

CAREER OPPORTUNITIES

National Research Foundation – South African Institute for Aquatic Biodiversity

ABOUT US

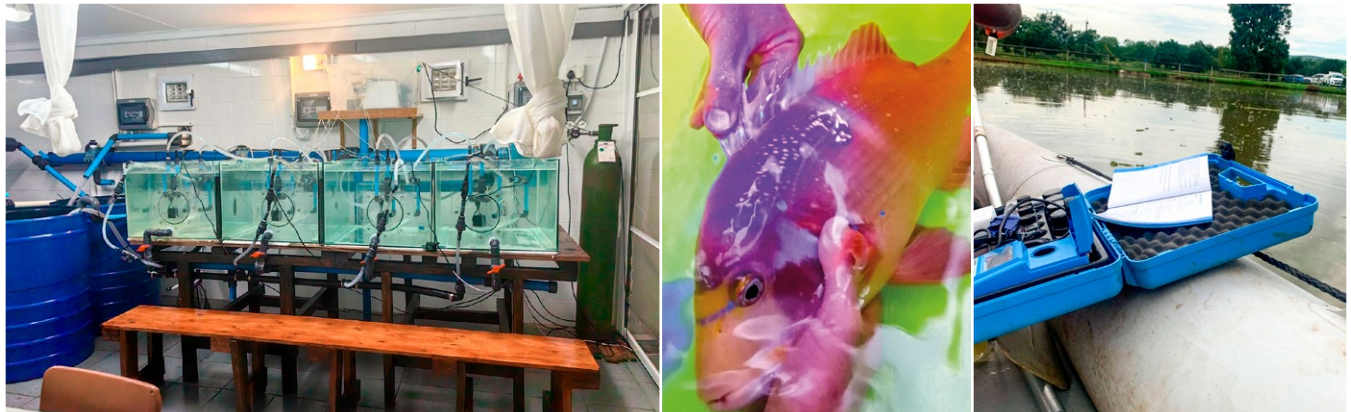
The South African Institute for Aquatic Biodiversity (NRF-SAIAB) is a national research facility supported by the National Research Foundation (NRF). We study the full range of aquatic environments, from deep ocean waters to inland freshwater systems.

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

Aquatic Ecophysiology Research Platform



WHAT IT IS

Aquatic ecophysiology is an exciting, inter-disciplinary field that studies the connections between environmental factors that affect the body functions of aquatic animals, caring for marine resources to maintain their sustainability, and assess the effects of climate change. At NRF-SAIAB, this research explores how temperature, salinity, oxygen levels, pollution, and climate change impact the normal functioning of aquatic species. This work helps us understand how species adapt, how ecosystems stay healthy, and how to protect biodiversity. Our work also supports careers in science, conservation, government, and industry for people passionate about protecting aquatic life.

WHY THIS RESEARCH MATTERS

Aquatic ecophysiology helps us predict how species will respond to climate change, such as warming waters, ocean acidification and changes in salinity. It shows how much stress species can tolerate and how they might adapt. Studying pollutants like heavy metals, microplastics, and new contaminants at the physiological level helps develop pollution control strategies. The research also helps protect endangered species by identifying their needs and assessing how vulnerable they are to change. Understanding how aquatic animals deal with stress, resist disease, and grow efficiently is important for sustainable fisheries and aquaculture. Research into invasive species—one of the major threats to biodiversity—helps us manage their impact and protect native ecosystems.

RELEVANT UNIVERSITY QUALIFICATIONS

Bachelor's Degrees:

- BSc in Marine Biology
- BSc in Biological Science
- BSc in Environmental Science
- BSc in Zoology
- BSc in Aquatic or Fisheries Science

Master's Degrees:

- MSc in Marine Science
- MSc in Aquatic Ecology
- MSc in Environmental Physiology
- MSc in Fisheries and Aquaculture
- MSc in Zoology

Doctoral Programs (PhD):

- PhD in Ecophysiology, with research in areas like climate resilience, toxicology, or metabolic adaptation in aquatic organisms
- PhD in Ichthyology/Zoology, with research area like physiology

CAREER OPPORTUNITIES

- University research and teaching
- Government and regulatory work
- Environmental consulting
- Fisheries and aquaculture management
- Conservation organizations and NGOs
- Industry and pharmaceutical research





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