Paper No: 26	**Agenda item: 15.1**
Standing Committee	SCADM
Person Responsible:	Johnathan Kool

SCAR Delegates Report 2020

Standing Committee on Antarctic Data Management (SCADM)

2018-2020 Report

Summary

Report Author(s)
Johnathan Kool (Australia)

Summary of activities from 2018-20

2018-19
The Antarctic Master Directory (AMD) continues to be hosted by NASA's GCMD (Global Change Master Directory) and was migrated to the NASA CMR structure. The AMD allows for searching and retrieval of data from data held within National Antarctic Data Centres, coordinated under SCAR. The AMD remains one of the largest portals in the GCMD with significant use of the portal, especially from Asian countries (India, Korea) and also Italy.

Several National Antarctic Data Centre (NADC) representatives expressed issues about the current AMD. Two surveys have been planned one for NADCs and how they use the AMD and a second would be SCAR wide to better understand how researchers search for data.

In 2018, a considerable amount of effort was put into POLDER, a joint project/initiative of SCDAM and the Antarctic Data Committee (ADC) to investigate the possibilities of a federated search tool. Rather than having all metadata located on a single server, federated searching crawls dispersed metadata collections, in a similar manner as Google does with web pages (and, for example, search capability is provided using Google Dataset Search at https://datasetsearch.research.google.com/). The SCADM group devised a list of requirements and functionalities that a federated search tool would have to provide and those that were not essential but would provide additional benefits.

As a result of this work, SCADM broadened the metadata formats that it recommends for NADCs use from just DIF to one or more of: ISO, DIF, and schema.org.

2019-20:
SCADM has been jointly developing a polar data policy to update the SCAR data policy in alignment with the data policies of the Arctic Data Community and Southern

Ocean Observing System (SOOS). The alignment is also drawing on various existing data policy frameworks, including those of the Organisation for Economic Cooperation and Development (OECD), the Research Data Alliance (RDA), the Group on Earth Observations (GEO) and many others. A draft was initially prepared for the 2020 delegates' meeting, but with the COVID outbreak and cancellation of the meeting, we have recommenced revising the document to give other groups more time to contribute to the shared framework.

SCADM supported and attended the Third Polar Data Forum held in Helsinki, Finland, November 2019, with 148 attendees, and 375 registrations for individual activities within the week.

The AMD portal has been re-developed in response to architectural changes made to the Global Change Master Directory by NASA. The re-developed website's location is https://search.earthdata.nasa.gov/portal/amd/search.

Work has been undertaken to engage new members, which has resulted in broadening representation to include Sweden, Switzerland, Italy, and Belarus.

Summary Budget 2019 to 2022

	2019	2020	**2021**	**2022**
	Spent	Allocated	Request	Request
(US$)1	544.25	0	5000	5000

Please note that the majority of the SCADM budget for 2020 was reserved against support for members to travel to the SCAR/COMNAP meetings in Australia. With the cancellation of the meetings, we have been forced to adjust our plans, but consequently have not spent the money yet. The intent is to use the funds to support developing NADC initiatives (capacity building), and potentially make improvements to the AMD.

Future plans

Planned use of funds for 2020 to 2022

(*Start with 2022 and work back to 2020 down the table*)

Year (YYYY)	Purpose/Activity	Amount (in USD)	Contact Name	Contact Email
2021-2022	Support workshop planning, attendance, and infrastructure support	$1250	Johnathan Kool	johnathan.kool@awe.gov.au
2021-2022	Provide prizes for student and early career projects advancing data management and data science	$1250	Johnathan Kool	johnathan.kool@awe.gov.au
2021-2022	Develop tools and web capability to improve access to AMD collections (improve the AMD)	$1000	Johnathan Kool	johnathan.kool@awe.gov.au
2021-2022	Improve integration with global biodiversity delivery systems	$500	Johnathan Kool	johnathan.kool@awe.gov.au
2021-2022	Increase engagement capability with developing Antarctic data programs	$1000	Johnathan Kool	johnathan.kool@awe.gov.au
2020-2021	Support workshop planning, attendance, and infrastructure support	$1250	Johnathan Kool	johnathan.kool@awe.gov.au
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2020-2021	Improve integration with global biodiversity delivery systems	$500	Johnathan Kool	johnathan.kool@awe.gov.au
2020-2021	Increase engagement capability with developing Antarctic data programs	$1000	Johnathan Kool	johnathan.kool@awe.gov.au

Additional detail on funds usage and desired results/outcomes

If travel support is not required during 2021, the funding will instead be used to support increased virtual attendance by developing nations through an internal application process. Funding would support development of National Antarctic Data Strategies, and potentially contribute to capacity building. Depending on ongoing travel restrictions and changes to conference logistics, SCADM may also provide some support to the SCAR biology conference to be held in July 2021 in New Zealand.

