

Polar Data Policy Recommendations / Alignment of Polar Data Policies

Outline

2020-09-07: All content and comments in this document have been copied to a new draft document. This version has been reduced to a document outline without other content, and frozen.

Part 1, Background and intentions

Why data policies (1)?

- Important for setting expectations among scientists about how and what data to share and how to treat data shared by others.
- Key instruments for science coordinating bodies, funding agencies and research institutions in optimising the societal benefits and scientific productivity of their investments in scientific data collection.
- Something about the societal benefits of data and that a policy will help achieve these benefits

Developments since IPY

- The three major polar data management groups – ADC, SCADM, and SOOS – have data policies and principles that set similar expectations, though they pre-date the widespread adoption of the FAIR data principles and other recent developments in data management technologies and culture.
- FAIR, CARE, TRUST
- Something about technological advances?
- Other observations from PDF 3
- Arctic research collaboration

Alignment and updates

- Areas of agreement and disagreement between data policies
- How to move forward with SCAR, IASC, SAON, SOOS?

Process and involvement so far

- PDF 3 and the process behind this document

Intended audience

1. SCAR, IASC, SAON, SOOS, and their science programmes, projects
2. Polar data centres
3. Funding agencies?
4. Scientists
5. Users?

Data definition?

6. Should this document include a data definition?

Part 2, Reference Policies and Policy Drivers

Reference policies

(For some background, see:

1. [Summary of rationales and key principles of some important international data policies](#)
2. [Data Policies Comparison spreadsheet](#))

Global

(top level recommendations/best practices)

- OECD Principles
- GEO
- ISC/CODATA/WDS
- WMO, IODE
- IPY Data policy (& PIC ethics and norms)

Regional

- Antarctic Treaty (binding/«soft law») w/resolutions, SCAR DP, SOOS DP
- Agreement on International Arctic Scientific Cooperation; IASC data statement
- EU (Inspire, PSD)
- Other?
- [JRL to check if the statements from the Arctic Science Ministerial have text related to data sharing]

Policy drivers

- “Drivers and principles underlying data policies which are currently mostly published by funders of research” (CODATA 2014)
 - “The OECD’s Principles and Guidelines for Access to Research Data from Public Funding (2007) have, since their publication, been of particular influence on research funders across countries and research disciplines.”
- The emphasis on open data
 - Open by default
 - “Intelligent openness” (CODATA)
 - As open as possible, as limited as necessary (EU)
 - What are the necessary limits of openness? Examples where this may be necessary include the need to protect endangered species (greater societal benefit), or in support of similar compelling national and international concerns.
 - The demand for transparency
 - corresponds to the scientific principles of repeatability and reproducibility.
- Long-term preservation and availability
- Data availability and scientific productivity

Part 3, Objectives and Principles

Key objectives (“Why data policies (2)?”)

- Shared elements of current policies
 - IPY Pedigree: reference set; rationale (provide a framework for data to be handled in a consistent manner, strike a balance between the rights of investigators, the rights of indigenous peoples, and the public); definition: «multidisciplinary and disparate»; metadata (OAIS reference model); findable - full metadata record; accessible (fully, freely, openly, timely/minimal delay)
 - Long term preservation
 - Data management plans
 - IPR recognition
- Key elements of higher-level policies
 - Publicly funded data a public asset; maximise the benefit of data
 - Scientific cooperation/cooperation for scientific advancement
 - Improve efficiency/effectiveness/quality of science
 - Transparency (reproducibility), efficiency (more data for less impact), innovation
 - Usability; from findability to linked data
 - Ethical considerations
 - Responsible reuse
 - Indigenous peoples’ rights, citizen science
- What important issues are the policies not yet addressing?
 - How to strike a balance between ambition and realism?
 - What should be the responsibilities of:
 - Data originators?
 - Data consumers?
 - Data centres?
 - Institutes?
 - Funding bodies?
 - Big data
 - Machine readability

Requirements for effective data sharing

- Openly, freely and timely; “intelligent openness”
- FAIR and limits to FAIR
 - Comments on findability: Recommend ways of exposure/publishing that ensure a widest possible catchment?
 - Machine readability and costs
- Preservation
- Recognition (and licencing?)
- Limits to openness (“as open as possible, as restricted as necessary”)

Recommended core principles for all polar data policies

7. Considerations on the scope of the data policies (who will the policies be for?)
 - (See “intended audience”)
 - Relation to Antarctic Treaty (& other cases of international agreements?)

- o Relation to national & other data policies
- 8. Core principles
 - o Open access (& legitimate limits to openness)
 - o Fully & freely
 - o Timely (& conditions for time-limited, privileged usage?)
 - o FAIR (conditional)
 - Non-conditional elements of FAIR?
 - o Acknowledgment & responsible reuse (citations, licences, PIDs)
 - o Safe
- 9. Considerations related to stakeholder responsibilities (funders, institutes, scientists, data centres...)

Part 4: Further considerations

- 10. CARE and TRUST
- 11. Funding (“costs of open data processes as an intrinsic part of the cost of doing the research”)
- 12. Infrastructure (resourcing of the facilities to make data available and safe)
 - o Federated search
- 13. DMP
- 14. Policy implementation
 - o (30 June discussion on how we might best “push” international level statements/policies to more local scales where implementation may be more feasible)

References

[White Paper on Polar Data Accessibility](#) (EU PolarNet deliverable D3.8)