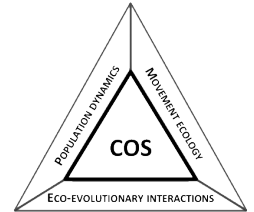




Department of Coastal Systems Science Plan 2018



Mission: Understanding how various levels of ecological organization respond to environmental change through studies on eco-evolutionary patterns and processes in the coastal zone

Theme: Movement Ecology

Movement is crucial to almost any ecological and evolutionary process. Understanding the key processes affecting movement at different spatial and temporal scales, will allow understanding of how organisms react to environmental change, such as habitat fragmentation, climatic changes, and biological invasions. Through movement and migration, animals and plants act as important transporters of nutrients, energy and information, both within and between ecosystems. Long-distance movements and migrations connect ecosystems on a global scale. As such, moving organisms can carry over ecological effects obtained in one (part of the) system to another.

This research direction is aimed at understanding how ontogeny (organismal development), sociality (through learning and collective behaviour), as well as adaptations (in timing and direction) contribute to the formation of movement strategies. We study the movement of plankton, invertebrates, fish, birds, reptiles and marine mammals on various spatial scales, and how their movement connects trophic levels, habitats, and ecosystems. Using the latest tracking technologies and genomic data, we study these phenomena at the individual, group and population level, which will help us decipher the actual drivers and decisions that underlie animal movement and migration, and their consequences on population dynamics and evolution.