



The University of Hong Kong  
School of Biological Sciences

# Qualifying Seminar

## Monitoring the diversity and distribution of seaweed species in Hong Kong and the commercial opportunities within a circular economy

**Date: 27<sup>th</sup> August 2025**

**Time: 2:00 pm**

**Venue: 6N-11**

### About the speaker:

Alison Linsey FREEMAN specialises in fisheries, aquaculture and marine conservation, and is working within the Marine Futures Laboratory, under the supervision of Dr. Bayden Russell. Alison completed her Bachelor of Science at the University of Aberdeen and Master of Research in Sustainable Aquaculture & Fisheries at Swansea University. Alison has worked in fisheries management in the UK fishing sector for over 8 years.

### Abstract:

This research investigates the historical and ecological changes in macroalgae populations in Hong Kong, and sustainable applications. The study is structured into four interrelated chapters: (1) compilation and analysis of historical macroalgae records, including taxonomy, environmental metadata, and the impacts of ecological stressors; (2) mapping of Sargassum forest distribution using satellite imagery, field surveys, and citizen science contributions; (3) assessment of seasonal and long-term biodiversity and abundance changes in macroalgae populations through replicated surveys and predictive modelling under future climate scenarios; and (4) evaluation of the commercial potential of local macroalgae through species identification, biochemical analysis, and the development of prototype products. By integrating historical data, fieldwork, technological tools, and stakeholder engagement, the research advances understanding of macroalgal dynamics and highlights their significance for marine ecosystems and innovative, sustainable industries in Hong Kong.

