

Postdoctoral Research Fellowships (x2) – Marine Biodiversity Observation

Host Institution: South African Institute for Aquatic Biodiversity (SAIAB), Grahamstown/Makhanda, South Africa

Duration: 2 years, each

Start date: Between October 2025 and January 2026

Stipend: R320 000 per annum (tax free, no benefits)

We invite applications for two Postdoctoral Research Fellowships to contribute to projects advancing the way demersal fish biodiversity is observed, analysed and applied in management. The over-arching project integrates underwater visual census methods, machine vision and AI-assisted workflows and open standardised data systems to:

- Generate biodiversity datasets across spatial and depth gradients,
- Develop and test indicators of fish assemblage status,
- Build FAIR-aligned data pipelines and repositories, and
- Co-develop reporting frameworks and guidelines with management stakeholders.

The postdoctoral fellows will join this effort to address different aspects of the work depending on their skill sets. For example, one may focus on field research, observation methods and indicator development; the other may emphasise machine vision, programming, system design and data management. Together, they will contribute to outputs that support marine spatial planning, fisheries management and global Essential Ocean Variables reporting.

Responsibilities:

- Conduct and analyse field research using BRUVs, stereo-video, diver-operated video, and related methods.
- Lead or support comparative evaluations of methods and indicators.
- Develop or apply automated image and video analysis tools.
- Support data workflows, system design, and FAIR data publication.
- Engage with stakeholders to co-develop knowledge products, and provide training and capacity development.
- Publish peer-reviewed research and contribute to best-practice guidelines.

Minimum Requirements:

- PhD (awarded within the past 5 years) in Marine Biology, Ecology, Oceanography, Data Science, Computer Science, or a related field. Candidates who have submitted their thesis and are awaiting examination outcomes will also be considered.
- Peer-reviewed publication record.
- Demonstrated expertise in at least two or more of the following areas:

- Underwater observation methods (UVC, DOV, BRUV, ROV) and field research at sea.
- Machine vision, image analysis, and/or ecological informatics.
- Advanced programming (e.g. R, Python, MATLAB) and/or system design.
- Data management system development and biodiversity informatics.
- Stakeholder engagement and co-development of research (engaged research).

Desirable Skills:

- Commercial SCUBA Diver certification (or willingness to obtain – training can be supported).
- Experience leading or coordinating field campaigns at sea, including logistics and team management.
- Familiarity with ecological indicator development and Essential Ocean Variables.
- Experience working in multidisciplinary and/or international collaborations.
- Ability to translate scientific outputs into formats relevant for management and policy.
- Strong written and verbal communication skills, including preparation of technical reports and stakeholder presentation

Application process

Applicants should submit:

- Cover letter outlining research interests, relevant skills, and how they align with the fellowship.
- CV including publication list.
- Contact details of two referees.

Applications should be sent to Dr Anthony Bernard (a.bernard@saiab.ac.za) by 22nd of September 2025.