

## PROJECT DETAILS

Project Title:

**Blue carbon assessment of Peninsular Malaysia's mangrove habitats.**

Project Summary:

Mangroves and seagrasses are important coastal habitats that provide multiple ecosystem services, including efficient carbon sequestration (Blue Carbon; BC), which gives them a prominent role on mitigation and adaptation to climate change. Unfortunately, they are also among the most threatened ecosystems on Earth. Despite their importance, many areas in the world (e.g., Asia, Indo-Pacific, Africa, Central and Latin America) are still lacking carbon sequestration information essential to understand the role they may play at national and regional levels. The aim of this study is to assess the carbon sequestration capacity of mangrove habitats in the Peninsular Malaysia and to understand their connectivity with the adjacent seagrass habitats in terms of carbon.

This project will also provide the opportunity to test new radionuclide techniques for assessing short term (10 years) sedimentation rates, and hence carbon accumulation, using  $^{228}\text{Th}$  that have not been explored yet in a BC context and that could potentially overcome limitations of classic methodologies currently in use (i.e.,  $^{210}\text{Pb}$ ,  $^{14}\text{C}$  and Surface Elevation Tables). This research will contribute to enhance the accuracy of regional and global BC estimates and will provide new information on coastal BC potential in Malaysia, contributing to policy and financial solutions for habitat management and conservation.

Preferred Applicant Skillset:

We are looking for an enthusiastic and motivated PhD candidate with a background in environmental sciences, marine sciences or similar field. The candidate should have excellent organization and problem-solving skills, essential to organize large fieldwork campaigns and comprehensive analyses. A good attitude towards teamwork and cultivating cultural curiosity is expected. Ideally, the candidate should be familiar with coastal ecosystems ecology, such as mangrove and seagrasses, and should have a good level of fitness, as sampling in mangroves habitats can be particularly challenging. A candidate with proven scientific writing skills will be preferred.

Internship Opportunity:

Yes. It is envisaged that the candidate shall collaborate with other international research teams in Malaysia and elsewhere, involving fieldwork and analyses. In particular, some of the new techniques to be developed may require spending time in other institutions (i.e., Universitat Autònoma de Barcelona, Spain; Marine Environment Laboratories, International Atomic Energy Agency, Monaco).

Primary Contact:

Pere Masque

+61 458 422 390

[p.masque@ecu.edu.au](mailto:p.masque@ecu.edu.au)