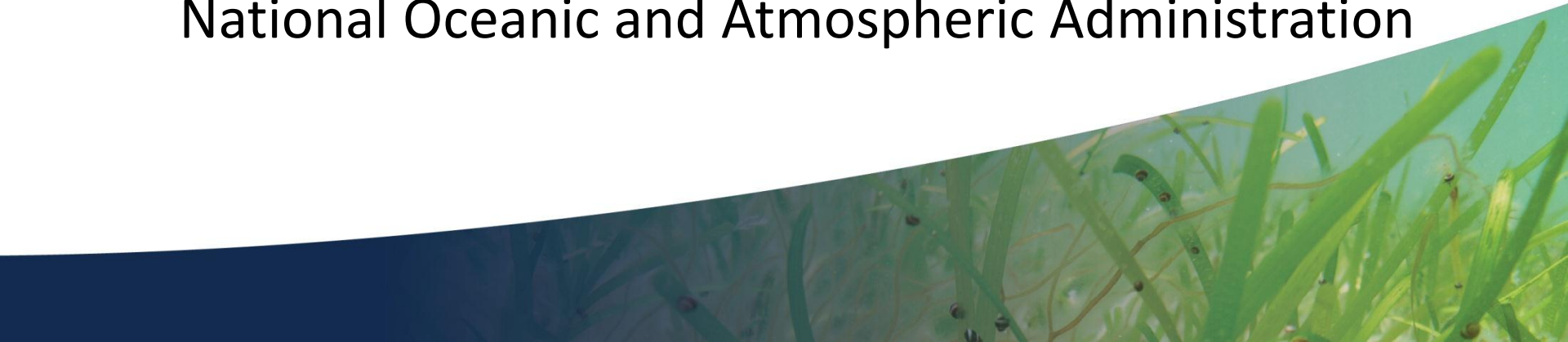


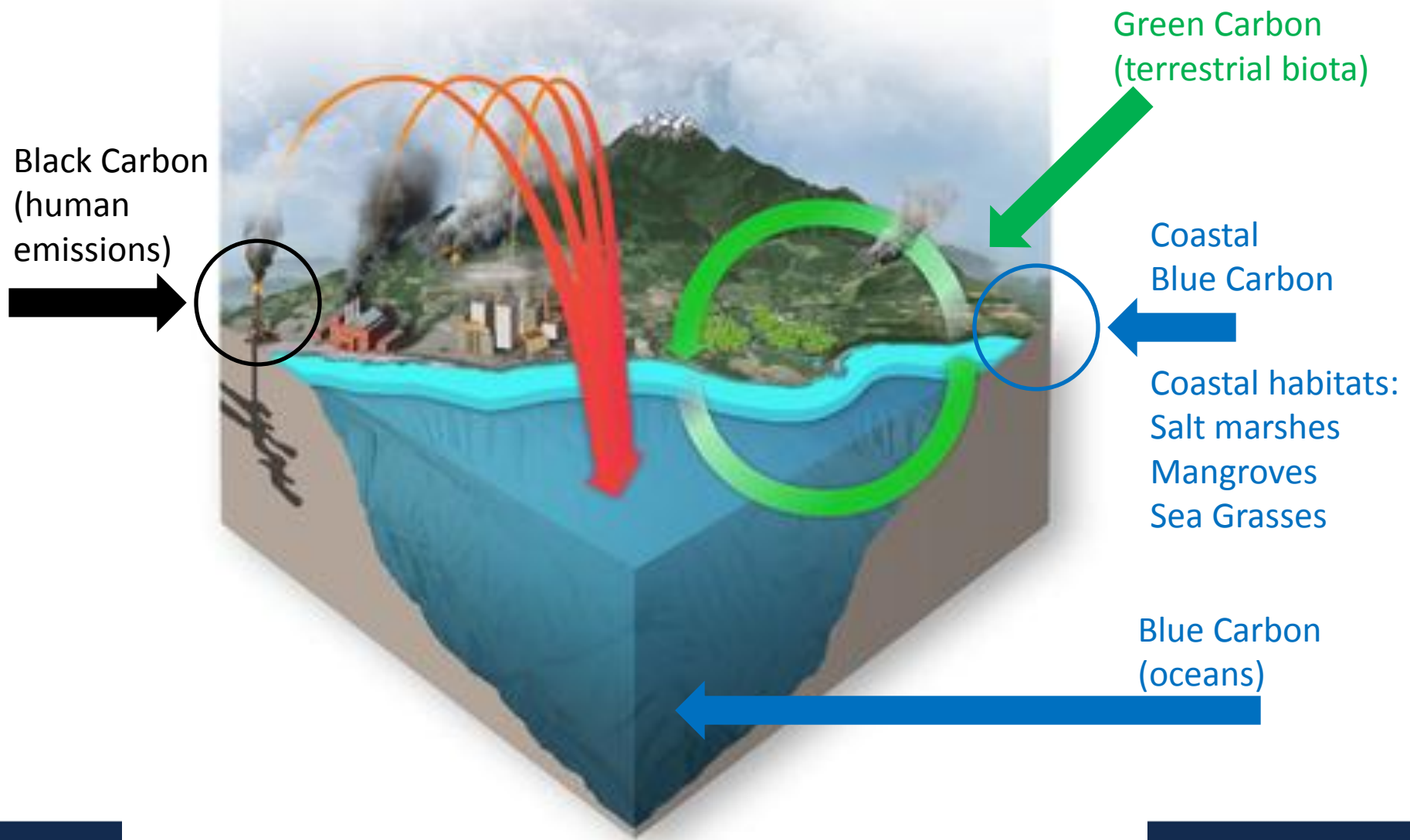


Leveraging Carbon Services for Habitat Conservation: NOAA's Blue Carbon Interests

Ariana Sutton-Grier, Roger Griffis & Meredith Muth
National Oceanic and Atmospheric Administration



