

(Initial one year contract, with a possible additional year)



Postdoctoral Position
17008

Postdoctoral position on Indicators of Marine Biodiversity

ABOUT IRD

IRD (Institut de Recherche pour le Développement) is a French government organisation engaged in research, training and innovation for the promotion of the economic, social and cultural development in Southern countries. Research performed in IRD covers a wide range of areas and disciplines, addressing major development challenges such as climate change, sustainable exploitation, human health, food security, water resources, vulnerability and social inequality. IRD operates jointly with academic partners in France and Europe, and in 35 countries in the Mediterranean Basin, in Africa, Asia, and Latin America.

The Research Unit MARBEC (MARine Biodiversity and ECosystem services - 230 staff members from IRD, Ifremer, CNRS and University of Montpellier) has three main objectives: (1) to describe marine biodiversity, understand its dynamics and the functioning of marine ecosystems; (2) to analyze the impacts of anthropogenic pressures on marine ecosystems and develop global change scenarios; (3) to reconcile exploitation (especially fisheries and aquaculture), and conservation and respond to societal expectations (expertise, innovation, remediation).

LOCATION

University of Montpellier - UMR MARBEC
Place Eugène Bataillon, CC093 - 34095 Montpellier, France

JOB DESCRIPTION

Context

In 2019, the IPBES Global Assessment on Biodiversity and Ecosystem Services showed clearly that Nature is deteriorating faster than ever before, reducing the vital benefits Nature provides for humans' quality of life. A crucial process is now to start with a new strategic plan for conserving biodiversity, the post-2020 Biodiversity Framework that Governments will negotiate in 2021 at the upcoming COP 15 to the Convention on Biological Diversity (CBD). New global biodiversity goals will be adopted, replacing the set of Aichi Targets from the Nagoya Protocol. In preparing the framework, the scientific community has formulated a number of recommendations, including the necessity to define (i) goals that are quantifiable, precise and traceable, and (ii) time horizons for the goals. The expectations are high and require a set of robust indicators and target reference levels to be able to interlink different facets of biodiversity and multiple ecosystem services, and track progress efficiently at different time scales, within a decade and over several decades.

Activities

The postdoctoral project will be developed on the Mediterranean Sea, one of the main hotspots of marine biodiversity in the world. The combined pressures of fishing activity and climate change have also made it a hotspot of global change amidst increasing concern about the worsening status of exploited marine species. With the perspective to support successful decision-making for improving biodiversity status, the scientific community is challenged in its capacity to address multiple drivers of biodiversity loss, multiple components of biodiversity, and to propose a time frame for management actions such as regulating fishing effort, or implementing a dynamic network of marine protected areas.

The selected postdoctoral fellow will have the responsibility to :

- select a set of indicators for tracking progress in restoring marine biodiversity in its different components, from the genes, species to the ecosystems ;
- assess the performance of these indicators in reflecting the impacts of drivers of biodiversity loss (in particular climate change and fishing) with a high, rapid, and specific rate of response to change and management actions ;
- define quantitative targets for these indicators to preserve biodiversity in its different components ;
- based on these analyses, propose a roadmap that is consistent with the post-2020 Goals of the CBD, for restoring the biodiversity of the Mediterranean sea, at the 2030 and 2050 horizons.

The postdoctoral fellow will develop his/her activities based on a large body of studies conducted by a network of international laboratories from the northern to the southern borders of the Mediterranean Sea with which IRD has been collaborating for decades. Data on biomass indices, commercial catches, life-history traits, presence/absence, habitat preferences will be extracted from local databases such as the MEDITS, FishMed and GFCM databases, and global databases such as OBIS, GBIF and the FAO Geonetwork databases. To test the performance of indicators, a number of ecosystem models applied in the Mediterranean Sea (Osmose, Ecopath with Ecosim in the Gulf of Lions-France, Gulf of Gabes-Tunisia, Catalan Sea-Spain, Mediterranean basin) can be used to quantify indicators' sensitivity, their time of response, and their driver-specificity.

IRD promotes gender equality

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QUALIFICATION AND EXPERIENCE REQUIRED

- PhD in Quantitative Ecology, Applied Statistics or Ecosystem Modelling
- Advanced programming in R
- Education/Experience in marine ecology
- Superior written and oral communication skills

CONTACT

Applications should include a cover letter and a curriculum vitae.

Please send applications to Yunne Shin yunne-jai.shin@ird.fr and to recrutement.dr-occitanie@ird.fr