

Enhancing Capacity for Coastal Management with Ecosystem Services in Barbados

The Inter-American Development Bank (IDB) is collaborating with the Government of Barbados (GOB) through its Coastal Zone Management Unit (CZMU) in supporting climate-resilient coastal management in Barbados. In this context the IDB acting on behalf of the GOB has contracted the consortium Downstream Strategies (DS) and partners the Natural Capital Project (NatCap), the World Wildlife Fund (WWF), and The Nature Conservancy (TNC) to assist the CZMU to implement the project **Capacity Building for Ecosystems Services Valuation and Coastal Spatial Planning**. The project aims to integrate nature's values into coastal management in Barbados, strengthen the capacity of CZMU to map and value ecosystem services, and identify climate-resilient pathways for coastal investment. Over thirteen months, the CZMU with the assistance of the consortium will lead a stakeholder-driven process to identify, prioritize, map, and estimate the economic value of present and potential future ecosystem services in Barbados and build capacity in ecosystem service analysis with custom spatial analysis tools such as InVEST (Integrated Valuation of Ecosystem Services and Tradeoffs). This project is part of the technical cooperation grant **Capacity Building for Ecosystem Services Valuation and Integrated Coastal Zone Management (ICZM) Best Practices Dissemination (ATN/OC-13923/BA)** signed between the IDB and the GOB in 2013.

Barbados: Challenges and Opportunities for Blue Growth

Barbados is home to a rich diversity of ocean life and coastal habitats. The coastal zone is the country's largest economic asset. Barbadians are inextricably linked to the marine and coastal environment as a source of sustenance, inspiration, economic prosperity, recreation, and cultural heritage. The tourism industry, which accounts for over 40% of employment and GDP in Barbados, is heavily dependent on a sustainably managed marine and coastal environment. Yet Barbados faces a number of challenges in systematically managing coastal resources and risks in the face of a changing climate, including access to coastal risk information and developing comprehensive, integrated approaches for development decisions that affect the coast. To date, the Government of Barbados has lacked the capacity and tools needed to assess economic trade-offs among various coastal and marine uses. This initiative will respond to these challenges, incorporating information about nature's values and coastal risks into the updating of the national integrated coastal zone management plan while enhancing capacity for continued resilient and sustainable development.



The Project: Capacity Building for Ecosystem Services Valuation and Coastal Spatial Planning

The specific project tasks to be conducted are:

- Integrate ecosystem services into coastal planning and risk decisions
- Develop decision support tools using InVEST to inform coastal management
- Enhance the capacity of CZMU to conduct resilient coastal planning using ecosystem services analysis

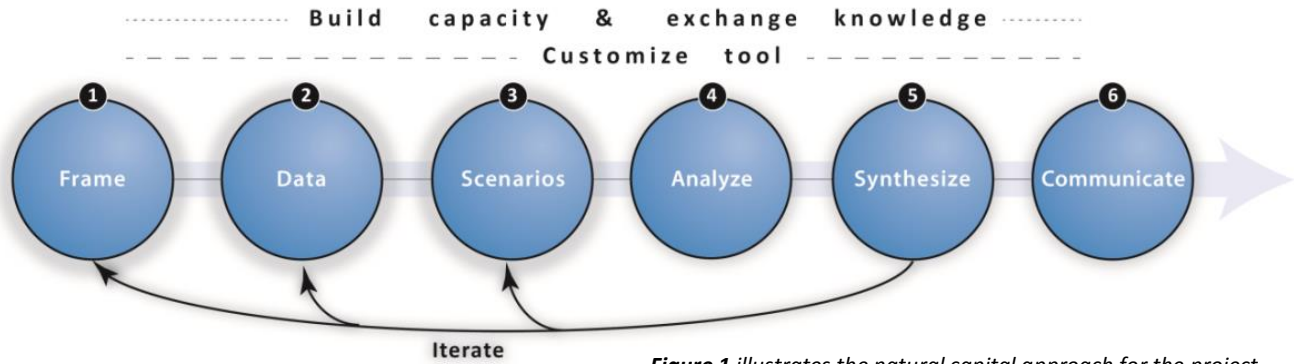


Figure 1 illustrates the natural capital approach for the project

Using a natural capital approach, the CZMU with the assistance of the consortium will lead a science-policy process to embed results from ecosystem service assessment into coastal management decisions. This will include the following steps: 1) design or frame the process with stakeholders, 2) collect and compile data, 3) develop scenarios that consider alternative development pathways and coastal risks, 4) analyze ecosystem services under these possible futures, 5) synthesize results using economic terms that resonate with diverse stakeholders, and 6) communicate knowledge to inform national planning, investment, and disaster risk and climate change management decisions. Key stakeholders are critical to the success of the project and will be consulted on a continuing basis throughout the process.

The Consortium

Downstream Strategies, NatCap, WWF, and TNC have worked successfully with government agencies, development organizations, academic institutions, and the private sector across the Caribbean, Asia, Africa, Latin America, and the U.S. The consortium is specialized in ecosystem service valuation, coastal management, spatial analysis, social science, and decision support systems, with a primary focus on disaster risk reduction and climate adaptation, environmental modeling, stakeholder engagement, and technical capacity building.

The consortium has unique expertise and experience in conducting ecosystem service-based coastal planning. Team members have developed and applied ecosystem service models to support integrated coastal zone management planning with the Government of Belize, resulting in a national Integrated Coastal Zone Management Plan. Previous work also includes development of new methods for incorporating climate change factors into coastal planning and adaptation decisions, analysis of climate hazards and vulnerability and capacity building in the Caribbean, and creation of GIS-based tools to support ecosystem-based adaptation and sustainable natural resource management.

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