

INSTITUTE FOR COASTAL AND MARINE RESEARCH (CMR)  
2024 QUARTER 1 SEMINAR



**Evolving Molecular Approaches  
for Conserving Southern Africa's  
(Marine) Biodiversity: From Data  
Generation to Supporting  
Conservation and Management**

**PROFESSOR SOPHIE VON DER HEYDEN**

*The past 15 years have seen a concerted effort in generating phylogenetic and phylogeographic data for southern African marine systems, which has provided unique insights into the evolutionary history and processes driving the patterns of marine biogeography and biodiversity in the region. In South Africa, molecular tools, including mtDNA, microsatellites and more recently analyses based on Single Nucleotide Polymorphisms and environmental DNA (eDNA) metabarcoding, have progressively been used to study a large variety of invertebrate and vertebrate taxa (and the odd angiosperm), however the uptake into the conservation and management of species and environments have been slow. This talk provides an overview of our state of knowledge of marine genetics and genomics in the region, including recent development in community genetics and the first attempts of biodiversity monitoring using environmental DNA. Further, Prof von der Heyden will provide examples of how seascape analyses can support the management of cross-boundary fisheries and how genomic data can contribute to coastal spatial planning that could enhance the resilience of populations to ongoing climate and anthropogenically driven changes.*

*Prof von der Heyden is a marine molecular ecologist. Her research is by necessity broad, but primarily focusses on the conservation and sustainable utilisation of species and the marine environment. Her particular interests lie in the applicability of molecular ecological and genomics tools to inform marine spatial planning, understanding MPA connectivity patterns and resilience and adaptation of marine species to ongoing and future change, as well as the impacts of changing marine communities on society.*

**Tuesday, 12 March 2024**

**13:00 - 14:00**

**RSVP: [cmr@mandela.ac.za](mailto:cmr@mandela.ac.za) by 15:00 on**

**11 March 2024 to receive Zoom and venue details**