

The Leibniz Centre for Tropical Marine Research ([www.leibniz-zmt.de](http://www.leibniz-zmt.de)) in Bremen is a member of the Leibniz Association, which is supported by the German Federal and State Governments. Through its research, ZMT contributes to developing science-based strategies for sustainable use of tropical coastal systems.

The working groups **System Ecology & Institutional and Behavioural Economics** are looking for

## 2 Doctoral Candidates (w/m/d)

(Reference number: 141 – SEATRAC)

to conduct research within the DFG (German Science Foundation) funded Project **SEATRAC** (Sea level change and the Tragedy of Cognition: A comparative study on the role of cognitive biases in understanding sea level rise) The project is part of the interdisciplinary DFG Priority Program **Regional Sea Level Change and Society**.

### **PhD1 - Institutional and Behavioral Economics position:**

You will run a comparative study between the North Frisian Islands and the WAKATOBI Islands in Indonesia, where you aim to understand the importance of various cognitive biases in the understanding of sea level rise. After a solid and theoretical preparation, you are going to go for a first field trip to understand, in a qualitative manner, the perception of sea level rise in the two places. This will enable you to produce experimental and survey tools to assess the importance of the various cognitive biases in the second field phase and in a quantitative manner and to inform the model (PhD2). You will adapt and develop experimental protocols for assessment of the biases in the field. Your study will be shaped in close collaboration with PhD2 (model development), which is further described below.

### **Requirements:**

- Background in social sciences (economics, psychology, sociology, etc.) potentially with a focus on natural resource use
- Conviction that a holistic understanding requires multiple methods and disciplines, with a particular interest in experimental methods (potentially experience) and Agent Based Modelling approaches
- Passion about fundamentally understanding human behaviour in relation to environmental threats.
- Preference for close collaboration and discussion with PhD2 and the two Principle Investigators
- Willingness to run extended field work in Northern Germany & Indonesia
- Quantitative method skills and interest in qualitative methods
- Knowledge of Bahasa Indonesia is an additional asset, but not a must for this project

For additional information, please **contact:** Prof. Dr. Achim Schlüter, [achim.schlueter@leibniz-zmt.de](mailto:achim.schlueter@leibniz-zmt.de)

### **PhD2 – Mathematical Modelling position:**

You will develop an Agent-Based Model of opinion dynamics. The model will integrate the relevant information gained with surveys and economic experiments (PhD1) into a broader and more flexible simulative context. Numerical experiments will allow you to explore a number of bias distribution hypotheses and their effects in the context of multiple sea level change scenarios. By combining empirical data into the model, you will investigate the behavioural factors that limit peoples' abilities to perceive and react to the threats posed by sea level rise in Northern Germany & Indonesia.

**Requirements:**

- Qualifications in theoretical and computational oriented disciplines (mathematics, physics, theoretical ecology, climate sciences, etc.), ideally with a focus on natural resources.
- A strong background in mathematical modelling, advanced python programming skills, and an excellent spoken and written English are mandatory.
- Proved interest for topics related to human-resource interactions, human adaptive behaviour, and human perception in the context of environmental change.
- Willingness to closely cooperate with PhD1 and to travel to Indonesia and Northern Germany to learn about and assist with behavioural experiments.

For additional information, please **contact:** Prof. Dr. Agostino Merico, [agostino.merico@leibniz-zmt.de](mailto:agostino.merico@leibniz-zmt.de)

**Details of the position:**

The candidate will be on a 36 months contract. Salary will be paid according to the German TV-L EG 13. The post will be filled 75% of a full position.

**We offer:**

- An exciting working environment in an interdisciplinary and internationally oriented institute and research project
- Possibilities to build and extend an international professional network and participate in a research field of high public and scientific interest
- A family-friendly working environment
- Various Corporate Health Management offers like company sports and fresh fruit baskets

ZMT is an equal opportunity employer. Applicants with a migration background are welcome. Disabled persons with comparable qualification receive preferential status.

Please send your application (a motivation letter, a copy of the relevant certificates, a complete CV with a list of publications/master thesis and skills, names with email addresses and telephone numbers of two referees) until September 30, 2019 **as a single pdf file** with the reference number "141 – SEATRAC", clearly indicating PhD1 or PhD2, to Ms. Lena Oehlmann, E-Mail: [bewerbung@leibniz-zmt.de](mailto:bewerbung@leibniz-zmt.de).

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