NETWORKING EVENT: GENERAL DISCUSSION

20/12/2021
Carbon credits form peatland rewetting: MoorFutures Standard

Succow Foundation

TOPIC OF INTEREST
• Inclusion of carbon credits in peatland rewetting to reduce CH$_4$ emissions of peatlands

METHODOLOGY
• Simplified standard principles for joining the voluntary markets of carbon credits
• Use of water level and vegetation as indicators [species groups (presence/absence)]

MAIN CONCLUSIONS
• Rewetting peatlands have some costs, especially economic, but not rewetting have higher costs focused on increasing GHG emissions, fires, and other damages
• Main benefits → safeguarding carbon stocks, enabling sequestration on long-run, water control, biodiversity… An opportunity to finance by carbon credits from peatland rewetting, as well as to establish a voluntary market
The role of Mediterranean wetlands in C & GHG-exchanges: LIFE Wetlands4Climate and related projects

Fundación Global Nature
Institut Cavanilles de Biodiversitat i Biologia Evolutiva, Universitat de València

TOPIC OF INTEREST
• Nature-based solutions, like carbon sinks, included in the conservation and management

METHODOLOGY
• Metabolic approach and GHG emissions to define a carbon balance
• GHG vs microbiota (structure and function)

MAIN CONCLUSIONS
• Ecology determines the trends of metabolic rates and carbon balance
• Ecological status can alter the carbon balance and retention capacity
Carbon cycling in temporary and shrinking waters: doing limnology when water vanishes

Universitat de Barcelona

TOPIC OF INTEREST
• Alteration of carbon sink and source dynamics in temporary and shrinking waters
• Both lotic and lentic ecosystems and studying the main processes of shrinking

METHODOLOGY
• Carbon and GHG fluxes

MAIN CONCLUSIONS
• Drying and rewetting phases are biogeochemical hot-moments (e.g. in CO₂ emissions)
• Dry phase in riverbeds is a hotspot of CO₂ emissions. The highest the water content, the lowest the CO₂ flux
• CO₂ from dry systems emissions share a pattern globally
• Reservoirs emit GHG emissions, especially during the dry phase
FLAMMINGGOS: The roles of waterbirds, invertebrates, and carbon and nutrient subsidies in modulating wetland greenhouse gas emissions

University of Louisville, USA
EBD-CSIC

TOPIC OF INTEREST

• Including the action of waterbirds and invertebrates with carbon and nutrients in GHG emissions

METHODOLOGY

• Lab study (effects of invertebrates and sinking algae on GHG emissions) and manipulative study (top-down effect of waterbirds on GHG emissions)

MAIN CONCLUSIONS

• More birds, fewer invertebrates → reduction of the microbial activity
• Significant higher fluxes of CO₂ in areas of flamingo exclusion
CiRcadian, seasOnal and climatic variability in greenhouse gas emissiOns in Mediterranean reservoirS: physical and biogeochemical drivers (CRONOS)

University of Granada

TOPIC OF INTEREST

• CO₂, CH₄ and N₂O fluxes measurements simultaneously in reservoirs.
• Studies including the relationship of fluxes with morphometry, land uses and watershed lithology

METHODOLOGY

• GHG fluxes in field, including ebullition

MAIN CONCLUSIONS

• GHG fluxes from reservoirs are determined by watershed, lithology and anthropogenic pressure
• Shallow reservoirs show higher GHG emissions
• Dissolved CH₄ is related with Chl-a concentration
Pond ecosystems for resilient future landscapes in a changing climate: PONDERFUL Project

Universitat de Vic-UCC & ICREA
Aarhus University

TOPIC OF INTEREST

• Interactions between biodiversity and ecosystem functions and services like GHG production and C trapping in ponds across the climate gradient, ecosystem state and land use

• CO_{2}, CH_{4} and N_{2}O

• Best way to manage ponds to optimize their carbon capturing capacity and minimize GHG emissions

METHODOLOGY

• Mesocosm experiments including both diffusive and ebullitive fluxes, and sampling ponds across Europe

MAIN CONCLUSIONS
CON LA CONTRIBUCIÓN DEL INSTRUMENTO FINANCIERO LIFE DE LA UNIÓN EUROPEA