



At the Institute of Sea Fisheries, one of 14 institutes of the Johann Heinrich von Thünen Institute, Federal Research Institute for Rural Areas, Forestry and Fisheries, a three-year position of a

Research associate

is to be filled within the project SeaUseTip starting at the 1st of March in 2019 (depending on approval of funding). The position is part-time according to 65% of a full-time equivalent (currently 25.4 h/week). The position offers the possibility to attain a doctoral degree in natural sciences.

The Thünen Institute advises the Federal Ministry of Food and Agriculture (BMEL) regarding the implementation of the Common Fisheries Policy (CFP) and is actively involved in the implementation processes of the Marine Strategy Framework Directive (MSFD).

SeaUseTip is funded by the Federal Ministry of Education and Research (BMBF) and is a transdisciplinary research project, which aims to assess the vulnerability of the socio-ecological system (SES) of the North Sea to ecological tipping points. Emphasis lies on the SES in relation to key fisheries resources in the southern North Sea and the integration of economic, socio-cultural and ecological analyses. SeaUseTip will develop operational tools allowing a better understanding the effectiveness of management measures.

The successful candidate is expected to conduct a PhD on "Analysing and predicting spatio-temporal patterns of fishing effort". The candidate will explore different modelling techniques such as statistical and agent-based models to describe and predict the spatial-temporal distribution pattern of key fishing fleets in the predefined SES of the southern North Sea. Understanding the factors that influence the spatial behaviour of fishing fleets is a prerequisite to both understand the vulnerability of SES to ecological tipping points and inform marine spatial planning. Thus, the candidate is expected to engage with SeaUseTip stakeholders, get actively involved with the SeaUseTip PhD students network, and contribute to the project reporting.

Detailed tasks

- Compilation of physical, ecological and economic time series and spatial data of the North Sea in a project data base,
- Handling of big data such as Vessel-Monitoring-System (VMS) and/or AIS data,
- Development of statistical models (GAMs, GLMs, species distribution models),
- Exploration and application of agent-based models (DISPLACE, POSEIDON, etc.),
- Engagement with stakeholders for the verification of model results,
- Contribution to project reporting and dissemination,
- Publication and communication of scientific results.

Requirements

- A master degree in Marine Biology, Fisheries Biology or comparable disciplines,
- Experience in compiling and handling big data,
- Proficiency in the use of R (or other programming language) and ArcGIS,
- Excellent communication and writing skills in English and at least the willingness to learn German. A knowledge of the German language would be beneficial,
- Work experience in interdisciplinary research teams,
- Excellent communication skills

- Proven ability to publish scientific results.

We offer:

- an exciting position in applied research which produces results of high public interest,
- intensive interdisciplinary and international cooperation.

Employment complies with the German wage agreement for the civil service sector (TVöD Bund), salary group E13 (65%) (if the personnel requirements are fulfilled). The Thünen Institute supports gender equality. Qualified female applicants are encouraged to apply. Handicapped applicants are especially considered if equally qualified for the job; a minimum of physical fitness, however, will be required.

Additional information is available from Dr. Vanessa Stelzenmüller (vanessa.stelzenmueller@thuenen.de), Institute of Sea Fisheries and Dr. Rabea Diekmann (rabea.diekman@thuenen.de), Institute of Fisheries Ecology. Interested candidates should send their applications (including motivation letter, CV, list of publications, copies of relevant certificates, names and addresses of personal references) preferably via e-mail in one PDF file referring to "**SF-SeaUseTip PhD**" before 8th of February 2019 to the

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