Step 1. Compile spatial data (FY13-14)

Examples of data collected



## Step 2. Mapping threats to priority resources (FY15)



An online open access mapping tool, BIOMapper, is being developed for MPA managers and communities to display and query the many spatial information layers available. The tool can be used to assess and visualize ocean spaces with potential conflict of interest and spaces with low conflict of interest. For example, where protected species are exposed to threats and stressors from human activity. This type of tool will support scenario development for ocean zoning and help to prioritize management actions for more effective conservation.



For further information contact: Dr Simon Pittman ([simon.pittman@noaa.gov](mailto:simon.pittman@noaa.gov))  
Dr Chris Jeffrey ([chris.jeffrey@noaa.gov](mailto:chris.jeffrey@noaa.gov))