

Blue Economy

India's Palk Bay Dugong Reserve

Innovative financing mechanisms could help unlock the full potential of nature-based solutions. A new feasibility study is underway to explore whether carbon credits could support conservation and restoration in the Palk Bay Dugong Conservation Reserve in India.

Background

Our ocean is our greatest carbon sink, provides natural solutions to climate change, and is the lifeline for millions living in coastal communities who depend on its resources for their livelihoods.

Despite this, many projects which work to conserve and restore marine ecosystems face important funding challenges.

New financing mechanisms are therefore needed to plug this funding gap.

This is what a new study seeks to do by scoping the feasibility of leveraging carbon credits to create new revenue streams for conservation in the Palk Bay Dugong Conservation Reserve.

A unique ecosystem

The Palk Bay Dugong Conservation Reserve in India is one of the largest seagrass beds in the world. These seagrass meadows are home to a range of critically endangered species including dugongs, dolphins and vulnerable porpoises.



The Dugong Reserve is

448km²



50%

of it is covered with seagrass

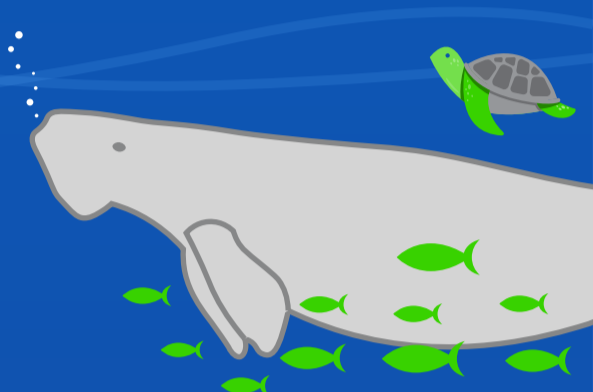


40%

of India's dugong population live in Palk Bay

Due to economic pressures faced by the community, this precious habitat is under threat from pollution and unsustainable fishing practices. Some nets have proven harmful to the seagrass and dugongs.

Overfishing has also reduced the ecosystem's resilience and fish populations, threatening widespread poverty among the local coastal communities in the long term.



Unleashing the potential of seagrass

The study aims to scope the blue carbon value which could be derived from Palk Bay's very own carbon sink: its seagrass.

What is blue carbon?

Blue carbon is carbon dioxide which has been sequestered, stored, or absorbed by marine ecosystems.

Despite only covering a small amount of the world's ocean bed, with some estimates being as small as 0.1 per cent*, seagrass currently absorbs 10 per cent of total oceanic carbon.

Palk Bay is one of the largest seagrass beds in the world, with historical research suggesting:

these meadows could sequester up to

143k tonnes

of carbon per year

with a total stock of up to

4.6mn tonnes

of carbon**

If viable, and with sufficient demand, carbon credits derived from Palk Bay's seagrass could generate new revenue streams to support conservation efforts and support local communities.

What are carbon credits and how can they be blue?

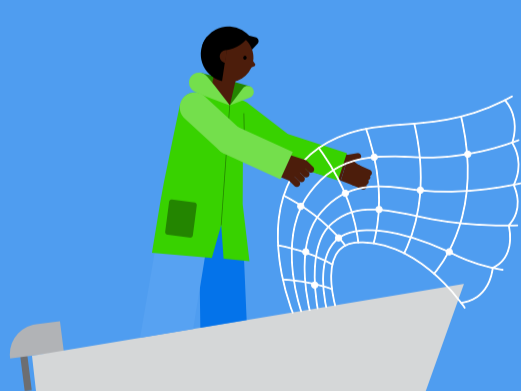
- Carbon credits are based on a tonne of carbon dioxide emissions avoided, removed or reduced.
- They have increasingly been derived from natural sources, known as nature-based solutions, which sequester (lock away) carbon dioxide.
- Blue carbon is carbon dioxide sequestered by marine ecosystems, including seagrass meadows, seaweed and mangrove forests.
- Nature-based carbon credits can support the mitigation of the twinned crises of nature loss and climate change by supporting ecologically important habitats by generating revenue streams to finance restoration and conservation activities.
- They can also be used to support indigenous peoples and local communities through equitable disbursement of revenues generated by nature-based carbon credits.

Local stewardship for lasting impact

Revenue generated from carbon credit sales could be reinvested into the equitable management plan for the area.

This plan supports sustainable fishing practices and alternative income streams, contributing to more stable and resilient income for local communities. By aligning conservation efforts with economic development, the initiative could strengthen livelihood security while ensuring responsible resource use, helping to address both ecological needs and community priorities.

The plan also contributes to the preservation of traditional coastal practices and cultural heritage, reinforcing community identity through sustainable marine stewardship.



>50,000

individuals reside along the coastline adjacent to the Dugong Conservation Reserve

The initial study in Palk Bay is under way, and if successful, could be transformative in creating long-term economic security and enhancing the resilience of the local community, and other conservation efforts alike.

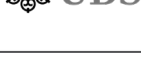
Want to learn more?

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* UN Environment Programme (2023) Five ways often-unheralded seagrasses boost biodiversity, UN Environment Programme. Available at: <https://www.unep.org/news-and-stories/story/five-ways-often-unheralded-seagrasses-boost-biodiversity>.

** Ganguly, D., Singh, G., Purvaja, R., Bhatta, R., Selvam, A.P., Banerjee, K. and Ramesh, R., 2018. Valuing the carbon sequestration regulation service by seagrass ecosystems of Palk Bay and Chilika, India. Ocean & Coastal Management, 159, pp.26-33.

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