



Socio-Oceanography Workshop 2024

SESSION 2 DESCRIPTION

Navigating the Waters of Marine Carbon Dioxide Removal: From Promise to Practice (Env Lead Dr. Chelsey Baker, NOC; Social Science lead: Dr. Leslie Mabon, The Open University)

The sluggish progress in global carbon emission reduction has sparked a shift in perspective on marine carbon dioxide removal (CDR), elevating large scale deployment strategies to the forefront of political discussions and business interests. Among these methods, Ocean Alkalinity Enhancement is being viewed as a promising solution for testing and commercialization. However, as the urgency to combat climate change drives innovation, field trials are advancing rapidly without the requisite level of comprehensive research and regulation. This enthusiasm for marine CDR raises concerns about potential unintended consequences for marine ecosystems and coastal communities and lack of observational frameworks to evidence the efficacy of marine CDR approaches.

This session will bring together a diverse group of natural and social scientists, all working collaboratively to explore the untold stories of marine CDR. Using a storyline approach, we'll develop narrative scenarios of two possible large-scale trials: one, a successful experiment in a coastal zone of a developing country, showcasing meticulous research, community engagement, and careful planning to protect sensitive habitats and local livelihoods. This narrative will emphasize rigorous evidence of successful carbon sequestration. Conversely, we'll examine a failed trial, illustrating potential ecological, economic, and political impacts and the negative consequences for the business of neglecting efficacy assessment. We will use these narratives as a stepping stone to guide development of a comprehensive CDR assessment framework, ensuring a sustainable, responsible and ethical future for marine CDR. As an output of this session, we will aim to publish a perspective-style article on the developed storylines to act as a foundation for further interdisciplinary collaborations on this topic.