Nansen-Tutu Centre for Marine Environmental Research (NTC), University of Cape Town (UCT), and Department of Forestry Fisheries and the Environment (DFFE), Cape Town, South Africa, in collaboration with Nelson Mandela University (NMU) Gqeberha.

Post-doctoral fellowship on marine dispersal and connectivity modelling

General context

The MERMOZ project (*Marine Ecological connectivity and conseRvation in the MOZambique Channel*) aims to fill in current knowledge gaps on the current and future spatio-temporal connectivity patterns of various vulnerable, iconic and representative fish, sea turtle and seabird species in the Mozambique Channel (MC), in the Southwestern Indian Ocean (SWIO). These gaps will be addressed by combining ecological connectivity multidisciplinary approach, i.e. connectivity modelling and simulations, in-situ species tracking and genomic data. Finally, through a transdisciplinary approach, ecological connectivity and socio-economic knowledge will be combined into stakeholder workshops to co-design policy recommendations on how to best use ecological connectivity knowledge in climate and equity-proof regional conservation strategies.

Post doctoral position description

Within the project, one task aims to simulate and analyse current and future connectivity patterns between conservation sites, in particular key Marine Protected Areas (MPAs), Locally Managed Marine Areas (LMMAs) and coral reefs, for a broad range of planktonic larval durations. This will be achieved by using high-resolution simulations and future oceanographic conditions into the biophysical model of larval dispersal Ichthyop (https://ichthyop.org/; Lett et al. 2008). To complete this task, we are looking for a motivated post-doctoral candidate with computer and modelling skills, interested in marine dispersal and connectivity.

Required skills

- A recent PhD (less than 5 years) in Physical Oceanography, Numerical Ocean Modelling, Marine Ecology, Marine Spatial Planning or related fields;
- Ability to start in the first half of 2026;
- Experience with publishing scientific papers;
- Proficiency in Linux, and programming skills in MATLAB, Python, R.
- Proven experience with handling large oceanographic datasets;
- Proven experience with modelling, with focus on marine dispersal.

Deliverables:

- Sets of sites connectivity simulation outputs
- Analysis report & one scientific publication

Practical information

Host institution:

The post-doctoral fellow will be based in the Department of Oceanography, UCT.

Duration: 12 months, with possible extension

Start Date: 1 April 2026

Salary: Fellowships are fully funded by NRF at yearly amount of R320.000,00.

Application: Apply (CV, Highest level Academic transcripts and cover letter) no later than 28 February 2026 to both IHalo@dffe.gov.za and nicolas.barrier@ird.fr

Supervisors: Dr Bernardino Malauene (NMU, South Africa/ InOM, Mozambique), Dr Nicolas Barrrier (MARBEC/IRD, France), Dr Christophe Lett (MARBEC/IRD, France), and Dr Issufo Halo (UCT/DEEF, South Africa).