

Over the past 30 years WCRP has greatly enabled the understanding and prediction of Earth's climate system. Today, there is an unprecedented demand in many socio-economic sectors for relevant climate information for climate change adaptation, mitigation and risk management as well as coping with climate variability. WCRP is helping the global climate research community create a scientific foundation for meeting this demand. The focus is on facilitating the development of climate observing networks and state of the art modeling, studies of climate processes and data analysis activities and on making the scientific outputs, including tools and climate information products, available for an increasing range of practical applications.

The process by which WCRP provides climate science knowledge to scientists and decision-makers around the world is based on two fundamental principles:

**Data Availability and Open Access.** WCRP coordinated research uses directly observed data, derived data, gridded fields, and other data products to further the WCRP scientific goals. WCRP-relevant data and products can be categorized in terms of those that are generated by the activities of WCRP core projects and working groups, those generated by other related bodies and programmes such as the World Weather Watch of the WMO, GCOS and JCOMM and those generated by relevant national and institutional WCRP-related projects and programmes. WCRP strives to ensure and promote:

- **Free and unrestricted exchange.** Data should be made available freely and without restriction. "Freely" means at no more than the cost of reproduction and delivery, without charge for the data itself. "Without restriction" means without discrimination against, for example, individuals, research groups, or nationality. In exceptional circumstances involving highly specialized or experimental data, principal investigators may temporarily limit access until such time as the data can be adequately validated.
- **Timely exchange** Investigators are encouraged to make data available voluntarily and with minimal delay, preferably also in real-time, to maximize their value to the community overall. In cases where extensive post-processing of delayed mode data is needed before a final research quality data set can be generated, early release of a preliminary version of the data is appropriate.
- **Quality control** Scientists retain the primary responsibility for the quality of the data they produce and distribute. Data originators and those generating climate data products are required to ensure that their data meet international quality standards wherever possible.
- **Easy access.** WCRP encourages the use of the most recent advances in information and communication technology to ensure widespread access to data.
- **Reporting Requirements.** It is important that datasets should be adequately documented in peer reviewed literature and for original data to be archived and clearly linked to any value-added datasets through provision of appropriate metadata. Data and metadata should be submitted to recognized data assembly centers as well as to appropriate national and

international archival institutions so that the collected information may be safeguarded for future analysis. Inventories of data and related information should be readily accessible and updated as needed on a routine basis.

**Peer Review and Publication in Open Literature.** WCRP has fostered and supported a global scientific enterprise with an enormous quantity of high-quality research results that are published in the peer reviewed scientific and technical publications. All relevant results of WCRP research are published in international journals with established reputation and rigorous peer review process. This process enables a transparent and open assessment of the scientific findings and their contribution to the knowledge of climate variability and change. In this way WCRP scientific results are distributed worldwide and are available without any restriction to any and all countries, institutions and individual scientists around the world. In addition, popular press and media coverage are both valuable means of disseminating WCRP findings that have broad societal impacts, but these do not supplant the importance of meticulous research and rigorous peer review.