

### **How to apply :**

Send your cover letter and detailed resume with the following reference 2023-01/OO/OSABD to [recruitment@mercator-ocean.fr](mailto:recruitment@mercator-ocean.fr)

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### **About the job :**

We are looking for an enthusiastic scientist sharing Mercator ocean's ambition and objectives.

You will participate in the development of tools for assimilating new biogeochemical data into the reanalysis and near-real-time forecasting systems implemented by our departments.

More specifically, you will:

- Develop further the assimilation of carbonate system variables (DIC, alkalinity, pH, pCO<sub>2</sub>) into the global coupled physical-biogeochemical model NEMO-PISCES, which already assimilates ocean colour. The data assimilation platform is based on the SAM tool developed at MOi and uses a SEEK filter. In a second stage, you will contribute to assimilating the above new datasets by using also an ensemble-based system that is being developed at MOi.
- Set-up, carry out, analyse and validate assimilative simulations of the global air-sea CO<sub>2</sub> fluxes, in the framework of the European H2020 CoCO<sub>2</sub> project ([www.coco2-project.eu](http://www.coco2-project.eu)).
- Once your developments have been tested, you will embed them in the current operational biogeochemical system to deliver reanalysis products.
- Disseminate your work in peer-reviewed publications and international conferences. You will participate in follow-up meetings and present the progress in the framework of an international project.

### **Assets for success:**

You have a PhD in oceanography (preferred) or a minimum of 5 years of working-experience in oceanography and data assimilation.

- You have experience in the use of physical ocean models, data assimilation methods, and the analysis of ocean observations. Experience in marine biogeochemical modelling would be a plus.
- You have advanced skills in scientific computing, programming languages (in particular Fortran and Python), version control software (git) and in the use of supercomputers.
- You are a good listener, rigorous, dynamic, reactive and a strong team player, autonomous, capable of managing your time and deadlines, and you are eager to bring your technical and scientific ideas to ambitious projects.
- You are fluent in written and spoken English

### **Who are we?**

Mercator Ocean International has been developing operational oceanography activities for nearly 25 years, as part of its public interest mission to preserve the ocean.

Many scientific and societal challenges must be met to ensure a sustainable ocean, whether they concern the environment, biodiversity, climate change, the blue economy or education. To meet these challenges, Mercator Ocean designs, develops, operates and maintains state-of-the-art digital systems capable of describing, analysing and forecasting the state of the ocean in 3D, continuously and in real time. The scientific information is then translated to be accessible to all, whether they are public or commercial services, political decision makers, industrialists, associations, NGOs, teachers or citizens. Mercator Ocean International thus combines scientific excellence and social commitment on a daily basis.

As a non-profit company under multinational governance (ES, FR, GB, IT, NO), we work in a climate of trust with our ten shareholder partners, all key players in the development of European oceanography.

#### **MERCATOR OCEAN**

INTERNATIONAL

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