Our Changing Carbon Cycle.....



Key Issues



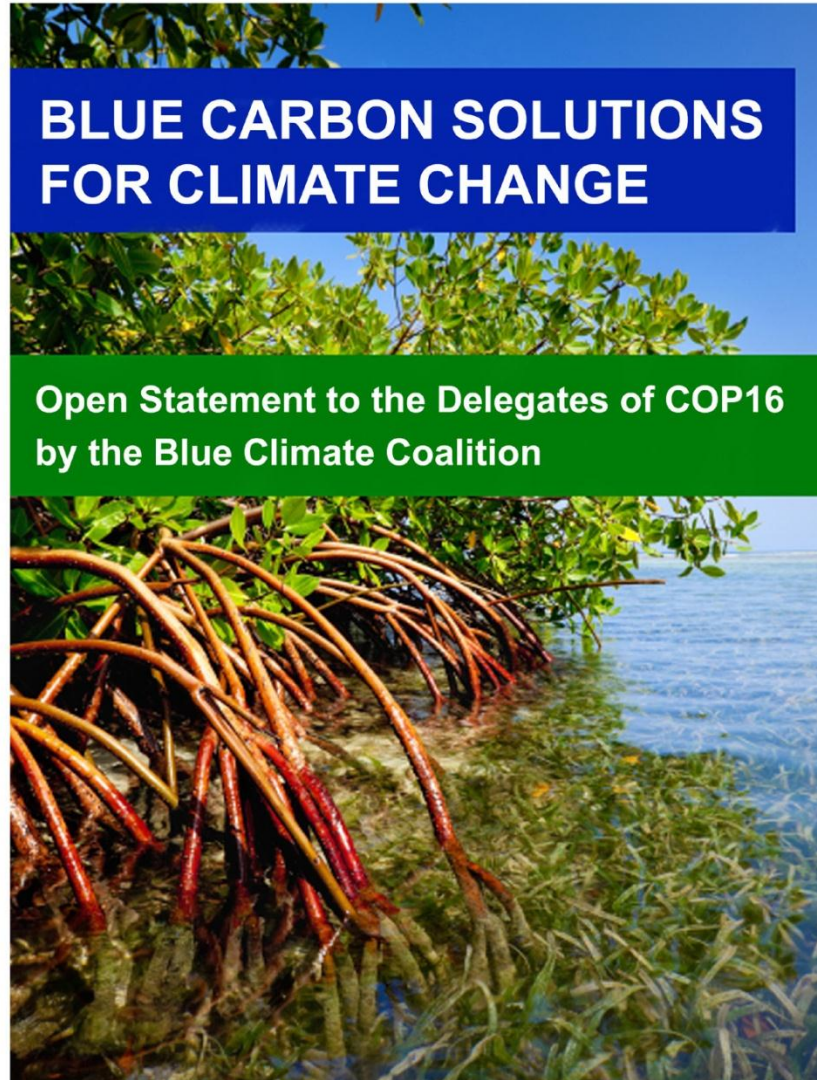
Coastal habitats at risk



Lots of stored carbon

Considering and valuing these carbon services
→ increase coastal habitat conservation.

