

# SEMINAR

## INTRODUCTION TO MARINE ECOSYSTEM MODELLING AND THE ECOPATH WITH ECOSIM (EWE) AND ECOSPACE MODELLING APPROACH

Ecosystem modelling seeks to understand and quantify ecosystems and simulate potential responses to scenarios of various environmental and human pressures. Ecosystem models are designed and utilized for three core purposes: describing and understanding the current ecosystem, forecasting and hindcasting scenarios, and supporting management decision making.

This seminar will introduce marine ecosystem modelling and principles behind them, with a specific focus on the Ecopath with Ecosim (EwE) and Ecospace modelling framework.

EwE is a quantitative end-to-end ecosystem modelling approach which represents trophic flows between functional groups in an ecosystem to describe and understand modelled ecosystems. The 3 core components of EwE are: Ecopath – a static, mass balanced snapshot which can be used to understand the structure and function of whole ecosystems; Ecosim – a time dynamic simulation model, which can be used to explore policy, fishing and environmental stressor impacts; and Ecospace – a spatially and temporally dynamic and can be used to understand the spatial structure of ecosystems, and the impacts of spatially variable pressures such as placement of MPA's, fishing pressure, and ocean warming.

### FACILITATORS:



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**DATE:** 26 May 2025, 09:00 – 12:00 (SAST)



**VENUE:** Resource Room, Ocean Sciences Campus, B block



**RSVP:** in-person or online

<https://forms.office.com/r/5WtQ61TjZc>



1: Marine Sustainability Group, University of Cape Town, 2: Nelson Mandela University