Blue Carbon Scientific Working Group

2014 Meeting in Rio Grande, Brazil

Coastal wetlands – mangroves, salt marshes and seagrasses – are some the most threatened ecosystems on Earth. They are being degraded or destroyed at four times the rate of tropical forests and climate change threatens to accelerate these losses. The global CO_2 emissions from the degradation and destruction of these "blue carbon" ecosystems are estimated at 45 billion metric tons annually, with an associated economic cost approaching $20 billion each year. Globally, coastal wetlands are some of the most valuable natural resources, providing essential ecosystem services such as protection from storms and sea level rise, erosion control, maintaining coastal water quality, carbon sequestration and storage, and food security. They are vital to human well-being along the coasts of all continents and particularly for some of the world's most vulnerable people.

Brazil's coastline is the 16th longest in the world with over a million hectares of mangrove forests and more than 20,000 hectares of seagrass meadows. Brazilians have increased their seafood consumption per capita by 40% since 2003, 96% of domestically caught fish is sold in Brazil, about 3.5 million people are directly or indirectly involved in fisheries or aquaculture, and a majority of Brazilians live within 300 km of the coast. However, coastal ecosystems in Brazil are in peril from sea level rise and warming ocean temperatures. One study places Brazil within the top 15 countries threatened by sea level rise. Brazil is also predicted to experience a 10% increase in storm surge affecting around 15% of Brazil's coastal land area and 30% of the coastal population. Coastal storms bring stronger winds creating greater wave damage along shorelines. Weather extremes will also severely threaten the region's livelihoods from farming and fishing. Warming seawaters and habitat destruction are already threatening Brazil's coastal and marine biodiversity. However, healthy coastal marine ecosystems can combat these effects by sequestering providing numerous benefits and services that contribute to people's ability to mitigate and adapt to the impacts of climate change, as well as address the global need for reduced greenhouse gas emissions through blue carbon sequestration and storage.

Blue Carbon

Blue Carbon is the carbon stored, sequestered or released from coastal ecosystems such as mangroves, tidal marshes, and seagrass meadows. When coastal ecosystems are degraded or destroyed that carbon is released back into the atmosphere as CO_2 emissions. Thus, effective management and conservation of coastal wetlands is now a critical priority, especially in regions where people are highly dependent on these ecosystems for critical services.

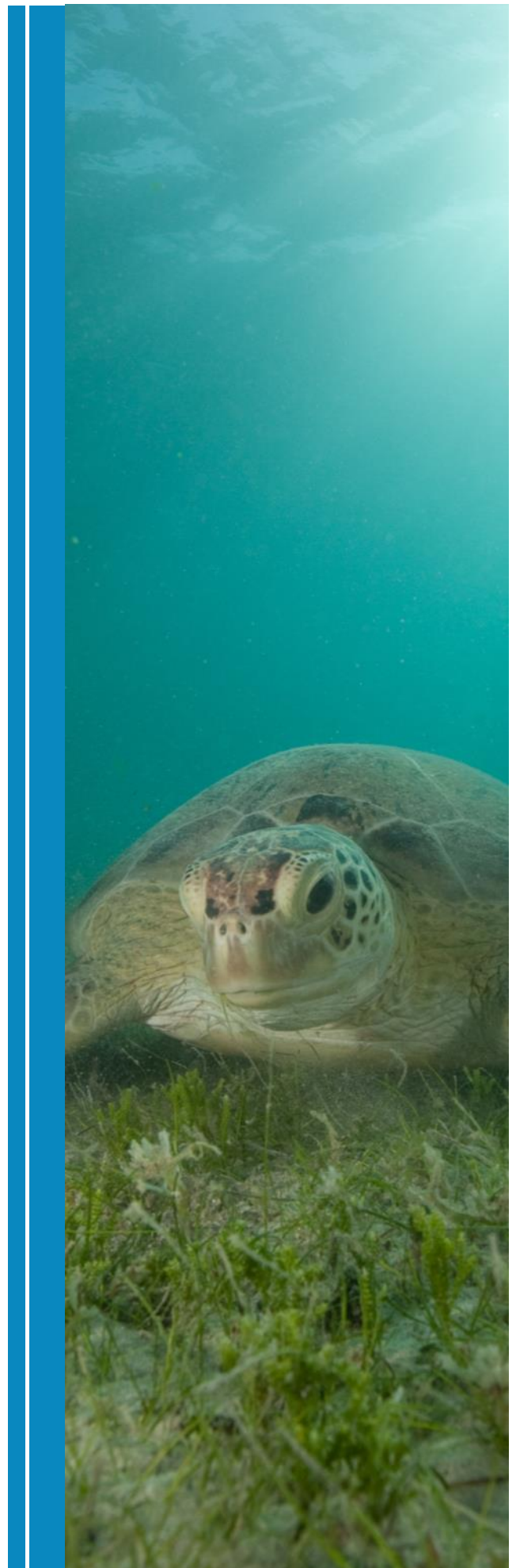## The International Blue Carbon Initiative

The Blue Carbon Initiative is an integrated program focused on mitigating climate change by conserving and restoring coastal marine ecosystems globally. The Initiative is led by Conservation International (CI), the International Union for Conservation of Nature (IUCN) and the Intergovernmental Oceanographic Commission (IOC) of UNESCO, and works with partners from national governments, research institutions, nongovernmental organizations, coastal communities, inter-governmental and international bodies and other relevant stakeholders.

Meeting Goals

The proposed three-day meeting will bring together the research community and regional leaders to assess the status of Brazil's coastal wetland systems and identify knowledge gaps and opportunities for future research. Meeting attendees will take an active role in developing a regional network of blue carbon experts and identifying priority geographies, projects and needs.

The five primary goals for the meeting:

1. Increase awareness of the importance of coastal wetlands for critical ecosystems services specifically including carbon sequestration and storage and the potential for increased emissions when these systems are degraded.
2. Assess the coastal carbon distribution in Brazil, including compiling existing data and analysis.
3. Identify priority regions for science, management and pilot project development. Identify opportunities and challenges to achieving this in the region.
4. Explore ways to increase capacity through development of blue carbon networks and identifying possible regional Blue Carbon focal points.
5. Increase education and outreach to local communities, scientists, and policy makers.

the
**BLUE
CARBON**
initiative

Coordinating Organizations

**CONSERVATION
INTERNATIONAL**

UNESCO

United Nations
Educational, Scientific and
Cultural Organization

Intergovernmental
Oceanographic
Commission

IUCN

For more information
please visit:

www.thebluecarboninitiative.org