Call for applications

Academic year 2023-2024

Doctoral or post-doctoral research grant on the conservation and restoration of marine and coastal ecosystems (mangroves and seagrass beds) in the Western Indian Ocean (WIO)

Introduction

The "Coastal Populations and Ecosystems Resilience in the Southwest Indian Ocean" (RECOS) is a 10 million euros project implemented by the Indian Ocean Commission (IOC) and co-financed by the *Agence Française pour le Développement* (AFD) and the *Fond Français pour l'Environnement Mondial* (FFEM). Its overall objective is to strengthen the resilience of coastal populations to the effects of climate change by restoring the services provided by coastal ecosystems. One of the main focuses of the RECOS project is to provide a regional scientific platform for consultation and exchange around 4 key topics. On of the topics focuses on the conservation and restoration of key ecosystems (mangrove et seagrass ecosystems) in the Western Indian Indian Ocean (WIO) region. As part of the RECOS project, a doctoral thesis or postdoctoral contract will be funded to contribute to the scientific research on this topic. Collaboration and partnership between regional universities and/or research centres will be strongly encouraged.

Context

Mangroves in the coastal areas of the Western Indian Ocean region account for 5% of the world's mangroves. The latest reports (e.g. State of Mangroves in the Western Indian Ocean, Wetlands international, 2022) show that the region lost almost 4% of its mangrove forests between 1996 and 2020, mainly due to deforestation for agriculture, unsustainable logging and the consequences of extreme weather events. Mangroves provide essential ecosystem services on which the survival of millions of people living in the region's coastal areas depends, and they are significant carbon sinks for the countries in the region. On the other hand, more recent studies have highlighted the significant carbon sequestration capacity of seagrass beds. These ecosystems are already known to be providing multiple ecological services but are also experiencing significant degradation in the Western Indian Ocean region. For all these reasons, conserving and restoring mangroves and seagrass beds is of critical importance to the region. In this context, regional networks have been set up (WIOMN and WIOSN), aiming to pool efforts in pursuit of conservation objectives and create a regional dynamic among the stakeholders involved in the management of these marine/coastal ecosystems.

As part of the RECOS project, a scientific working group dedicated to advancing research on the conservation of marine/coastal ecosystems (mangroves and seagrass beds) met in April 2023 in the Seychelles. The discussions that took place highlighted research priority areas for the region, with the aim of better characterising and quantifying these ecosystems to strengthen management and conservation measures at regional level. During this regional workshop, a dedicated working session enabled the identification of research areas that could be addressed as part of a doctoral or postdoctoral research project to be financed

by the RECOS project. The following paragraphs describe the research questions and scope of this research project.

Research topic

This research project aims to focus on the conservation of marine and coastal ecosystems at a regional scale, more specifically on mangroves and/or seagrass beds ecosystems. The results of this research should allow for a better characterisation of these ecosystems on a regional scale and should allow for management, conservation and restoration measures to be strengthened. Two aspects are of central importance in this regional context: i) the evaluation of the ecosystem services provided by mangroves and seagrass beds, and ii) the analysis of the socio-economic impacts associated with the conservation of these ecosystems. The research work should address one or more of the following topics:

- Development of **methods for quantifying ecosystems** (e.g. abundance, biomass, spatial coverage, density, etc.) for regional use: mapping, remote sensing, processing, analysis, development of a regional algorithm.

- Study of the **vulnerability and resilience** of mangrove and seagrass ecosystems in the face of climate change in the Indian Ocean region: identification of anthropogenic and natural pressures, impacts of management measures (MPAs/LMMAs) on the dynamics of the ecosystems studied on a local scale, analysis of historical data, etc.

- **Socioeconomics aspects associated with the conservation of marine and coastal ecosystems:** socio-economic impacts of management measures (MPAs/LMMAs) on beneficiary populations, diagnosis of management models (bottom-up, top-down, community management, etc.), evaluation of ecosystem services, sensitivity and adaptation capacities of the social-ecological system, etc.

- The identification of **strategies** that can be put in place to guide progress in the conservation effectiveness of mangroves and/or seagrass beds in the countries of the IOC region, in order to contribute towards strengthening the resilience of the coastal populations of the IOC countries.

Eligible graduate schools/host universities

The eligible host universities and graduate schools are those existing in the IOC countries targeted by the RECOS project, i.e. Mauritius, Madagascar and Réunion. Joint supervision is strongly encouraged, in particular involving French universities (Overseas France and mainland France) or other regional/international universities relevant to the proposed research topic.

Eligible applicants

Eligible applicants must be nationals of the countries targeted by the project, i.e. Comoros, Madagascar, Mauritius and Seychelles. In the absence of a graduate school at the University of Seychelles and Comoros, nationals of these two

countries will have to enrol with a graduate school in one of the other targeted countries mentioned above.

Candidates must hold a Master degree/thesis in ecology, geography, environmental sciences or in any other field addressing the theme described above.

This call for applications will be circulated to all the universities in the IOC area.

Duration

The funding comes from the RECOS project, which is scheduled to run until the end of 2026. Thesis/post-doctoral work must begin by the end of 2023 and be completed by October 2026, at the latest, when the thesis will be defended and published.

Resources made available

The PhD. Student /post-doctoral fellow will receive a monthly stipend, as well as some of the costs required to conduct the research (data collection, fieldwork, participation in conferences, publication/communication costs, etc.)

Expected skills

- ✓ Analytical, writing and synthesis skills.
- ✓ Excellent ability to work in French and English. Fluency in a language of one or more of the IOC countries would be a plus.
- ✓ Knowledge of the regional context and the context and issues of coastal areas.

How to apply

Candidates wishing to apply must have identified at least one graduate school/host university and a PhD./post-doctoral supervisor with the skills needed to supervise a thesis on the specific research question as described above. Applicants must provide the following supporting documents:

- ☑ a cover letter from the applicant explaining the applicant's general interest for the project (800 words maximum);
- ☑ the applicant's CV (3 pages maximum);
- ☑ a copy of the applicant's master's degree or doctoral thesis;
- ☑ a brief research proposal for the scheduled PhD. thesis explaining how it fits in the line of research presented in this document (limited to 2000 words);
- ☑ where possible, a letter from the graduate school agreeing in principle to the registration for the 2023-2024 year (unless applying for a for post-doctorate);
- ☑ a letter from the thesis director/postdoctoral supervisor attesting to his/her agreement to supervise the candidate;
- ☑ the names, affiliations, e-mail addresses and telephone numbers of two persons who can provide references in the academic or professional context, who can be contacted if necessary;
- ☑ the CV of the PhD/Postdoc supervisor;
- ☑ copy of passport/identity card.

Selection process

The pre-selection procedure for candidates will be subject to the following criteria:

- applications received after the closing date will be rejected;
- incomplete applications will be rejected;
- applications submitted by candidates who are not nationals of the IOC member countries targeted by project will be rejected.

Each application validating the above criteria will be assessed according to the following evaluation grid.

Criteria	*Points*
Master/PhD. results	10
Experience on the research topic	10
Experience/knowledge of the IOC context	10
Writing skills	20
Soundness of the 2000 proposal	20
The research project set-up is collaborative in the region (joint supervision, joint tuition, etc.)	30
Total	**100**

Only candidates with a score of 75/100 or higher will be shortlisted for the interviews.

Send your application to RECOS@coi-ioc.org , and copy anne.lemahieu@coi-ioc.org and christophe.legrand@coi-ioc.org before the 29th September 2023 at midnight, Mauritius time. Shortlisted candidates will be notified mid-October for an interview by the end of October by a committee made up of representatives of the RECOS project, academics and regional experts.