



Seminar: *From Farmland to Carbon Markets: Evaluating Enhanced Rock Weathering Across Australia and Southeast Asia*

Durable carbon dioxide removal (CDR) technologies are increasingly recognized as essential for meeting long-term climate targets, yet their deployment remains limited by economic, technical, and policy uncertainties. Drawing on a detailed case study, we apply Life Cycle Assessment (LCA) and Techno-Economic Analysis (TEA) to evaluate the full Enhanced Rock Weathering (ERW) supply chain, from feedstock processing and transport to field application and post-deployment monitoring. In North Queensland, spatially optimised cradle-to-farm LCA of basalt and mill ash on farmlands shows basalt delivers substantially higher and more robust net CDR, while mill ash becomes viable only under targeted, low-transport deployment. In Southeast Asia, cradle-to-credit modelling of ERW in agricultural supply chains indicates strong carbon-insetting potential, where logistics dominate emissions and MRV dominates costs. Stakeholder perspectives from both regions further highlight governance, market readiness, and supply-chain coordination as deployment priorities.

Yiwen is a PhD candidate at the Asian School of the Environment and Earth Observatory of Singapore, Nanyang Technological University, and was a visiting scholar at the University of Cambridge. Her research focuses on enhanced rock weathering as a scalable carbon dioxide removal strategy, integrating life-cycle assessment, techno-economic analysis, and stakeholder perspectives to evaluate deployment pathways across Southeast Asia and Australia. She also conducts policy analysis on links between UN SDGs, ESG, and carbon markets with support from her industry experience. Her work bridges environmental and earth sciences, economics, and real-world implementation to support effective climate solutions.

Seminar information

Date: Tuesday 23 June, 2026
Time: 16:00-17:00 AEST / 14:00-15:00 SGT
Venue: Crowther Lecture Theatre,
Building A3 Room 002,
JCU Nguma-bada Campus, Smithfield
followed by drinks and nibbles *(Cairns only)

Zoom: [https://jcu.zoom.us/j/89885408996?](https://jcu.zoom.us/j/89885408996?pwd=oPo9Ga9KtpCm4bHGNsSyWahaBB5X42e.1)
pwd=oPo9Ga9KtpCm4bHGNsSyWahaBB5X42e.1

Passcode: 591106

QR Code: Scan the code below to join us on Zoom

