

# Café Scientifique Headingley

**Monday 10 January 2022**  
**Blue Carbon - the role of UK salt marshes in climate change mitigation**

**by Scott Xavi Gudrich**



**Outline:** Marine ecosystems like seagrass meadows, salt marshes and mangroves absorb or 'draw down' carbon dioxide from the water and atmosphere. The storage of carbon in marine habitats is called blue carbon.

- Globally, salt marshes and seagrass – blue carbon sinks – draw down and store between them 235-450 million tonnes of carbon a year; almost half the emissions from the entire global transport sector.
- Scientists estimate that salt marsh and seagrass habitats fix and store carbon at two to four times the rate of mature tropical forests. This means the UK's salt marshes and seagrass beds have the carbon storage potential of between 1,000 and 2,000 km<sup>2</sup> of tropical forests.

Yet despite these impressive numbers and the obvious importance of coastal wetlands for climate change mitigation and carbon sequestration, there is still much global scarcity in understanding the patterns and drivers of salt marsh carbon storing. In particular, little is known about how salt marsh carbon store will react to changes in marsh elevation due to sea level rise (SLR), and the drivers which determine variations of carbon store at depth levels below 50 cm are also not well described. I will present the findings of my research directly addressing the how changes in relative elevation due to SLR might affect carbon store.

*Scott Xavi Gudrich has a BSc in Environmental and Sustainability Studies and a MSc in Marine Environmental Protection with a research interest in coastal ecosystems and coastal management, especially human-nature interactions and participatory methods in stakeholder engagement, as well as ABR (arts-based research). A former professional musician, in 2020 Scott founded the Plover Rovers, a charity dedicated to enhancing ocean literacy and empowering coastal communities through delivering exciting scientific talks all along the English Coast Path.*

**Venue: The New Headingley Club, 56 St Michael's Rd., Leeds LS6 3BG**

**Time:** Club opens at 7:00pm for drinks & the room at 7:30; talk begins promptly at 7:45pm

**Entry:** Donation please for room hire and expenses: **£3 at the door**



Café Scientifique Headingley is a programme run under the auspices of the Headingley Development Trust. More from our website:

<http://cafesci.hdtleeds.org.uk/>