

# 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 CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O). 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

⌚ 14:45

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 CO<sub>2</sub> flux from automated chambers?

*Leona Neftaliem*

📍 *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