



**L-Università  
ta' Malta**

**Human Resources  
Management &  
Development Office**

University of Malta  
Msida MSD 2080, Malta

Tel: +356 2340 2810  
hrmd@um.edu.mt

[www.um.edu.mt](http://www.um.edu.mt)

## **Call for Applications**

### **Post/s of Full-Time Research Support Officer 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 a full-time Research Support Officer 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. Applicants should ideally be in possession of a doctorate degree in hydrogeology. The Research Support Officer III or IV should also:
  - Be experienced in numerical groundwater modelling;
  - Have experience investigating karst aquifers in fractured rocks;
  - Be familiar with techniques for the physical characterisation of aquifers, both in the field and in the laboratory;
  - Be familiar with concepts and techniques in offshore groundwater research;
  - Have a basic knowledge of GIS software (especially ArcGIS);
  - Have experience communicating science via publication in peer-reviewed scientific journals and presentation at international conferences;
  - Have an excellent level of proficiency in English;
  - Be organised, enthusiastic and ambitious;
  - Have good problem solving, interpersonal and communication skills;
  - Be able to work independently and under minimum supervision.
3. The full-time post is for a period of 36 months starting in January 2019 and carries an initial remuneration of €31,200 per annum for Research Support Officer III, and €41,600 per annum for a Research Support Officer IV. The post may be extended by 24 months in January 2022.
4. Candidates should submit their letter of application, a copy of their curriculum vitae and copies of their certificates. Applications may be sent by e-mail to [projects.hrmd@um.edu.mt](mailto:projects.hrmd@um.edu.mt). Applications should be received by not later than **Friday, 30<sup>th</sup> November 2018**. **Late applications will not be considered.**
5. Further information may be obtained from the website: <http://www.um.edu.mt/hrmd/vacancies>.

Office of the University,  
Msida, 16<sup>th</sup> October 2018

---

## **Call for Applications**

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

SMART – “Sustainable Management of Offshore Groundwater Resources”

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

---

#### **Further Information**

1. The Research Support Officer 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 will involve the following:
  - i. Carry out desktop studies of existing data, reports and scientific publications to develop a database of available baseline hydrogeological data;
  - ii. Develop a detailed conceptual hydrogeological model for the study area (Maltese Islands);
  - iii. Measure hydrogeological properties (e.g. permeability, porosity, saturation, transmissivity, storage co-efficient, hydraulic conductivity) in the field, using existing boreholes, and in the laboratory, using available samples;
  - iv. Generate a high resolution, finite element model to estimate onshore and offshore aquifer characteristics;

- v. Simulate changes in geometry, dimensions and geochemical characteristics of onshore and offshore aquifers due to sea level fluctuations and groundwater extraction;
  - vi. Quantify the hydrogeological budget of onshore and offshore aquifers;
  - vii. Participate in field campaigns to acquire geophysical data and samples, both onshore and offshore;
  - viii. Participate in the project communication activities (e.g. scientific manuscript production, conference presentation, public outreach activities);
  - ix. Play a key role in co-operation and capacity building activities (e.g. advanced training schools, exchange programs, mutual participation in advisory bodies, joint sessions at international conferences);
  - x. Prepare proposals for complimentary sources of research funding;
  - xi. Collaborate closely with the SMART team members in Germany and USA;
  - xii. Keep detailed progress reports and abide to all the conditions imposed by the project;
  - xiii. Perform any other project related task as instructed by the Project Coordinator.
3. The appointee is expected to work at such places and during such hours as may be determined by the University authorities.
  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); and
    - b. an interview and / or extended interview.
  7. The post is for a period of 36 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 24 months in January 2022.

Office of the University,  
Msida, 16<sup>th</sup> October 2018