



**ALFRED-WEGENER-INSTITUT**  
HELMHOLTZ-ZENTRUM FÜR POLAR-  
UND MEERESFORSCHUNG



The Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research (AWI) is a member of the Helmholtz Association (HGF) and funded by federal and state government. AWI focuses on polar and marine research in a variety of disciplines such as biology, oceanography, geology, geochemistry and geophysics, thus allowing multidisciplinary approaches to scientific goals.

## PhD student (m/f/d) Changes in Antarctic and Subantarctic Shelf Benthos

### Background

In contrast to the strong sea-ice decline in the Arctic Ocean, climate warming is affecting Subantarctic and Antarctic regions and their biota in different ways. Some areas in the Antarctic Peninsula and Subantarctic are warming fast, causing glacier retreat, sea-ice decline and ice-shelf collapse. But in large parts of the Antarctic, sea-ice cover has been stable or even increasing until less than a decade ago, affecting the timing and magnitude of food supply to the benthos, and the biodiversity and biomass of its unique biota. AWI scientists have carried out expeditions to the Antarctic and Patagonian region between the 1980s and 90s, respectively, and present. The comparison of historical stations visited on earlier cruises with recent Polarstern and Meteor expeditions using standardized methodology provides the tool to assess the changes in benthic biomass and composition in relation to the changes in sea-ice change, glacier and ice-shelf retreat, and physical disturbance (e.g. sedimentation, iceberg scouring).

### Tasks

The department of Biosciences, section Benthic-Pelagic Processes, has a vacancy for a PhD (m/f/d) student to work on the temporal changes in Antarctic and Subantarctic benthic communities. You are expected to analyze temporal changes in macrofauna (grab samples) and mega-epifauna communities (video/photo material) communities, comparing stations from the Eastern Weddell Sea and the Beagle Channel. We are interested in (i) the effect of changing sea-ice cover on benthic communities (sea-ice cover increased between 1988 and 2014, and plummeted thereafter), (ii) the patterns of benthic succession after ice-berg scour (BENDEX disturbance experiment), and (iii) the combined effects of glacial melt and anthropogenic change on the biodiversity and biomass of benthic communities (Fjordflux cruise). Research will involve state-of-the-art image analyses and spatial statistics methods

and will be supervised by a Thesis Advisory Committee with senior scientists from four AWI sections.

### **Requirements**

- Master's degree (or equivalent) in marine biology or related fields
- Good knowledge of benthic biodiversity and major taxa
- Proficiency in or willingness to learn image analysis and multivariate statistics/spatial ecology/GIS tools to analyze benthic community data
- Excellent written and oral communication skills and proven ability to work in a team
- Disposition to work in the laboratory, in the office and in the field

### **Additional skills and knowledge**

- Prior experience with benthic ecology, benthic sampling, identification and analyses methods are an important asset

### **Further Information**

Please contact **Prof. Dr. Claudio Richter** (claudio.richter@awi.de, +49 - 471-48311304) for further information.

This position is limited to 3 years. The salary will be paid in accordance with the Collective Agreement for the Public Service of the Federation (Tarifvertrag des öffentlichen Dienstes, TVöD Bund), up to salary level **13 (66%)**. The place of employment will be **Bremerhaven**.

All doctoral candidates will be members of AWI's postgraduate program **POLMAR** or another graduate school and thus benefit from a comprehensive training program and extensive support measures.

### **The AWI is characterised by**

- our scientific success - excellent research
- collaboration and cooperation - intra-institute, national and international, interdisciplinary
- opportunities to develop – on the job and towards other positions
- an international environment – everyday contacts with people from all over the world
- flexible working hours
- Health promotion and company fitness with qualitrain
- support services and a culture of reconciling work and family
- Occupational pension provision (VBL)
- Jobticket

Equal opportunities are an integral part of our personnel policy. The AWI aims to increase the number of employees who are women, and therefore strongly encourages qualified women to apply.

Applicants with disabilities will be given preference when equal qualifications are present.

The AWI fosters the compatibility of work and family in various ways and has received a number of awards as a result of this engagement.

**We look forward to your application!**

Please submit your application by **May 21st 2023**, exclusively online.

Reference number: 23/84/G/Bio-b

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