PhD Project with Top-up Scholarship Opportunity:

Mangrove living shorelines: a transdisciplinary approach for assessing effectiveness

The National Centre for Coasts and Climate, The University of Melbourne (nccc.edu.au)

Climate change and a growing coastal population is driving an increased reliance on artificial coastal protection structures, such as seawalls and breakwaters. These structures come at a significant environmental and economic cost. A PhD project is available to evaluate the effectiveness of hybrid mangrove living shorelines as a sustainable coastal protection option.

Hybrid living shorelines combine some hard elements (e.g. concrete units) with the establishment of natural habitats for coastal defence. The benefit of using living shorelines is that natural habitats have the capacity to adapt to changes in climate, self-repair after storm events and provide co-benefits, such as habitat and fisheries provision.

To promote the wider uptake of living shorelines in Australia we need a rigorous assessment of how they perform from an ecological (i.e. establishment and growth of mangroves), engineering (i.e. wave attenuation and sediment accumulation), and socio-economic (i.e. landowner barriers to implementation, cost-benefit analyses) perspective. The successful applicant will work in a team of marine ecologists, engineers and social scientists, gaining invaluable experience working in interdisciplinary research.

The student will need to obtain an Australian Postgraduate Award (APA) scholarship at the University of Melbourne (or be competitive for an international postgraduate scholarship: IPRS, MIRS). A first-class honours or master's degree, and/or evidence of publishing in international peer-reviewed scientific journals will be essential. Information regarding scholarships and admission for University of Melbourne can be found here: https://study.unimelb.edu.au/find/courses/graduate/doctor-of-philosophy-science/

If the applicant is successful at obtaining a full-scholarship (worth $30,600 pa. pro rata) then a $5000 pa. top-up scholarship will be awarded (for 3.5 years).

The successful applicant should have a background in one or more of the following fields: marine ecology, engineering or socio-ecology, with an interest or experience in working across multiple disciplines. Experience in the use of statistical software is also desired. The starting date for this project is early-2020.

To express interest please send a cover letter, CV and academic transcript to Dr Rebecca Morris (rebecca.morris@unimelb.edu.au), or feel free to contact for more information.

Collaborative team: Prof Stephen Swearer, Prof Ruth Beilin, A/Prof Anthony Boxshall, Dr Elisabeth Strain

Closing date for expressions of interest is 15th September 2019.