

BLUE CARBON

- Blue carbon is the **carbon stored in coastal and marine ecosystems**.
- Coastal ecosystems such as mangroves, tidal marshes and seagrass meadows **sequester and store more carbon per unit area than terrestrial forests** and are now being recognised for their role in **mitigating climate change**.
- These ecosystems also provide **essential benefits for climate change adaptation**, including **coastal protection and food security** for many coastal communities.
- However, if the ecosystems are **degraded or damaged**, their **carbon sink capacity is lost or adversely affected**, and the **carbon stored is released**, resulting in **emissions of carbon dioxide (CO₂) that contribute to climate change**.
- **Dedicated conservation efforts** can ensure that coastal ecosystems continue to play their role as long-term carbon sinks.

What is the issue?

The **coastal ecosystems** of mangroves, tidal marshes and seagrass meadows contain large stores of carbon deposited by vegetation and various

Global averages for carbon pools (soil organic carbon and living biomass) of focal coastal habitats. *Note: Tropical forests are included for comparison. Only the top metre of soil is included in the soil carbon estimates.*
Source: Murray, B.C. et al. (2011). *Green Payments for Blue Carbon.*

On an implementation level, mangroves, salt marshes and seagrasses can be included in **national accounting**, according to the *IPCC 2013 Supplement to the 2006 Guidelines for National Greenhouse Gas Inventories: Wetlands*.

Some technical elements need to be fully integrated into these mechanisms to value the full coastal carbon potential, e.g. accounting for soil carbon. An expansion of the implementation of programmes and projects around the world is also needed to **stop the ongoing loss of these ecosystems and curb resulting emissions**.

The management of marine ecosystems in the high seas as a climate mitigation option, and the use of the UNFCCC to incentivise better