

# Fostering coastal habitat protection through embracing ambitious climate commitments in Belize



THE PEW CHARITABLE TRUSTS



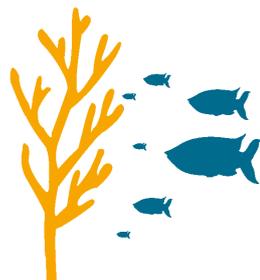
University of Belize

ERI Environmental Research Institute



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## Context



## COASTAL HABITATS AND CLIMATE CHANGE

THE EXCEPTIONAL ROLE OF COASTAL HABITATS IN PROVIDING MULTIPLE BENEFITS, INCLUDING CLIMATE CHANGE MITIGATION AND ADAPTATION, CANNOT BE CHALLENGED.

Around the world, climate change and human activities are increasingly impacting coastal habitats such as mangroves, seagrass beds, and coral reefs. The accelerated degradation of critical coastal habitats is jeopardizing the resilience, adaptive capacity, and biodiversity of these systems, thereby affecting national economies and coastal communities. Coastal ecosystems are chronically undervalued, resulting in overexploitation and severe harm from human activities such as unsustainable coastal development and poor landuse practices. Together, these are leading to the loss of goods and services such as coastal protection, food, recreation, and carbon sequestration.



Mangrove forests are powerful ecosystems that serve as critical habitats for multiple species, protect shorelines, provide livelihoods for coastal communities, filter runoff, and sequester carbon at significantly higher levels than other tropical forests. Presently mangrove forests are estimated to cover around 72,000 hectares in Belize<sup>1</sup> and offer considerable coastal blue carbon potential. It is also estimated that mangroves provide around US\$200M/yr through tourism, fisheries and shoreline protection<sup>2</sup>.



Seagrass beds are important absorbers of nutrients from coastal runoff and stabilize sediment, thereby supporting good coastal water quality. They are also important nurseries for many species of commercial interest and contribute to carbon sequestration. Belize is believed to have a fairly good expanse of seagrass beds.



Coral reefs, like mangroves, offer coastal protection, helping to reduce flood risk to shorelines, communities and infrastructure. They also offer significant economic benefits through tourism, fisheries, and local livelihoods. The multiple benefits of coral reefs are vast. For Belize, it is estimated that reefs provide around US \$350M/yr in services provided via tourism, fisheries and shoreline protection<sup>3</sup>.

1 Cherrington E, Griffin, R.E., Anderson, E.R, Hernandez-Sandoval, B.E., Flores Cordova, A.I., Muench, R.E., Markert, K. 2018. An assessment of changes in mangrove cover across the Belize Barrier Reef Reserve System World Heritage Site: 1996-2017.  
2 Cooper, E., Burke, L., and N. Bood. 2009. Coastal Capital: Belize. The Contribution of Belize's Coral Reefs and Mangroves. WRI Working Paper. World Resources Institute, Washington, DC. 53 pp.  
3 Cooper, E., Burke, L., and N. Bood. 2009. Coastal Capital: Belize. The Contribution of Belize's Coral Reefs and Mangroves. WRI Working Paper. World Resources Institute, Washington, DC. 53 pp.

## Coastal habitats and climate change adaptation

The exceptional role of coastal habitats in providing multiple benefits, including climate change mitigation and adaptation, cannot be challenged. For this reason, countries are taking steps through national and global commitments to protect these important ecosystems.

Although Belize is a country with relatively minor contributions to total global greenhouse gas emissions, the country has committed to ambitious climate goals. As a result, Belize is moving forward to include coastal ecosystems as nature-based solution in its 2020 Nationally Determined Contribution (NDC) to the United Nations

Paris Climate Agreement. Through multilevel engagement across government agencies, academic institutions, civil society, communities, and other key stakeholders, the country is aiming to set ambitious targets toward protecting these ecosystems for their carbon storage values and adaptation co-benefits.

Given the unique role of coastal ecosystems in reducing climate risk and impacts and absorbing carbon, combined with adaptation benefits, Belize is showing real leadership in committing to safeguarding these important habitats for the long-term.



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### EXPECTED RESULTS

The Belize Government, in collaboration with the World Wildlife Fund, The Pew Charitable Trusts, University of Belize's Environmental Research Institute and other partners, is aiming to increase the ambition for protection of coastal ecosystems in-country. Efforts are targeted at:

- Assessing the carbon stocks in Belizean mangroves, and determining the climate change mitigation and adaptation benefits and opportunities for mangroves, seagrass and coral reefs
- Identifying and setting measurable targets and recommendations for coastal ecosystem protection that can be tracked through a monitoring, verification and reporting (MRV) framework
- Building in-country capacity to support research and the MRV process
- Gathering input from wide range of stakeholders