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GEOMAR Helmholtz Centre for Ocean Research Kiel is a foundation of public law jointly financed by the Federal Republic of Germany (90%) and the state of Schleswig-Holstein (10%) and is one of the internationally leading institutions in the field of marine sciences. Currently GEOMAR disposes over an annual budget of approx. 80 million Euro and has approx. 1000 employees.

The research unit “Chemical Oceanography“ of the research division “Marine Biogeochemistry” is offering a position as

## **Doctoral researcher (m/f/d) in the assessment of carbon export processes in the Eastern Mediterranean Sea**

funded by the BMBF and starting on October 1st 2022. The position offers the possibility to attain a doctoral degree in natural sciences.

### **Project Description**

The biological carbon pump (BCP) plays a key role in transferring C from the atmosphere to the deep ocean where it is sequestered on time scales of months to millennia. The BCP is spatially and temporally variable, and operates through a combination of foodweb and oceanographic processes which are considered to be impacted by climate change with consequences for ocean CO<sub>2</sub> uptake. This Doctoral position is part of a Helmholtz funded International Lab project called EMS FORE (<https://www.geomar.de/en/ems-fore>). The project focusses on the Eastern Mediterranean Sea (EMS), which is one of the most rapidly changing ocean basins on our planet impacted by both climate change and extensive anthropogenic pressures.

The overarching aim of EMS FORE is to use the EMS, from coastal to deep ocean, as a natural laboratory to gain mechanistic and quantitative understanding of biogeochemical and ecosystem transitions of a future (sub)tropical ocean (covering 40% of global ocean) affected by global warming and other anthropogenic pressures. For this purpose, the EMS is used as an early warning and model system to examine ecosystem resilience and sensitivity.

The advertised Doctoral project will assess the functioning of the BCP and particle export in the Eastern Mediterranean Sea using observations from cruises, and material from moored sediment traps. The obtained knowledge will be used to improve model projections of ocean C uptake under future climate scenarios.

Sinking material fluxes will be measured using sediment traps and the <sup>234</sup>thorium-<sup>238</sup>uranium disequilibrium technique. The fieldwork will be conducted in the Eastern Mediterranean on research cruises with Israeli vessels, and also FS Maria S. Merian. We expect the candidate to enroll in the marine science post-graduate school in Kiel, ISOS.

### **Job Description / Duties**

The Doctoral researcher will work in strong collaboration with researchers at GEOMAR and the University of Haifa (Israel) and in an interdisciplinary environment of the EMS FORE project with about 10 other Doctoral researchers working on various topics. The supervisory team will include Prof. Eric Achterberg and Dr. Zvi Steiner (GEOMAR), and Prof. Ilana Berman-Frank (University of Haifa) The candidate will be working closely with chemical, biological and physical oceanographers, and biogeochemical modellers on the project. The candidate will undertake analysis of sinking material and thorium isotopes, determine material fluxes and their attenuation and interpret the data in relation to surface ocean microbial community composition and productivity, and zooplankton processes.

### Qualification

- A completed university degree (Master degree or Diploma) in chemical oceanography, marine sciences, environmental sciences, environmental chemistry, geosciences, analytical chemistry or related field is required.
- Experience in marine sciences, analytical chemistry, geochemistry, and/or environmental chemistry is required.
- Experience in field work is desired.
- We expect good English language skills.
- The candidate is willing and able to participate in sea-going expeditions.

The position is funded by the BMBF, and is available for a funding period of 36 months. The salary depends on qualification and could be up to the class 13 TVöD-Bund of the German tariff for public employees. This is a part-time position according to 75% of a full-time equivalent.

GEOMAR Helmholtz Centre for Ocean Research Kiel seeks to increase the proportion of female scientists and explicitly encourages qualified female academics to apply.

GEOMAR is an equal opportunity employer and encourages scientists with disabilities to apply. Qualified disabled applicants will receive preference in the application process.

Please send your application **including a letter of motivation, CV and contact details of 3 referees** for this post via email in a **single pdf-file** mentioning the keyword "**Achterberg – Steiner - EMS FORE**" in the subject line. Please send your application not later than **July 25<sup>th</sup>, 2022** to the following email addresses:

[bewerbung@geomar.de](mailto:bewerbung@geomar.de) and cc [eachterberg@geomar.de](mailto:eachterberg@geomar.de)

As soon as the selection procedure has finished, all your application data will be removed according to data protection regulation.

For further information regarding the position and research unit please contact Prof. Dr. Eric Achterberg ([eachterberg@geomar.de](mailto:eachterberg@geomar.de)) or Dr. Zvi Steiner ([zsteiner@geomar.de](mailto:zsteiner@geomar.de)).

Please do not contact us by phone about the present state of procedures. However, we will answer all your questions if you send us an e-mail to [bewerbung@geomar.de](mailto:bewerbung@geomar.de). In doing so, please refer to the keyword.

GEOMAR is a member of the Helmholtz Association and the German Marine Research Consortium (KDM). For further information please visit [www.geomar.de](http://www.geomar.de) or [www.helmholtz.de](http://www.helmholtz.de).

GEOMAR is committed to an objective and non-discriminatory personnel selection. Our job advertisements address all people. We expressly renounce the submission of application photos.



The TOTALE-QUALITY award is presented to GEOMAR for efforts in terms of human resource management aimed at providing equal opportunity.