

COASTAL BLUE CARBON

WETLANDS MITIGATING CLIMATE CHANGE

Coastal Blue Carbon is the carbon stored by and sequestered in coastal ecosystems, which include tidal wetlands, mangroves, and seagrass meadows.

Coastal Wetlands

These areas provide critically important ecological and economic values, such as habitat for important fish and other threatened and endangered species, storm and flood protection, improved water quality, tourism, and jobs, yet globally they are being lost at an unsustainable rate of **0.7-7% per year**.

3 Facts About Blue Carbon Ecosystems

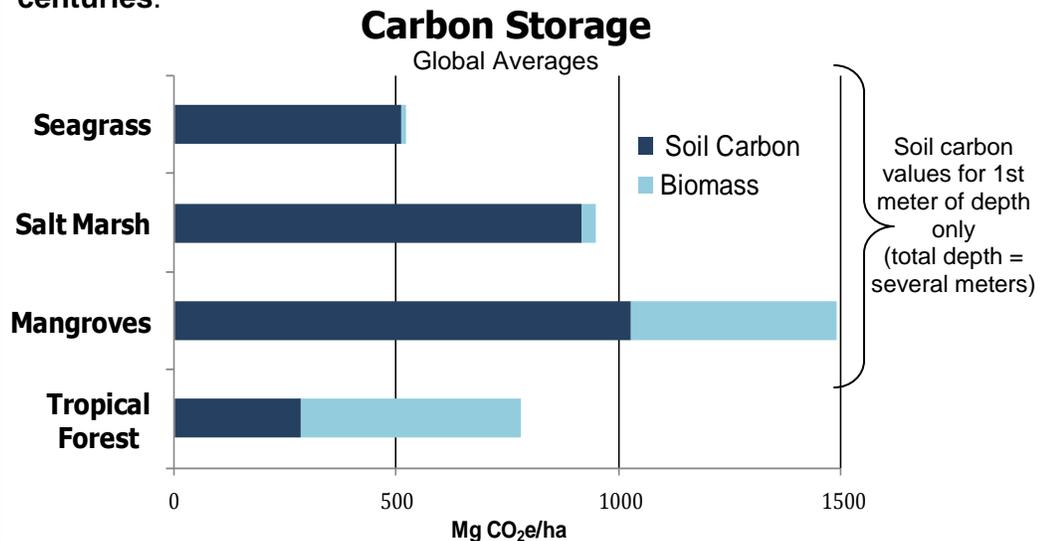
Blue carbon ecosystems **remove 10 times more CO₂** per hectare from the atmosphere than forest.

Wetlands primarily store carbon in the soils, where it can remain **for centuries**.

Drained and degraded coastal wetlands can release this stored carbon back into the atmosphere.

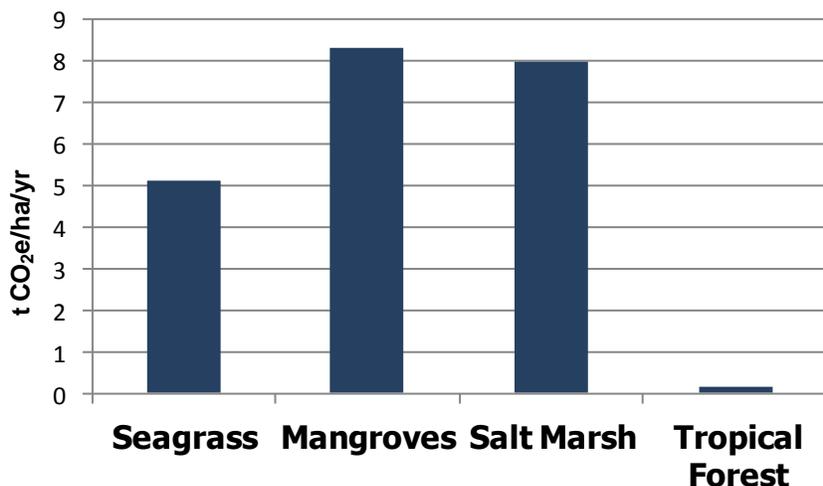
The Science

Carbon is held in aboveground plant matter and wetland soils. As plants grow, carbon accumulates annually and is held in **soils for centuries**.



Each year an average of nearly half a billion tons of CO₂ (equal to the 2008 emissions of Japan) are released through wetland degradation, underscoring the need to **protect** our remaining wetlands.

Annual Soil Carbon Sequestration





RAE Efforts to Advance Blue Carbon

Introducing Blue Carbon into the Carbon Markets

RAE led the effort to expand the rules of the Verified Carbon Standard, a leading GHG offset registry, to include wetland restoration, creation, and conservation as eligible offset activities.

RAE developed the first global Tidal Wetland and Seagrass Restoration Methodology (currently under validation). The methodology enables project developers to implement tidal wetland restoration projects for GHG offset credits.

Supporting Science and Demonstration Projects

Field demonstrations of the blue carbon mitigation benefits of restoration are needed to improve our understanding of its application and to promote its value globally.

RAE led a team to assess the climate mitigation benefits of blue carbon in the Snohomish estuary within Washington's Puget Sound, developing a project approach that is transferrable to other estuaries.

Exploring Policy and Regulatory Options

RAE is working with federal partners to identify opportunities to incorporate blue carbon ecosystem benefits into federal policies and regulations, benefiting conservation and restoration efforts.

Coordinating Blue Carbon Initiatives

RAE is working with scientists, policy experts, and practitioners across the country to increase understanding of blue carbon benefits, identify project opportunities, and communicate lessons learned.

Raising Awareness and Building Capacity

Presenting at conferences, workshops and webinars, RAE is educating the coastal community and building local expertise to support development of blue carbon projects.

Landmark study confirms climate change mitigation benefits of estuary restoration

RAE led a study in the nation's second largest estuary, Puget Sound, to assess the carbon benefits of estuary restoration. This study accounted for sea-level rise and looked at current and future restoration projects.

Full restoration of the Snohomish estuary could result in:

8.9 million tons of CO₂ sequestered over 100 years,

equal to the **1-year emissions of about 1.7 million passenger cars.**



Restore America's Estuaries

leads a national alliance of community-based organizations dedicated to the protection and restoration of bays and estuaries as essential resources for our nation.

For more information, visit www.estuaries.org/bluecarbon