SAPRI Standard Operating Procedures for submitting data

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The Southern Hemisphere polar region is a system of interconnected physical and ecological components comprising the Antarctic continent, sub-Antarctic islands, the Southern Ocean and the deep ocean basins surrounding South Africa. The Antarctic region is hence climatically, ecologically and socio-economically linked to South Africa, and the vast range of disciplines require a holistic approach. The vision of the recently established South African Polar Research Infrastructure (SAPRI) is to facilitate balanced and transformed research across marine and polar disciplines, and to maintain and further expand the world-class, long-term observational research infrastructure and datasets already established in South African polar and oceanographic research. Data across disciplines is handled by the SAPRI Data Centre (DC) hosted at the South African Environmental Observation Network (SAEON) uLwazi Node.

This document covers practical measures that fall outside the content covered by the SAEON Data Policy, Standard Operating Procedures for the SAEON Open Data Platform and the SAEON Preservation Policy.

SAPRI Data Management Framework

A. Service Level Agreements and Data agreements

All projects and data agreements will be filtered through the DPS Manager or the SAPRI Manager.

B. Background: Antarctic data

Countries working in the Antarctic operate within the framework of the Antarctic Treaty System, the cornerstone of which is the Antarctic Treaty. Of particular relevance for polar data management and delivery is Article III, section 1(c), which stipulates that “scientific observations and results from Antarctica shall be exchanged and made freely available”. This Article has been followed up by Antarctic Treaty Consultative Meeting (ATCM) Resolutions, such as: ATCM XXII Resolution 4 (1998), which recommends that Consultative Parties establish National Antarctic Data Centres and link these to the

Antarctic Data Directory, and that they give priority consideration as to how the requirement for freedom of access to scientific information is achieved within their national data management systems.[1]

The Standing Committee on Antarctic Data Management (SCADM) is the Scientific Committee on Antarctic Research (SCAR)'s data management arm and has 25 member states, providing a forum for Antarctic data managers to collaborate on data management and international scientific data exchange issues. SCADM helps to facilitate co-operation between scientists and nations with regard to scientific data and advises on the development of the Antarctic Data Management System. The SAPRI DC serves as a National Antarctic Data Centre for South Africa, and its activities are reported to SCAR through SCADM.

In 2019, SCADM initiated a process to align the data policies of international scientific bodies coordinating research in the polar regions. Following this, a working group under SCADM, The Southern Ocean Observing System (SOOS), The International Arctic Science Committee (IASC), Sustaining Arctic Observing Networks (SAON), and the Arctic Spatial Data Infrastructure (Arctic SDI) published the report "Alignment of Polar Data Policies - Recommended Principles" in November 2021 (DOI: 10.5281/zenodo.5734900). The report reviews external policy drivers along with key global and regional data policies, and concludes by outlining ten fundamental principles for polar data governance. These ten principles (see Tronstad et al. 2021 for details[2]) form the basis of the SCAR Data Policy (see https://scar.org/~documents/route%3A/download/5797) and are also embedded in the SAPRI SOPs for data submission:

1. Data must be ethically open
2. Data should be free
3. Data must be provided in a timely manner
4. FAIR Principles should be applied to the greatest extent practicable
5. All data must be accompanied by a complete set of metadata
6. Data should have persistent and globally unique identifiers
7. Data must be labelled as reusable
8. Data sources should be attributable and attributed
9. Data must be appropriately preserved for the long term
10. Data management and long-term curation must be planned and resourced

[1] SCAR Data Policy (2022). Available at https://scar.org/~documents/route%3A/download/5797
[2] Tronstad et al. (2021) Alignment of Polar Data Policies - Recommended Principles (DOI: 10.5281/zenodo.5734900)

C. Data submissions

In addition to institutional or international repositories where relevant, all data from National Research Foundation (NRF) South African National Antarctic Programme (SANAP)-funded projects must be deposited in the SAPRI DC. As part of user agreements and MoUs, all data obtained by infrastructure purchased by SAPRI and data emanating from projects supported by SAPRI infrastructure must be submitted to the SAPRI DC and made freely available.

Researchers must ensure that they submit data (raw, processed and ancillary), derived products and associated metadata in an acceptable form to the SAPRI DC within the timelines set for data submission which is normally before the project's end date or on an agreed upon timeframe.

Certain datasets may be embargoed for a maximum of three years pending student dissertation write-ups or other sensitivities, but never indefinitely nor for commercial gain.

D. Responsibilities of the Data Provider

Physical samples

The Data Provider must make provision for the management of any physical samples in an appropriately catalogued collection. These physical samples will be linked to digital data in the SAPRI DC where applicable and possible.