Blue Carbon Win-Win



What is lacking

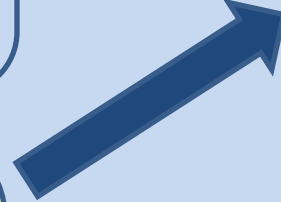
- ❖ Lacking mechanisms to account for ecosystem services
- ❖ Need methods to *value the ecosystem services of these habitats*



Coastal Blue Carbon Opportunities for Conservation: Two Pathways

Address Policy Needs:

- Identification of policies that could address coastal carbon
- Procedures for how to incorporate C services into activities



Improve ability to incorporate carbon services in programs and policies (e.g. mitigation projects, NEPA)



Address Science Needs:

- Better estimates of C storage, sequestration, and emissions
- Areal extent of habitats and which are most threatened
- Better understanding of carbon released when habitats are disturbed, or stored in restoration

Top pathway in blue is NOT dependent on carbon markets.

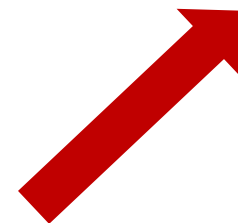
Bottom pathway IS dependent on carbon markets.

Address Market Policy Needs:

- Protocols for GHG accounting
- Carbon market protocols



Additional resources through carbon markets for protection and restoration



GOAL:
Enhanced Conservation of Coastal Habitats

- salt marsh
- seagrass
- mangroves

What's NOAA Doing?



- ❖ NOAA-wide blue carbon team
- ❖ Report
- ❖ Work Plan: Science and Policy opportunities
- ❖ Newly formed blue carbon interagency group to enhance coordination and communication across the federal family

NOAA Coastal Blue Carbon Work Plan



Presented to the NOAA Ocean and Coastal Council

NOAA Coastal Blue Carbon Team

February 28, 2012

Work Plan Goals

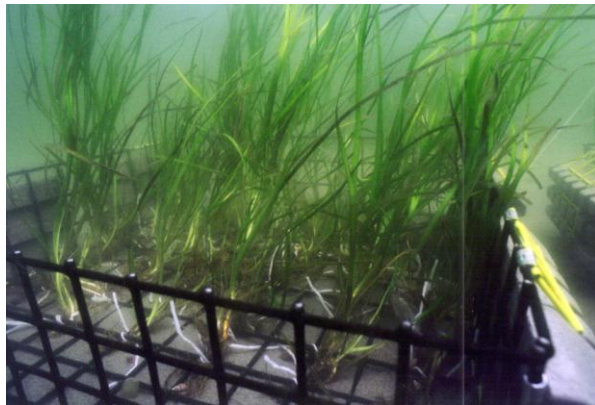


- ❖ Goal 1: Improve understanding and tools for assessing carbon services of coastal habitats.
- ❖ Goal 2: Incorporate carbon services as part of NOAA's and other Federal agencies' policies and practices concerning coastal habitats.
- ❖ Goal 3: Increase awareness and consideration of coastal habitat carbon services within international policies and programs.

Work Plan Actions will:



- ❖ Raise awareness
- ❖ Conserve more habitat
- ❖ Help mitigate and adapt to climate change
- ❖ Support market-based incentives for conservation



What's NOAA Doing: Science Example

❖ Science

- NERRS Waquoit Bay Study funded in FY11 to examine carbon emissions from the site
 - ◆ Help develop protocol for including wetland carbon in carbon markets
 - ◆ *See Alison Leschen's talk in the next session*



What's NOAA Doing: Policy NEPA

- ❖ *National Environmental Policy Act*
- ❖ Includes a mandate to consider impacts on coastal habitats and **ecosystem services** in planning federal actions
- ❖ Carbon sequestration not been explicitly included to date



Policy: Principles and Guidelines



- ❖ *Revised Principles and Guidelines (P&G) for Federal Water Projects*
- ❖ P&G being revised to include **ecosystem services**
- ❖ Carbon services not currently specified but could be

Other Policy Opportunities



❖ *Coastal Zone*

Management Act (CZMA) activities

- CZMA programs could consider including carbon storage research and carbon sequestration in their program activities where appropriate

