



## **Oceanographer: forecasts of total water levels at the coast**

**Full time position**

**1-year fixed term contract**

### **Who are we?**

Mercator Ocean International has been a pioneer in operational oceanography activities for nearly 25 years through its public service mission to preserve the ocean. Many scientific and societal challenges need to be met in order to ensure a sustainable ocean, whether they relate to the environment, biodiversity, climate change, the blue economy or education. To meet these challenges, we are required to constantly and in real time describe, analyse and forecast the state of the global ocean using reliable numerical models, then make this information relevant and accessible to all — whether public or commercial services, manufacturers, policy makers, 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 nine shareholding partners, all key players in the development of European oceanography.

Mercator Ocean International has been conducting the Copernicus Marine Environment Monitoring Service since 2014 on behalf of the European Union. CMEMS offers free, open access to scientifically validated operational information on the ocean to several thousand subscribers worldwide. To this end, the company coordinates a unique network of around 100 partners in Europe specialising in Earth observation and ocean forecasting.

Based near Toulouse in South-West France, the company's 100 or so contributors are all committed to achieving the United Nations' sustainable development goals.

### **About the job:**

We are looking for new talent with similar objectives. Our operational oceanography department is offering a 1-year fixed-term position for an:

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In the framework of a European H2020 project, Mercator Ocean International will develop short-term forecasts (up to 10 days) of the total water level (TWL) along the European coasts to feed an awareness system for marine coastal flooding (proof-of-concept).

In this context, you will join our Operational Oceanography Department and you will be in charge of producing, validating and inter-comparing time series of total water levels at the coast. More specifically, you will be in charge of:

- building hourly time series of sea level forecasts along the European coasts, based on the forecasts distributed in the Copernicus Marine Service and including contributions from ocean circulation, steric sea level, tide, storm and wave surges for the regions concerned.

- validating the time series obtained and/or contributions from observations distributed in CMEMS supplemented by other sets of observations based on the framework established by the CMEMS Product Quality Working Group and on the literature.
- making the datasets obtained available to partners on cloud platforms.
- intercomparing time-series of total water level at the coast simulated by different systems of increasing complexity using reference metrics and observations.
- making recommendations in terms of model complexity for future use in coastal TWL forecasting.
- documenting and presenting scientific results.
- preparing the databases to be made available to project partners on cloud platforms.

### **About you:**

We're looking for rigorous, curious, well-organized and responsive candidates. Your skills and your ideas will contribute to ambitious projects and to develop international collaborations.

Assets to succeed include:

- PhD in physical oceanography (preferred) or five years of higher education in engineering.
- good knowledge of coastal sea level changes and of numerical ocean modelling and ocean observations analysis.
- good skills in scientific computing, programming and visualization languages (in particular Fortran and Python).
- good verbal and written communication skills.
- fluent in english (speak / read / write).

**Keywords:** Operational oceanography, sea level, numerical modelling, ocean observations, validation.

### **How to apply:**

Send your cover letter and a detailed CV with the following reference **2020-09/OO/OPNET** to [recruitment@mercator-ocean.fr](mailto:recruitment@mercator-ocean.fr)

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