

CONSERVATION
INTERNATIONAL



United Nations
Educational, Scientific and
Cultural Organization



Intergovernmental
Oceanographic
Commission

Blue Carbon Scientific Working Group

2nd Meeting

26-29th July, 2011
Bali, Indonesia

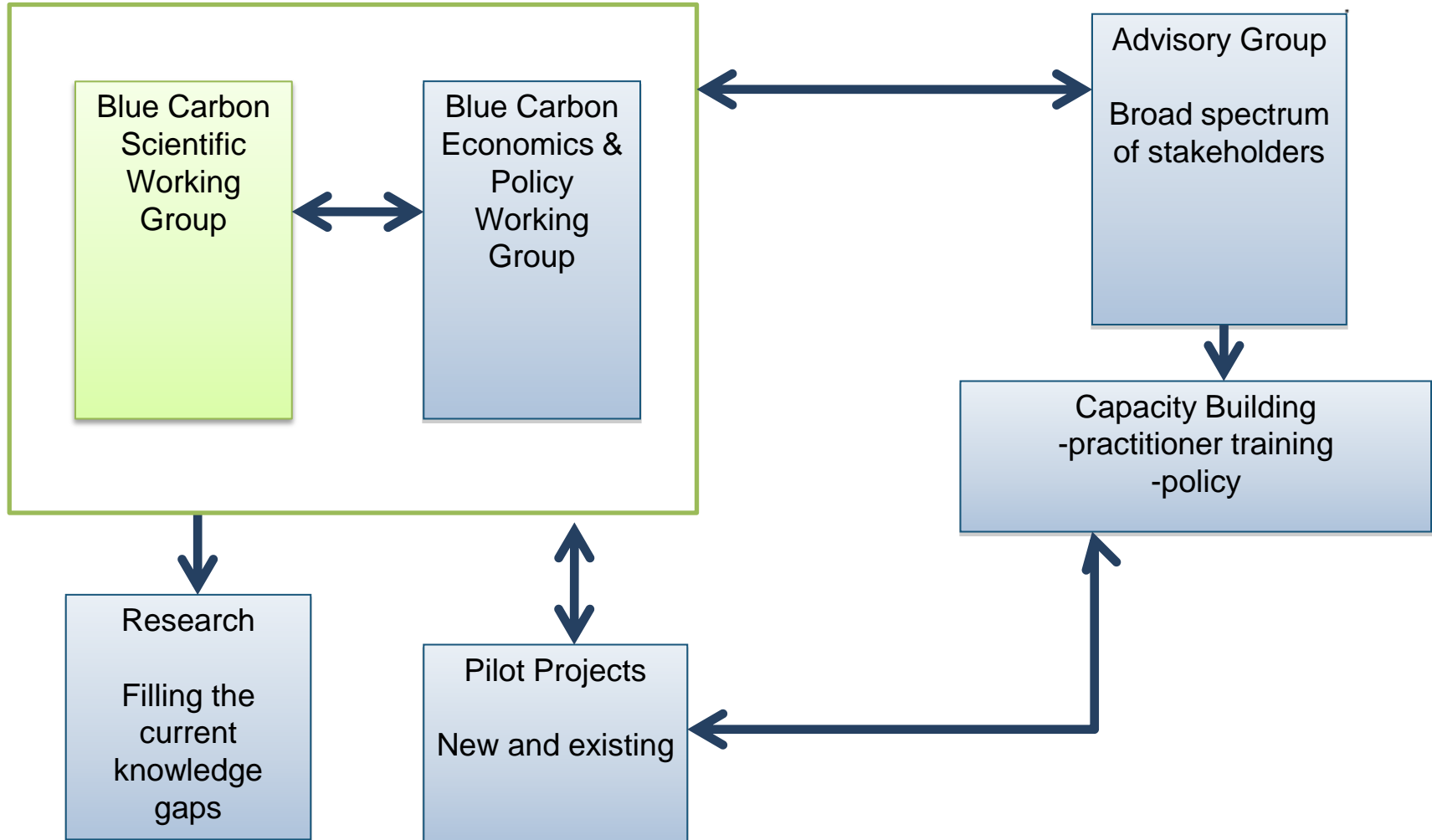
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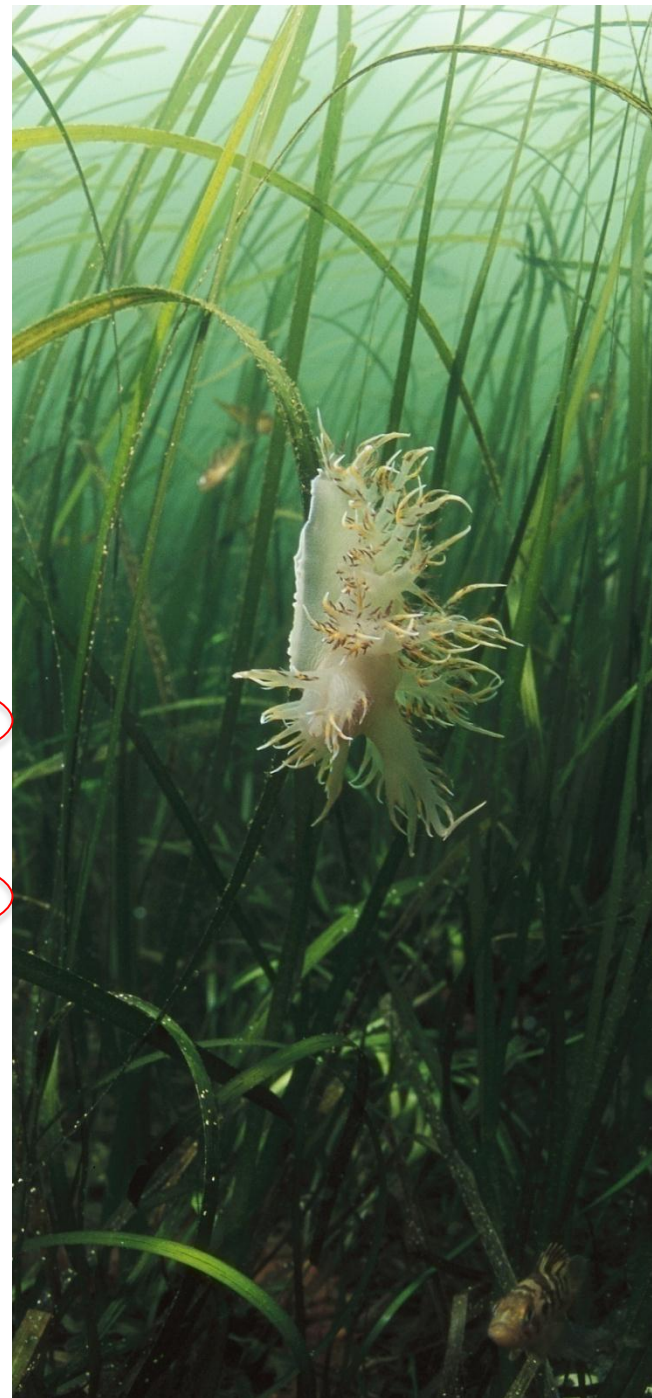
We gratefully thank the Government of Indonesia for hosting this workshop

