

B14B - Coastal Wetland Carbon and Nitrogen Cycles: Recent Advances in Measurements, Modeling, and Syntheses III Online Poster Discussion



Monday, 12 December 2022



14:45 - 15:45



Online Only

Coastal marshes, mangroves, and seagrass sequester significant amounts of “blue carbon” in soils, sediments, and biomass. They have potential as a negative emissions technology. With the increasing policy focus on climate change mitigation, we need to understand and accurately predict wetland carbon cycling processes. Complex interactions of climate, land use, sea level, nitrogen pollution, and human management regulate the strength of the carbon sink and the greenhouse gas balance (including CO₂, CH₄, and N₂O). Our ability to measure and model vertical and lateral exchanges, as well as the soil and sediment processes, at the land-ocean interface is limited. We aim to bring together researchers from various disciplines to discuss coastal carbon and nitrogen pools and fluxes, and their roles in global biogeochemical cycling and climate change mitigation. We also aim to report advances in eddy flux, lateral flux, field experiments, remote sensing, modeling, and synthesis that support coastal wetland carbon accounting.

Type

Online Poster Discussion

Primary Convener

[Omar I. Abdul-Aziz](#)

West Virginia University

Conveners

[Jianwu Tang](#)

MBL

[Kevin D Kroeger](#)

USGS

[Lisamarie Windham-Myers](#)

U.S. Geological Survey

Chairs

[Omar I. Abdul-Aziz](#)

West Virginia University

[Jianwu Tang](#)

MBL

[Kevin D Kroeger](#)

USGS

[Lisamarie Windham-Myers](#)

U.S. Geological Survey

Index Terms

Ask a question or comment on this session (not intended for technical support questions).

Have a question or comment? Enter it here.

8 Papers

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B14B-01

[The Effect of Mangrove-Salt Marsh Substitution on Organic Carbon Burial and their Association with Reactive Iron: a Case Study from Apalachicola Wetland](#)

[Prakhin Assavapanuvat](#)

 *Online Only*

 14:53

B14B-02

[Can a DIY Arduino-based system accurately measure CO2 flux from automated chambers?](#)

[Leona Neftaliev](#)

 *Online Only*

 15:01

B14B-03

[Controls of Methane Emission Fluxes from Freshwater Wetlands at the Global Scale.](#)

[Samira Jahan](#)

 *Online Only*

 15:09

B14B-04

Estimates of Coastal Blue Carbon Sequestration in Marsh-Mangrove Dominated Habitats in Port Fourchon, LA, USA in Response to Future Sea Level Rise

Hoonshin Jung Online Only 15:17

B14B-05

Decline Microbial Necromass Carbon with an Increase in Water Salinity and Soil pH in Estuarine Tidal Wetlands

Jin-E Wei Online Only 15:25

B14B-06

Dark Carbon Fixation in Intertidal Sediments: Controlling Factors and Driving Microorganisms

Bolin Liu Online Only 15:33

B14B-07

Expanding the phylogenetic distribution of cytochrome *b*-containing methanogenic archaea sheds light on the evolution of methanogenesis*Yafei Ou* Online Only 15:41

Discussion

 Online Only**Category:** Biogeochemistry (terrestrial and marine)**Section:** Biogeosciences**Neighborhoods:** 3. Earth Covering

Type: Online Poster Discussion

Cross-Listed: H - Hydrology

Cross-Listed: GH - GeoHealth

Cross-Listed: GC - Global Environmental Change

Cross-Listed: A - Atmospheric Sciences