Percentage of the budget to be used for support of early-career researchers

2020: 25% (direct)
2021: 25% (direct)
2022: 25% (direct)

Percentage of the budget to be used for support of researchers from countries with developing Antarctic programmes

2020: 25%
2021: 25%
2022: 25%

Membership

Leadership

Role	First Name	Last Name	Affiliation	Country	Email	Date Started	Date Term is to End
Chair	Johnathan	Kool	AAD	Australia	johnathan.kool@aad.gov.au	July 7, 2019	
Vice	Helen	Peat	BAS	UK	hjpe@bas.ac.uk		
Vice	Frank	Nitsche	LDEO	USA	fnitsche@ldeo.columbia.edu		

*Please identify early-career researchers with * in first column*

Other members

First Name	Last Name	Affiliation	Country	Email
Diego	Gomez Izquierdo	Instituto Antártico Argentino	Argentina	diegogi@dna.gov.ar
Anton	Van de Putte	SCAR Antarctic Biodiversity Portal	Belgium	antonarctica@gmail.com
Karaka	Sergey	Institute for Nature Management	Belarus	sk001@yandex.ru
Miroslav	Zanev	Bulgarian Antarctic Institute	Bulgaria	m.zanev@gmail.com
Gabrielle	Alix	Polar Data Catalogue	Canada	gabrielle.alix@uwaterloo.ca
Ricardo	Jaña	Instituto Antártico Chileno	Chile	rjana@inach.cl

Lizong	Wu	Polar Research Institute of China	China	
Jüri	Ivask	Tallinn University of Technology	Estonia	juri.ivask@taltech.ee
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Oscar	Bermudez	Centro Nacional de Datos Polares	Spain	o.bermudez@igme.es

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Anne	Treasure	South African Environmental Observation Network	South Africa	anne@saeon.ac.za
Evgen	Dykyi	National Antarctic Scientific Center	Ukraine	evgen.dykyi@uac.gov.ua
Helen	Peat	British Antarctic Survey	United Kingdom	hjpeat@bas.ac.uk
Frank	Nitsche	Lamont-Doherty Earth Observatory	United States	fnitsche@ldeo.columbia.edu
Scott	Ritz	Global Change Master irectory	United States	scott.a.ritz@nasa.gov
Pip	Bricher	SOOS	Australia	data@soos.aq

*Please identify early-career researchers with * in first column*

Additional information

Detailed information on activities to date

Major Outcomes

Without a doubt, SCADM's greatest strength lies in slow but steady progressive engagement with National Antarctic Data Centres. SCADM has new and active representation from countries such as Sweden, Switzerland, India, and Italy. SCADM maintains regular monthly meetings, with strong participation from many members, and providing a forum for sharing of information and best practices (e.g. sharing capability on how to set up and run a data portal). SCADM also helps coordinate collaboration with broader community initiatives such as the UN Decade of the Ocean.

SCADM is in the process of re-invigorating its dData policy and statement of principles with the aim of becoming more relevant to the greater SCAR community and external users of Antarctic data. To this end, SCADM has revised the SCAR data policy, but following on the outbreak of COVID and the cancellation of the SCAR/COMNAP meetings is taking the opportunity to increase its engagement with the Arctic Data Community, achieving greater global alignment of data practices, and promoting better overall interoperability.

SCADM has also significantly advanced its use of schema.org metadata to enhance searches over National Antarctic Data Centre collections. Schema.org metadata allows for Antarctic data collections to be searched and discovered through portals such as Google Datasets (https://datasetsearch.research.google.com/). Training workshops were held at the Third Polar Data Forum held in Helsinki, Finland in 2019, and several data centres have now made this capability operational.

Major Products

(*Numbered list of products; e.g. databases, or papers to Treaty/CCAMLR. Title and brief, ~one sentence, description of each*)

Antarctic Master Directory: SCADM is responsible for operating and maintaining the Antarctic Master Directory – the chief source for the global collection of Antarctic Data.

Revised SCAR Data Policy (2020): SCADM developed an updated version of SCAR's data policy, but due to the cancellation of the SCAR/COMNAP meetings, we have gone back to revising it to bring greater alignment with the wider Data Community (i.e. Arctic Data Centres, Research Data Alliance, OECD etc.).

Major Impacts

Extremely strong community engagement and information-sharing regarding best data management practices.

Providing ongoing maintenance and delivery of Antarctic data collections through the Antarctic Master Directory.

Direct support from outside organisations received for your activities

(*Numbered list with values indicated if direct cash support. Please restrict in-kind support to substantive in-kind support only*)

1. NASA provides ongoing in-kind support for hosting the Antarctic Master directory

Major collaborations your group has with other SCAR groups and with organisations/groups beyond SCAR

(*Numbered list of substantive collaborations*)

Within SCAR

1. Anton Van de Putte is the liaison between SCADM and the Life Sciences Group
2. Frank Nitsche has contacts to the SCAR Scientific Research Programme PAIS (Past Antarctic Ice Sheet dynamics) and the Antarctic Seismic Data Library System (SDLS)
3. Pip Bricher is the liaison between SCADM and SOOS
4. Johnathan Kool has contacts to the SCAR Standing Committee on the Antarctic Treaty System, Integrated science to support Antarctic and Southern Ocean Conservation (Ant-ICON), and the State of the Antarctic Ecosystem (AntEco) through Aleks Terauds at the Australian Antarctic Division.

Outside SCAR

1. The group is currently engaged with the Arctic Polar Data community (contact: Peter Pulsifer).

Outreach, communication and capacity building activities

SCADM is providing assistance with South Africa's bid to establish the South African Environmental Observation Network (SAEON) as a National Polar Data Centre.

SCAR Fellowship Reviewers

Please list one or more people (name and email address) from your SC who would be willing to serve as reviewers for the next few years, along with 1-3 keywords on their principal expertise.

First Name	Last Name	Email	Principal Expertise
Anton	Van de Putte	antonarctica@gmail.com	Biodiversity data management
Pip	Bricher	data@soos.aq	Ocean data management