

# WORLD METEOROLOGICAL ORGANIZATION

## SURVEY OF MEMBERS

### ON NEEDS AND CAPACITIES FOR REGIONAL CLIMATE CENTRE IMPLEMENTATION OVER ANTARCTIC REGION

#### **PART A: Mandatory Functions for designation as WMO RCC/ RCC Network**

| <b>MANDATORY<br/>Requirement/Function</b>   | <b><i>Does your<br/>country<br/>require this<br/>activity to be<br/>performed or<br/>coordinated<br/>by an RCC?<br/><br/>(Yes/No)</i></b> | <b><i>Does your<br/>country<br/>already<br/>provide<br/>relevant<br/>services or<br/>carry out<br/>research to<br/>enable such<br/>services for<br/>Antarctica?<br/><br/>(Yes/No)</i></b> | <b><i>Is your<br/>country<br/>interested in<br/>contributing<br/>to this<br/>function of an<br/>RCC for<br/>Antarctic?<br/><br/>(Yes/No)</i></b> |
|---|---|---|--|
| <b>Operational Activities for Long Range Forecasts (LRF)</b>  |   |   |  |
| Interpret and assess relevant LRF products from Global Producing Centres (GPCs), distribute relevant information to RCC Users; and provide feedback to GPCs |   |   |  |
| Generate regional and sub-regional tailored products, relevant to RCC User needs, including seasonal outlooks etc.  |   |   |  |
| Generate consensus statement on regional or sub-regional forecasts  |   |   |  |
| Perform verification of RCC quantitative LRF products, including the exchange of basic forecasts and hindcast data  |   |   |  |
| Provide on-line access to RCC products/services to RCC Users  |   |   |  |
| Assess use of RCC products and services through feedback from RCC Users   |   |   |  |
| <b>Operational Activities for Climate Monitoring</b>  |   |   |  |
| Perform climate diagnostics including analysis of climate variability and extremes, at regional and sub-regional scales                                     |   |   |  |
| Establish an historical reference climatology   |   |   |  |

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| for the region and/or sub-regions   |  |  |  |
| Implement a Regional Climate Watch  |  |  |  |
| <b>Operational Data Services, to support operational LRF and climate monitoring</b>   |  |  |  |
| Develop quality controlled regional climate datasets, gridded where applicable  |  |  |  |
| Provide climate database and archiving services, at the request of Members  |  |  |  |
| <b>Training in the use of operational RCC products and services</b>   |  |  |  |
| Provide information on methodologies and product specifications for mandatory RCC products, and provide guidance on their use |  |  |  |
| Coordinate training for RCC Users in interpretation and use of mandatory RCC products   |  |  |  |

*NOTE: Reflect true capacity to deliver the function, in consideration of the required human resources, computing and telecommunications capacities including equipment, power, hardware, software, etc., and other infrastructure requirements, and also mandate of the organization.*

## PART B: Highly recommended Functions for RCCs and RCC-Networks

Ref.: 19065/2019-1.8 CLW/WCAS

| <b>HIGHLY RECOMMENDED<br/>Requirement/Function</b>  | <b><i>Does your<br/>country<br/>require this<br/>activity be<br/>performed or<br/>coordinated<br/>by an<br/>Antarctic<br/>RCC?<br/><br/>(Yes/No)</i></b> | <b><i>Does your<br/>country<br/>provide<br/>relevant<br/>services or<br/>carry out<br/>research to<br/>enable such<br/>services for<br/>the Antarctic?<br/><br/>(Yes/No)</i></b> | <b><i>What Is your<br/>country's<br/>interest level<br/>in<br/>contributing<br/>to this highly<br/>recommended<br/>RCC function?<br/><br/>(High,<br/>moderate, low<br/>or not at all)</i></b> |
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| <b><i>Climate Prediction and Climate Projection</i></b>   |  |  |   |
| Assist RCC Users in the access and use of WCRP-CMIP climate model simulations   |  |  |   |
| Perform downscaling of climate change scenarios   |  |  |   |
| Provide information to RCC Users for use in development of climate adaptation strategies  |  |  |   |
| Generate, along with warnings of caution on accuracy, seasonal forecasts for specific parameters where relevant, such as sea ice concentration. |  |  |   |
| Perform verification on consensus statements for forecasts;   |  |  |   |
| Perform assessment of other GPC products such as SSTs, winds, etc   |  |  |   |
| <b><i>Non-operational data services</i></b>   |  |  |   |
| Keep abreast of activities and documentation related to WMO WIS, and work towards WIS compliance and DCPC designation;                          |  |  |   |
| Assist Members in the rescue of climate data from outmoded storage media;   |  |  |   |
| Assist Members to develop and maintain historical climate datasets;   |  |  |   |
| Assist RCC Users in the development and maintenance of software modules for standard applications;  |  |  |   |
| Advise RCC Users on data quality management;  |  |  |   |
| Conduct data homogenization, and advise RCC Users on homogeneity assessment and development and use of homogeneous data sets;                   |  |  |   |
| Develop and manage databases, and   |  |  |   |

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| generate indices, of climate extremes;   |  |  |  |
| Perform Quality Assurance/Quality Control on national datasets, on request of an Members;  |  |  |  |
| Provide expertise on interpolation techniques;   |  |  |  |
| Facilitate data/metadata exchange amongst Members, including on-line access, through an agreed regional mechanism;                                       |  |  |  |
| Perform Quality Assurance, Quality Control on regional datasets  |  |  |  |
| <b>Coordination Functions</b>  |  |  |  |
| Strengthen collaboration between Members on related observing, communication and computing networks including data collection and exchange;              |  |  |  |
| Develop systems to facilitate harmonization and assistance in the use of LRF products and other climate services;  |  |  |  |
| Assist Members in user liaison, including the organization of climate and of multidisciplinary workshops and other forums on user needs;                 |  |  |  |
| Assist Members in the development of a media and public awareness strategy on climate service  |  |  |  |
| <b>Training and Capacity building</b>  |  |  |  |
| Assist Members in the training of users on the application and on implications of LRF products on users;   |  |  |  |
| Assist in the introduction of appropriate decision models for end-users, especially as related to probability forecasts;                                 |  |  |  |
| Promote technical capacity building on country level (e.g. acquisition of hardware, software, etc.), as required for implementation of climate services. |  |  |  |
| Assist in professional capacity building (training) of climate experts for generating user-targeted products   |  |  |  |
| <b>Research and Development</b>  |  |  |  |
| Develop a climate Research and Development agenda and coordinate it with other relevant RCCs;  |  |  |  |
| Promote studies of regional climate variability and change, predictability and impact in the Region;   |  |  |  |

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| Develop consensus practices to handle divergent climate information for the Region                         |  |  |  |
| Develop and validate regional models, methods of downscaling and interpretation of global output products; |  |  |  |
| Promote the use of proxy climate data in long-term analyses of climate variability and change;             |  |  |  |
| Promote application research, and assist in the specification and development of sector specific products; |  |  |  |
| Promote studies of the economic value of climate information   |  |  |  |

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