❖ *Clean Water Act (CWA)*

- Requires compensatory mitigation for unavoidable impacts
- Impacts to carbon stores not currently considered
- Loss of carbon and storage functions could be part of functional and conditional assessments of impacts and could be mitigated

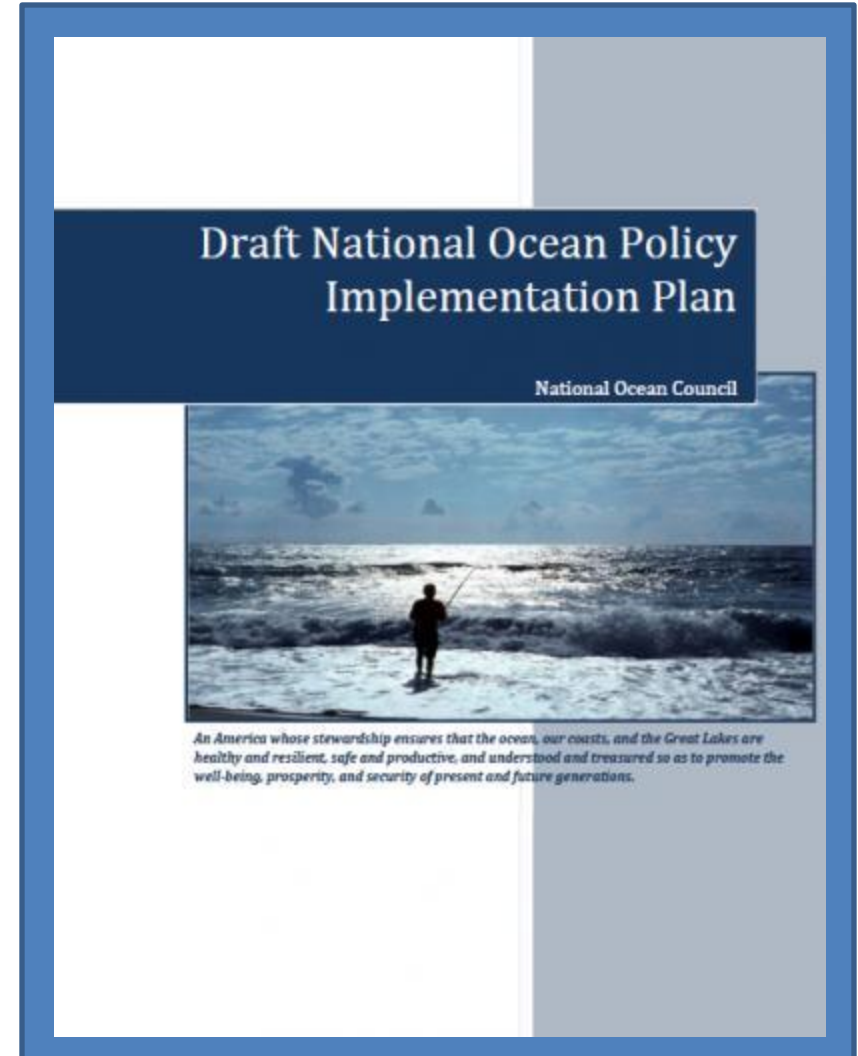
Other Policy Opportunities

❖ *Natural Resource Damage Assessment (NRDA)*

- Ecosystem services affected are bundled in the NRDA process
- Explicit consideration for carbon sequestration would be complex process, but possible



Blue Carbon and NOAA Priorities



What's NOAA Doing: International Examples



BLUE CARBON POLICY FRAMEWORK 2.0

Based on the discussions of the International Blue Carbon Policy Working Group

prepared by Dorothée Herr, Emily Pidgeon and Dan Laffoley



CONSERVATION
INTERNATIONAL



BLUE CARBON POLICY FRAMEWORK
Based on the first workshop of the International Blue Carbon Policy Working Group



Take Home Messages

- ❖ Potential double win for climate and conservation: valuing carbon services of habitats
- ❖ Remaining Work: Science, and Domestic and International Policy
- ❖ NOAA is working to support all these efforts





Questions?

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For more information see:

<http://www.habitat.noaa.gov/coastalbluecarbon.html>

What's NOAA Doing: Specific Examples



❖ Carbon Markets

- NMFS Office of Habitat Conservation funded Restore America's Estuaries in FY11 to do a study of “additionality” to support the development of carbon market protocols for wetland carbon