POST-DOC POSITION

Developing a tropho-economic model of intermediate complexity for integrated assessment and management of fisheries in the Bay of Biscay

Location
EMH, Ifremer, rue de l'ile d'Yeu, 44311 Nantes, France. http://wwz.ifremer.fr/emh_eng

Duration
12 months renewable 6 months from 1 November 2016

Subject
The proposed post-doc position is part of a project named "Process integration into multispecies and ecosystem Models for realistic evaluation of eccological, economic and social tradeoffs" – PRIME TRADEOFFS, with partners from Denmark, Norway, Spain and France funded by the ERA-net Cofasp (http://www.cofasp.eu/).

The ecosystem approach to fisheries and more recently the European marine strategy framework directive (MSFD) require methods for evaluating the impact of multiples pressures on marine communities, in particular those of fisheries and climate change related pressures. The first objective of the postdoctoral research is to formulate a model of intermediate complexity for the joint the dynamics of the food web in the Bay of Biscay and the fisheries that exploit it as well as the driving environmental variables. Several recent studies have provided the required knowledge for this task. The second objective is to determine and quantify the links and functional forms of the relationships between functional groups, fleets and environmental variables. Causal modeling will be used for this part. Time series for each state variable will be used for validating model structure and estimating direct relationships between state variables. A set of models will be fitted by maximum likelihood. All models will be state space formulations to account for both process and observation errors. The expected outcome is a parametric causal food web and fisheries economics model for the Bay of Biscay. The last objective is to use this final model to explore the expected changes under different scenarios of fisheries management and environmental conditions.

The postdoctoral scientist will have access to continuing training, scientific and technical information, editorial online resources, as well as all scientific computing tools of the host institute (Ifremer). He/she will benefit from the social policies of the Institute.

Required skills
We look for a dynamic, rigorous and autonomous candidate able to conceive quantitative ecological models, with programming skills (using e.g. programs such as R, C++, …). Candidates should have experience in statistical modeling and a PhD in statistical ecology or quantitative fisheries science.

Contact
Interested candidates can contact Verena Trenkel (verena.trenkel@ifremer.fr, http://annuaire.ifremer.fr/cv/16675).

Your application should include a cover letter, with a brief description of your research interests, a detailed CV (including a list of publications) and the names and addresses of at least two references. The deadline for applications is September 9th, 2016.