# Job offer in marine environment forecasting

A 2-year post doc position is available at the Modelling for Aquatic Systems research group (MAST) of the University of Liège (ULiege) (Belgium). MAST is devoted to the development of ocean numerical models for understanding, forecasting and managing the ocean. The position is offered in the frame of the European Union Copernicus Marine Environment Monitoring Service (CMEMS). The CMEMS provides state-of the-art analyses and forecasts of the ocean state each day combining information from observations (both satellite and in-situ) and numerical ocean models. This information is freely available to a wide community of users offering an unprecedented capability to observe, understand and anticipate marine environment events. The MAST is part of the Black Sea marine forecasting centre (BS-MFC) as a production unit for the biogeochemistry of the Black Sea.

The post doc will have to work on the research and development part of the biogeochemical operational model of the Black Sea. He/she will have to make the necessary adaptations and fine tuning of an existing biogeochemical model (BAMHBI for Biogeochemical Model for Hypoxic and Benthic Influenced Areas) (already run in operational) in lines with new expectations and for further fine tuning the quality of the results. In particular, a submodule describing the dynamics of carbonate systems adapted to the oxygen deficient conditions of the Black Sea will have to be developed and coupled with BAMHBI. Multidecadal simulations will be performed and model skills will be thoroughly assessed using in-situ (e.g. Argo floats) and satellite (e.g. Sentinel 3) data delivered by the CMEMS in-situ and ocean color thematic assembly centers. Based on models skills, the necessary model adaptations will have to be done (e.g. refinement of the optical model, processes at the transition layer between oxygenated and anoxic zone). In connection with the research performed in the MAST group, improvements of model quality thanks to data assimilation will be assessed.

The post-doc will have to contribute to the yearly CMEMS Ocean State Report delivered by estimating the long term trend in biogeochemical variables with for instance, a particular attention to the deoxygenation issue and assessment of the pH state. Ocean Monitoring Indicators that can be derived from model outputs and are relevant for climate change assessment will have to be developed and tested.

**Requirements for application**:
- PhD in ocean numerical modelling or equivalent.
- Talent for computational scientific work.
- Experience with biogeochemical modelling and supercomputers will be an asset.
- Good knowledge in English is necessary.

**Our offer**: The employment contract will start as soon as possible and be of fixed duration (2 years with eventually one additional year and beyond in fundings permit). The applicants will be hired as a post-doc. The workplace is Liège University, Sart-Tilman, Liege, Belgium.  He/she will be integrated in the Freshwater and Oceanic sCience Unit of research (FOCUS) of the Liege University and in the Black Sea marine forecasting centre (BS-MFC) which gathers the Institute of Oceanology from the Bulgarian Academy of Sciences (IO-BAS), Fondazione Centro Euro-Mediterraneo sui Cambiamenti Climatici – CMCC, Liege University, Institute for Coastal Research from Helmholtz-Zentrum Geesthacht, Sofia University, the National Romanian Institute of Hydrology and Water Management and the Istanbul technical University.

The post-doc will have to participate to CMEMS meetings (e.g. Product quality working groups, the Copernicus marine weeks, training events) and other meetings and international working groups related to the work.

**How to Apply**: The candidate should send as soon as possible by e-mail his/her curriculum vitae, a covering letter of motivation, together with two references (name and email address), to Marilaure Grégoire (email: mgregoire@ulg.ac.be) with copy to oceanphys@ulg.ac.be. Applications will be considered until the position is filled. Selected candidates will be invited for an oral (skype) interview.