International Blue Carbon Initiative



Scientific Working Group Objectives

- *Detail the Global Relevance of Coastal Carbon*
- *Assess the feasibility of coastal “blue” carbon as a conservation and management tool.*
- *Provide implementable recommendations for marine policy, conservation and management*
- *Identify critical information needs and data gaps*



When we met in Paris.....

Criteria for determining blue carbon hotspots

- Identify carbon rich soils
- Areas of large extent
- Areas of high vulnerability to loss via land use /cover change
- Mangroves soils carbon content may vary climatically, more in wet rather than dry climates
- Area of historically converted marshes and mangroves may continue to emit CO₂

More when we met in Paris.....

It is possible to estimate global carbon pools, sequestration and emissions but there are challenges

- Spatial distribution and extent – relatively well defined for mangroves but poorly defined for tidal wetlands and seagrass meadows.
- Extent of degraded and converted wetlands is poorly defined.
- Maps of soil types for converted wetlands not yet developed.
- Proxy indicators for soil biogeochemical processes are needed.
- Modeling approaches are being developed to simulate carbon sequestration by tidal marshes.
- Remote sensing technology advancements needed
 - High resolution altimetry data to record soil loss from drained wetlands
 - Identification and quantification of near-surface atmospheric GHG constituents
 - Land-cover mapping distinguishing relevant wetland classes.
 - Mapping of seagrass meadows (below water surface)



Minimizing Carbon Emissions and Maximizing Carbon Sequestration and Storage by Seagrasses, Tidal Marshes, Mangroves

Recommendations from the International Working Group on Coastal “Blue” Carbon

The natural coastal ecosystems of seagrasses, tidal marshes, and mangroves sequester and store large quantities of carbon in both the plants and in the sediment below them. If destroyed, degraded or lost these coastal ecosystems become sources of carbon dioxide emitted into the ocean and atmosphere. Much of this emitted carbon is thousands of years old and other processes in the ecosystem do not balance its rapid release into the oceans and atmosphere. Given the large quantity of carbon in coastal ecosystems relative to their area, these emissions are likely of global significance. This loss of a globally significant carbon pool is additional to the other recognized critical ecosystem services provided by coastal ecosystems.

Seagrasses, tidal marshes, and mangroves are being degraded and destroyed at a rapid pace along the world's coastlines. There is a need for active and effective measures to protect the large and vulnerable carbon pools stored in these systems, and to restore and reestablish their carbon sequestration capacity. **Immediate steps can be taken now by coastal communities, managers, policy makers and the scientific community.**

03/11

Recent activity – meetings and discussions

This meeting: objectives and outputs

- Developing Best Practice Guidance:
 - National Assessments of Carbon Sinks and Emissions
 - Field Data Collection
- Developing a Global Coastal Carbon Data Archive
- Science Summary for Policy makers

Task teams to support product development



Support Indonesian Government in Planning for Blue Carbon



Wednesday
7am