

CAREER OPPORTUNITIES

National Research Foundation – South African Institute for Aquatic Biodiversity

ABOUT US

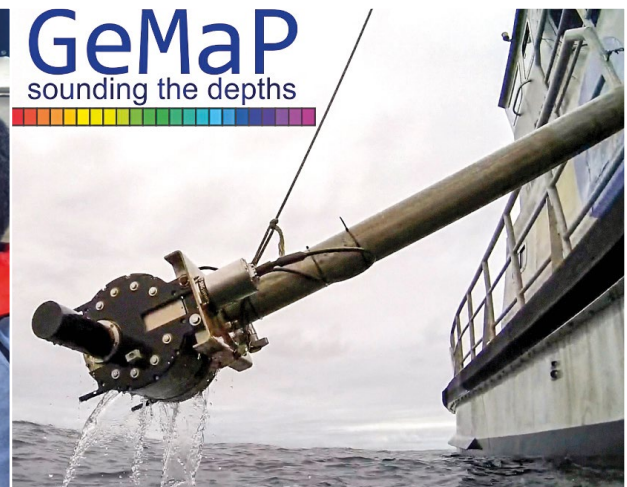
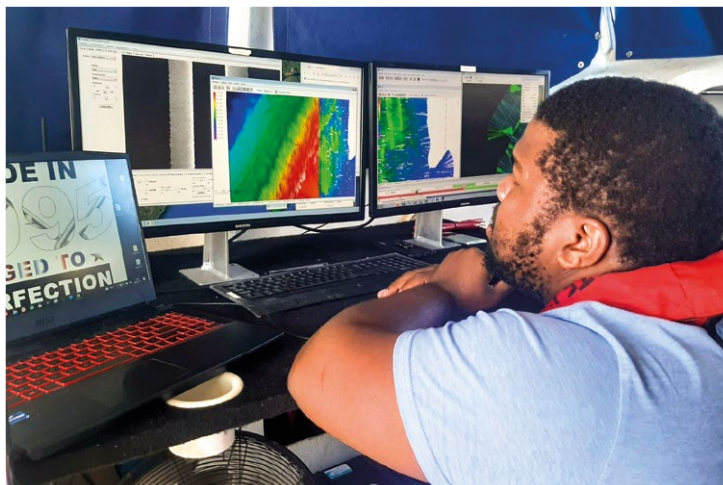
The South African Institute for Aquatic Biodiversity (NRF-SAIAB) is a national research facility supported by the National Research Foundation (NRF). We study the full range of aquatic environments, from deep ocean waters to inland freshwater systems.

Our research focuses on ecology and conservation, exploring how biodiversity at the genetic and species levels connects with the environment. The NRF-SAIAB also contributes to South Africa's *Operation Phakisa* programs, which aim to grow the country's Biodiversity Economy and Blue Economy.

Strong support from the Department of Science, Technology and Innovation and the NRF has enabled NRF-SAIAB to develop advanced research platforms that allow us to work in a wide range of environments and made us a leader in aquatic biodiversity research.

'All our work supports High Education in training and development of the next generation of aquatic scientists and environmental managers

Geophysics Mapping Platform



WHAT IT IS AND WHY IT MATTERS

Ocean Survey Work

Multibeam echosounders (MBES) are powerful acoustic tools used to map the seafloor, making them essential for marine research, exploration, and supporting sustainable marine and freshwater management.

The Geophysics Mapping Platform (GeMaP) uses two MBES systems:

- Teledyne Reson 7101 (on the *Phakisa* vessel in Durban)
- R2Sonic 2026 (on the *Observer* vessel in Gqeberha)

These systems can survey the seafloor at depths ranging from 10 to 700 meters below sea level.

What the surveys produce:

- Primary outputs: detailed seabed maps (bathymetry) and information on seabed texture (backscatter)
- Additional data: seafloor slope, roughness (rugosity), and sediment classification maps

GeMaP supports a range of marine science projects funded through the NRF's ACEP Open Call, with expert assistance provided by the platform team.

Inland Survey Work

Recently (2024/2025), GeMaP has expanded to include inland water surveys. Bathymetric maps were created for protected rivers, lakes, and estuaries in the Western Cape, working with CapeNature and SANParks.

These surveys focus mainly on tracking sediment buildup.

For these inland studies, a Lowrance Elite 9Ti2 system is used. It features:

- A 3-in-1 transducer with built in real-time mapping (Genesis Live) and enhanced screen clarity and target separation

UNIVERSITY QUALIFICATIONS FOR THIS FIELD

- BSc in Geography (with GIS focus)
- BSc in Geology (specializing in Marine Geology)
- BSc in Geophysics

This field requires strong computer skills and a willingness to learn new software and adapt to evolving technologies.

CAREER PATHS

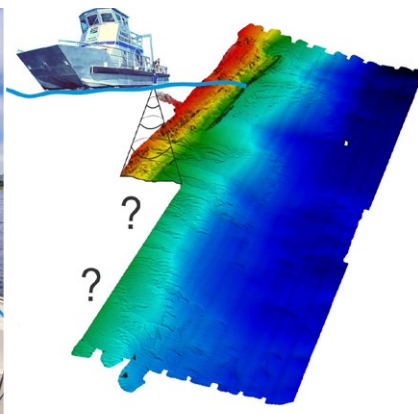
At NRF-SAIAB, students can work as:

- Interns
- Multibeam Instrument Technicians
- Instrument Scientists or Platform Managers

In the private sector, related roles include:

- Hydrographic Surveyor
- Marine Mapping Specialist
- Geospatial Data Analyst

These careers involve fieldwork and data analysis.





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