



**L-Università  
ta' Malta**

**Human Resources  
Management &  
Development Office**

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## **Call for Applications**

### **Post/s of Full-Time Research Support Officers III or IV**

#### **SMART Project – Helmholtz European Partnering Funding Scheme**

*“Sustainable Management of Offshore Groundwater Resources”*

Marine Geology and Seafloor Surveying group,  
**Department of Geosciences, Faculty of Science**  
(<https://www.um.edu.mt/science/geosciences/mgss>)

1. Applications are invited for two full-time Research Support Officers III or IV to work on the “Sustainable Management of Offshore Groundwater Resources” (SMART), a project financed by the Helmholtz European Partnering Funding Scheme, GEOMAR and the University of Malta.
2. The **first applicant (groundwater modeller)** should ideally be in possession of a doctorate degree in hydrology, hydrogeology, computational sciences or a related field of research, be experienced in groundwater modelling, and proficient in Fortran 90 or a similar programming language.
3. The **second applicant (geological modeller)** should ideally be in a possession of a doctorate degree in geology, geophysics, computational sciences or a related field of research, and be experienced in stratigraphic/geological modelling, geostatistical modelling and seismic reflection data interpretation.
4. Both applicants should also:
  - Have experience communicating science via publication in peer-reviewed scientific journals and presentations at international conferences;
  - Have an excellent level of proficiency in English;
  - Be organised, enthusiastic and ambitious;
  - Have good interpersonal and communication skills; and
  - Be able to work independently, in line with established deadlines and under minimum supervision.
5. The full-time post is for a period of 15 months starting in October-December 2020 and carries an initial annual remuneration as follows: (i) Research Support Officer III - €31,200; (ii) Research Support Officer IV - €41,600 . The post may be extended by 12 months in January 2022.
6. Candidates must submit their letter of application, a copy of their curriculum vitae, copies of their certificates and the contact details of two referees. Applications may be sent by e-mail to [projects.hrmd@um.edu.mt](mailto:projects.hrmd@um.edu.mt) by not later than **Wednesday, 30 September 2020**.

**Late applications will not be considered.**

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7. Further information may be obtained from the website: <http://www.um.edu.mt/hrmd/vacancies> or by sending an email to Prof. Aaron Micallef ([aaron.micallef@um.edu.mt](mailto:aaron.micallef@um.edu.mt)).

Office of the University,  
Msida, \_\_\_\_\_ 2020



**Call for Applications**

## Posts of Full-Time Research Support Officers III or IV

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*“Sustainable Management of Offshore Groundwater Resources”*

Marine Geology and Seafloor Surveying group, Department of Geosciences, Faculty of Science

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#### Further Information

1. The Research Support Officers III or IV will be responsible for the execution of a number of tasks related to SMART, a project financed by the Helmholtz European Partnering Funding Scheme, GEOMAR and the University of Malta.

#### **Project Description:**

Groundwater resources in coastal regions are facing enormous stress caused by population growth, increased pollution and climate change, with the recent crisis in Cape Town - a city with 4.5 million inhabitants that just escaped a total shutdown of fresh water supply - being just the latest prominent example. Offshore aquifers (OAs) - freshwater bodies located beneath the seafloor - have been proposed as an alternative source of freshwater. However, there are a number of first-order questions that need to be addressed before OAs can be exploited sustainably. These include a lack of understanding of the location, nature, geometry and architecture of OAs, their connectivity with onshore aquifers, and their evolution in response to potential exploitation and predicted climate change. Here we propose the project SMART, which will lead to a step change in the methodology used to characterise OAs and in our understanding of how they can be used sustainably. Specifically, we will (1) Develop a best practice guide on how to combine geophysical measurements with geochemical characterisation to detect, characterise and monitor OAs, (2) Quantify the hydrologic budget of OAs, and (3) Predict how OAs will change in response to extraction and sea level rise associated to climate change. SMART will entail a unique integration of innovative concepts and techniques from terrestrial and marine geology, geochemistry, geophysics, and hydrogeology to reach the project objectives. The outcomes of the SMART project will be shared with a wide range of stakeholders via scientific publications, conference communications, website, social media, interviews and press releases, public understanding of science activities, workshops and a best-practice guide.

2. The main tasks of the Research Support Officer III or IV (**groundwater modelling**) will involve the following:
  - i. Contribute to the development of a 3D basin evolution model by including a solute transport component
  - ii. Apply the 3D basin evolution model in theoretical scenarios
  - iii. Apply the 3D basin evolution model at a selected passive siliciclastic margin
3. The main tasks of the Research Support Officer III or IV (**geological modelling**) will involve the following:

- i. Develop theoretical 3D geological models of passive margins
  - ii. Develop a 3D geological model at a selected passive siliciclastic margin
4. Both Research Support Officers will also be expected to:
- i. Participate in the project communication activities (e.g. scientific manuscript writing, conference presentation, public outreach activities);
  - ii. Play a key role in organising a week-long summer school in 2021;
  - iii. Collaborate closely with each other and with team members at GEOMAR (Germany) and New Mexico Tech (USA);
  - iv. Keep detailed progress reports and abide to all the conditions imposed by the project; and
  - v. Perform any other project related task as instructed by the Project Coordinator.
5. The appointees will be expected to work at such places and during such hours as may be determined by the University authorities. The work may be carried out both in Germany and Malta.
6. The selection procedure will involve:
- a. scrutiny of qualifications and experience claimed and supported by testimonials and/or certificates (copies to be included with the application);
  - b. shortlisting; and
  - c. an interview and / or extended interview.
7. The posts are for an initial period of 15 months, which will be subject to a probationary period and to the provisions of the Statutes, Regulations and Bye-Laws of the University of Malta which are now or which may hereafter be in force. The post may be extended by 12 months in January 2022.

Office of the University,  
Msida, \_\_\_\_\_ 2020