OPAG.I Climate data and data management
Priority of activities

- Provide guidance on the **implementation of new CDMSs** to ensure better data management including new types of data and quality management
- Establish **standards for the exchange of metadata** and the needs for **WIS**
- Advise on the choice of **instruments and sensors,** and on basic characteristics of **Climate networks** and their observations
- Provide guidance on best practices for **long term homogeneity** of climate data
- Development of Guidance and procedures for improved **data exchange** to meet GCOS requirements and principles
- Identify specific needs to **rescue data** at risk of lost and/or degradation
- **Facilitate Project proposals** for data rescue and digitization
- **Capacity building** : assess the needs for training in the implementation of, e.g., CDMS.

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OPAG.I Climate data and data management
Expert Teams

ET1.1: Climate Data management including Metadata

ET1.2: Observing Requirements and Standards for Climate

ET1.3: Data rescue, Preservation and Digitization of Climate records

ET 1.x Work is facilitated by WMO WCDMP Division at WMO

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OPAG.II : Monitoring and Analysis of Climate Variability and change *Priority of activities*

- Provide international collaboration on **climate change detection**
- Develop and make use of **indices of climate variability and change**
- Explore joint activities with relevant programs and projects and technical commission to identify **observations needs for climate change detection**
- Guide on the provision of **WMO climate System monitoring** and its relevant publications
- Contribute to generation of **optimized integrated** satellite and insit datasets in support of climate monitoring
- Identify needs in **reanalysis data** for monitoring climate variability and change
- Coordinate **global extreme** data records

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OPAG.II : Monitoring and Analysis of Climate Variability and change *Expert Teams*

ET2.1 Joint CCl/Clivar/JCOMM on climate change detection and indices

ET2.2 Climate Monitoring including the use of satellite and marine data and products

ET 2.x Work is facilitated by WMO WCDMP Division at WMO

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Challenging topics for Climate Data Management

- Making implementation and coordination work more effective (e.g. bette facilitating the mobilization of resources for priority activities, particularl the implementation and supporting infrastructures for data collection an exchange, climate databases and data rescue);
- Transforming guidelines to knowledge
- Strengthening of links with groups with complementary goals, e.g. CBS CIMO, JCOMM, GCOS, GEOSS,WCRP,Clivar and other agencies
- Assisting NMHSs to manage remotely sensed data and other "emerging" data that tend to be managed outside of conventional climate databases;
- Data integration into WIS
- More innovative education and training, such as on-line courses;
- Further assisting developing countries in meeting the challenges o automation of observations;
- Implementing better quality management.

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ET1.2 activities

Task 1. Develop an updated list of standards for AWSs for climate purposes. This will include recommendations on sensor precision, network spacing & design, provision for non-instrumental obs, backup systems, etc

Task 2. Develop, or contribute to, a Guidelines document for climate observational standards in developing countries (noting the special problems in these countries of sustainability and limited resources for maintenance), and provide advice relevant to the GEOSS project. This should involve, *inter alia*, collaboration with GCOS Lead Centres

Task 3. Complete the Guidelines document on Quality Control/Quality Assurance commenced in 2005, "**Guidelines on Quality Assurance/Quality Control of surface meteorological data**", including providing appendix addressing feedback to observational systems providers.

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Current Aust Bureau of Meteorology activities – actual and proposed

- Digitisation of historical ship's logs
- Digitisation of data, including marine data, from coastal sites
- Digitisation of historical sea-level and tidal data
- Establish stronger links with overseas counterparts (e.g., UKMO)
- Consider ingest of sea-level and tsunami data into the climate database (ABoM is Australian location of the tsunami warning system).
- Projects for integration and access of Australian marine data holdings, e.g., Bluelink