



## **Data-scientist position for the FRB-CESAB project BLUE JUSTICE**

### ***Supporting climate resilience through equitable ocean conservation***

**Location :** Montpellier

**Contract :** 11 months fixed term contract

**Salary :** from 2 620 € gross per month

**Deadline for application :** October 15th, 2023

**Starting date :** mid-November, 2023

#### **The FRB and the CESAB**

The **Foundation for research on biodiversity (FRB)** was created in 2008. It gathers public research institutions, environmental NGOs, land and genetic resources managers and the private sector. It provides a forum where science meets society in order to address the current challenges related to biodiversity research.

*More information :* [www.fondationbiodiversite.fr](http://www.fondationbiodiversite.fr)

The Centre for Synthesis and Analysis of Biodiversity (**CESAB**) is FRB's main programme and a leading research organization in Europe, with an international reputation. Launched in 2008 after the "Grenelle de l'Environnement" by the Ministries for research and for ecology, it was created by eight public research institutions (BRGM, CIRAD, CNRS, IFREMER, INRA, IRD, IRSTEA and MNHN), joined in 2014 by LVMH and in 2017 by the University of Montpellier. Its aim is to implement the innovative work of synthesis and analysis of existing data in the field of biodiversity. Advancing knowledge, developing culture and collaboration, facilitating links between scientific disciplines and with the stakeholders, are the main objectives of CESAB, which welcomes every year a large number of researchers from all continents.

*More information :* <https://www.fondationbiodiversite.fr/la-fondation/le-cesab/>

#### **The BLUEJUSTICE project**

Climate change is rapidly transforming the ocean with disproportionate impacts on vulnerable societies in least developed countries. Concurrently, the expansion of area-based conservation is also transforming our ocean. Marine protected areas (MPAs) can be effective tools to build local social-ecological resilience to climate stressors and provide other societal benefits. However, if poorly implemented, marine conservation can also lead to inequitable outcomes, compromising the wellbeing of vulnerable coastal peoples and undermining long-term conservation success. The urgency and magnitude of climate change impacts and implications of inequitable conservation expansion necessitate robust, evidence-based strategies and policies at multiple scales.

The **BLUE JUSTICE** partnership will produce original, solution-oriented research based on the synthesis of multiple existing, and newly assembled, global datasets on social and ecological conditions in marine

systems. Specifically, we will examine the relationship between marine conservation governance and social-ecological outcomes, generating novel insights on the conditions that promote equity and climate resilience in vulnerable coastal groups (including women and Indigenous groups), and produce the first global evidence-base on innovative pathways towards greater equity and resilience in marine conservation.

Through engaging a transdisciplinary team of leading academics, practitioners, and policy makers in development and conservation sectors, we will deliver actionable strategies to international leaders in marine conservation and sustainable development. Our group will challenge disciplinary boundaries and forge creative connections between these traditionally separate groups. As implementation begins for work under the UN Decade of Ocean Science for Sustainable Development, we will produce policy guidance for the rapid implementation of equitable conservation, with a focus on building the climate resilience of vulnerable groups.

### **Job description**

The data scientist is expected to:

- Assemble and manage global datasets on social and ecological conditions in marine systems to examine the relationship between climate vulnerability, marine conservation, and equity across local to global scales;
- Contribute to the building, standardization and management of a shared database among project partners;
- Data mining and Statistical analysis (selection and application of the most appropriate existing statistical methods);
- Support for the implementation of an analysis reproducibility strategy (via R/Python, Markdown and GitHub for example);
- Assist the coordination of the BLUE JUSTICE project.

### **Work environment**

The data scientist will be hosted in Montpellier (France) at CESAB (see description above). The data scientist fellow will be under the supervision of Jessica Blythe (Brock University, Canada), Joachim Claudet (CNRS, France) and David Gill (Duke University, USA) and will benefit from the expertise of all project members (practitioners and academic researchers from conservation and development in nine countries) and from the methodological and logistic support of the CESAB. CESAB will also provide a specific budget for a laptop workstation and for travels to visit the project PIs.

### **Requirement and qualifications**

A research-oriented profile master degree (diploma required: PhD, engineer/master's degree) with training in an environmental field and statistics. The ideal candidate will be a highly motivated person with an interdisciplinary background and training.

#### *Required skills*

- Strong quantitative skills: proficiency in statistical analyses and modeling techniques applied to ecology and socio-economic fields
- Big Data Analytics: Experience working with and synthesizing different types of social and ecological data at various spatial scales, and large spatial datasets in R or GIS

- Knowledge of machine learning algorithms and techniques
- Data visualization techniques
- Proficient in programming languages in R, as well as have experience with SQL for data manipulation and analysis
- Advanced skills in reproducibility research tools (Git, Markdown, etc.) data visualization techniques.
- Good team player, able to work independently and coordinate with large interdisciplinary teams and in different time zones,
- Strong organizational skills and attention to detail
- Fluency in English, both written and verbal

*Preferred*

- Experience working with GitHub, cloud, or cluster computing
- Qualitative data skills considered an asset
- Experience with marine science and/or tropical environments

**Application procedure**

Interested individuals should send the following materials to [joachim.claudet@cnrs.fr](mailto:joachim.claudet@cnrs.fr), [jblythe2@brocku.ca](mailto:jblythe2@brocku.ca) and [david.gill@duke.edu](mailto:david.gill@duke.edu) by the 15th of October

- CV
- Names and email addresses of 3 references
- A short cover letter describing your background and career goals (max 12 pages)
- Google scholar profile (if possible)