World Meteorological Organization

Weather • Climate • Water

Antarctic Regional Climate Centre
Survey outcome and mapping of capabilities

(!DRAFT – TO BE COMPLETED!)

Secretariat

Survey outcome
(mandatory RCC functions for formal recognition)

Out of **23** Member responses, approximately

- **65%** state that they **require** the activities listed under mandatory functions to be performed or coordinated by an RCC (75% for both data and monitoring activities, respectively; 60% for LRF; 50% for training)
- **30% offer** relevant activities already (50% for monitoring, 30% for data; 20% for LRF and training, respectively)
- **40% are interested** in contributing to an Antarctic RCC effort (40% for data and LRF, respectively; 50% for monitoring; 30% for training).

Survey outcome: Contributing Members

Argentina,
Australia,
Austria,
Brazil,
Canada,
Chile,
China,
Denmark,
Finland
France,
Germany,
India,
Italy,
Japan,
Kazakhstan,
Korea,
Norway,
Peru,
Russia,
Slovakia,
Sweden,
United Kingdom,
USA

Double-check responses from Germany, New Zealand, South Africa

RCC mandatory functions – high-level overview of interest and capability

Function	Countries offering relevant Antarctic services already	Countries interested in contributing to Antarctic RCC functions
LRF	Argentina, Australia, (Italy), (Russia), UK, USA	Argentina, Australia, Chile, China, Finland, India, Italy, (Japan), Korea, Norway, Peru, Russia, Sweden, USA
Monitoring	Argentina, Australia, Denmark, Chile, France, India, (Italy), Norway, Russia, UK, USA	Argentina, Australia, (Denmark), Chile, China, France, India, Italy, Japan, Peru, Korea, Russia, UK
Data	Argentina, Australia, France, Chile, India, Japan, Norway, Russia, UK, USA	Argentina, Australia, Chile, China, (Denmark), France, India, Italy, Japan, Korea, Norway, Russia, UK
Training	Argentina, (Russia), USA	Argentina, Australia, Chile, China, France, Korea, Peru, Russia

RCC mandatory functions – high-level overview of interest and capability

More interest and contributions may be triggered:

- Upon finalisation of the current Antarctic RCC scoping excercise (e.g. Canada and US)
- On the basis of further national consultations (e.g. Chile, Germany)

Survey outcome (highly-recommended RCC functions)

Out of **23** Member responses, approximately

- **75%** state that they **require** (at least selected) activities listed under highly-recommended RCC functions to be performed or coordinated by a RCC

- **65% are interested** in contributing to (selected) activities listed under highly-recommended RCC functions; R&D coordination often highlighted in particular

RCC highly-recommended functions – high-level overview of interest to contribute

Interest to contribute to all highly-recommended functions (all or selected activities)**:**

Argentina, Australia, Chile, China, Italy (check), Japan, Korea, Norway, USA (check)

Interest to contribute to some of the highly-recommended functions (all or selected activities)**:**

Finland, France, India, Peru, Russia, UK

Notes re Antarctic RCC scoping

Mandatory RCC functions needed for designation (but may not very attractive for users)

<u>Topics of common interest beyond pre-defined RCC functions:</u>

Sea ice monitoring and forecast

Extending forecast timescales (shorter timescales)

Radiation

Clouds

Notes re Antarctic RCC scoping

Stratospheric Ozone

Mass balance (data, evaluations…)

Climate change projections

R&D

Wind

Space weather

Extratropical cyclones and Polar lows

Iceberg tracking and services (liaise with satellite community)

Sea ice concentrations, fast ice (coastal exposure), ice edge

Sea ice ages – how to predict at sesonal timescales

Notes re Antarctic RCC scoping

polynia monitoring

Polar view – complementary approach (COMNAP)

Ice PET – complementary approach (COMNAP)

Ocean color

SST

Pressure

High-resolution radiosonde dataset

Ice shelve front monitoring

Antarctic melting

Permafrost

Notes re Antarctic RCC scoping

Surface boundary layer

Energy balance

Crevassing, ice sheet movement

Large-scale dynamical forcing, e.g. Antarctic oscillation, ENSO

Salinity

Sea level

Historical data sets, proxy data

Priority activities beyond mandatory RCC functions

Sea ice monitoring and prediction (Paula and Scott to explore leadership)

Atmospheric modes of variability and indices (Scott to lead coordination)

Climate Change Projections and **accumulation and surface melt** to be explored by national focal points based on national consultations and reported back to the group including an implementation proposal, where appropriate

*Note: Antarctic RCC to consider identifying sources of **weather forecast information** and communicating needs for a more collaborative approach to appropriate WMO bodies such as EC-PHORS*

Antarctic RCC stakeholders

Governments

Research institutions and programmes

Tourist sector

Fisheries

Global Maritime Distress and Safety System

…

Lead Coordinators towards implementation

Function	Lead coordinator towards implementation
LRF	Scott, BoM, Australia
Monitoring	Vito, ISP, Italy
Data	Steve, BAS, United Kingdom
Training	To be tackled as part of the above functions

Overall coordinator tbd (Scott to check at home)

Existing and future collaborations

A number of existing collaborations and relevant opportunities have been mentioned, such as COMNAP, GCW, IICWG etc.

An Antarctic RCC (-Network) can largely benefit from this.

HOW?

Next steps

1. Seek formal endorsement of the implementation approach from ~~RAs II, IV and VI as well as~~ EC-PHORS;
2. ?Seek formal expression of intent to contribute to an Antarctic-RCC-Network (gives also mandate to national experts to discuss technical implementation)?
3. Specify products/services for Antarctic-RCC-Network (cf. RA VI RCC-Network Implementation Plan) – both mandatory and highly-recommended
4. Focal Point, Product/Service, Producer, Areal coverage, time of issuance, URL/access point, Remarks
5. Methodology, spatial resolution, temporal resolution, Quality indicators/Validation, References
6. Draft an Antarctic-RCC-Network Implementation Plan (who leads?) (including identifying Node leads and consortia, Antarctic-RCC-Network WebPortal, open vs restricted product access etc)
7. Seek commitment of contributing countries and start demonstration (follow WMO RCC Designation Process)

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Thank you for your attention

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