

## **Scope and Potential of Coastal Ecosystems in Mitigating Climate Change**

Coastal ecosystems are some of the most productive on Earth and are home to a wealth of biodiversity and provide us with essential ecosystem services, such as coastal protection from storms and nursery grounds for fish. Their role in sequestering and storing “blue” carbon from the atmosphere and oceans is also increasingly being recognized by policymakers. The different coastal wetlands types such as mangroves, seagrasses, tidal marshes and coral reefs — commonly referred to as blue carbon ecosystems, provides numerous benefits and services that contribute to people’s ability to mitigate and adapt to the impacts of climate change. Many of these services are essential for climate adaptation and resilience along coasts, including protection from storm surge and sea level rise, erosion prevention along shorelines, coastal water quality regulation, nutrient recycling, sediment trapping, habitat provision for numerous commercially important and endangered marine species, and food security for many coastal communities around the world.

The carbon that is stored in the coastal ecosystems can be extensive and it can remain trapped for very long periods of time and thus resulting in very large carbon stocks. As a result of coastal development and land-use change, mangroves, tidal salt marshes, corals and sea grasses are under high levels of pressure. To explicitly address the role of blue carbon ecosystems in climate change mitigation and human wellbeing through policy, regulatory, finance, or other mechanisms, the carbon stock in these ecosystems and the existing or potential carbon emissions resulting from changes to those ecosystems must be quantified. In India, mangroves are being mapped and the estimated total carbon sequestration potential to be 702.42 million tonnes of CO<sub>2</sub>e. Therefore, countries with coastal ecosystems can recognize the values provided by these ecosystems as a potentially significant contribution to both the mitigation and adaptation goals of their India’s NDC targets (Creating additional carbon sink of 2.5 to 3 billion tonnes of CO<sub>2</sub> equivalent by 2030). Blue carbon has received international attention for its potential role in mitigating CO<sub>2</sub> emissions.

With their value for both mitigation and adaptation, blue carbon ecosystems are a vital part to any climate change solution.

In this context, TERI is in the process of organizing a webinar on **“Scope and potential of Coastal Ecosystems in mitigating climate change”** on 18th August, 2020. The overall objective of this webinar will be the recognition of these coastal ecosystems in climate change mitigation and their contribution towards achievement of India’s NDC target. Through this webinar we will try to get the views of different stakeholders and policy makers on whether blue carbon should be eligible to contribute in achieving the India’s NDC target and its role in mitigating climate change.