

Postdoc position at LEGOS & Mercator Ocean (Toulouse, France) on Sargassum seasonal forecast

Before 2010, pelagic *Sargassum* spp. bloomed preferentially in the Sargasso Sea and in the northwestern tropical Atlantic. They are now found in large quantities on the coasts of the Lesser Antilles, Central America, Brazil and West Africa. Satellite imagery reveals that these strandings come from colossal quantities of algae drifting from the central tropical Atlantic between 0 and 10°N, disconnected from the known seeding regions.

Modeling and forecasting the Sargassum strandings is essential for designing effective integrated risk management strategies, and corresponds to a strong and pressing demand from the civil society. This operational challenge concerns both event forecasts (i.e. on a one-week scale) and long-term forecasts (one to several months). While many efforts have been made for short-term forecast, initiatives for reliable long-term forecasting are very scarce and face several scientific obstacles.

The successful candidate will implement a seasonal and mechanistic forecast of the large scale Sargassum distribution over the Tropical Atlantic with a few months in advance. This will rely on the development and skill assessment of a physical-biogeochemical (based on NEMO-PISCES models) seasonal forecast at 1/4° horizontal resolution and the integration of a Sargassum drift and growth in the seasonal prevision. The project will benefit from Mercator Ocean computing resources and modelling expertise. The regional NEMO-PISCES model configuration of the Tropical Atlantic has already been developed at LEGOS.

The successful candidate will share his time between LEGOS (<http://www.legos.obs-mip.fr>) and Mercator Ocean (<https://www.mercator-ocean.fr>). This work will be carried out in a highly collaborative framework involving researchers working on Sargassum physiology and Sargassum teledetection from space (MIO, LIS, LEMAR).

Applicants should have a PhD in physical or biogeochemical oceanography (defended less than 5 years ago) or other similar fields of study. A background in numerical modelling would be a plus and an interest in multidisciplinary approach is necessary. Good programming skills (especially FORTRAN90, Python) are required.

Interested candidates should send their CV, a letter explaining their motivation for the position to: Julien Jouanno (julien.jouanno@ird.fr), Marie Helene Radenac (Marie-Helene.Radenac@legos.obs-mip.fr) and Yann Drillet (yann.drillet@mercator-ocean.fr).

The postdoc, funded by IRD (Institut de Recherche pour le Développement), is expected to start between November and December 2019. Review of applications will be made until the position is filled. The contract will cover a period of one year and will be extended for one year depending on progress.