

Memorandum of Understanding (MoU) between the World Climate Research Programme, the International Arctic Science Committee and the Scientific Committee on Antarctic Research on co-sponsorship of the Climate and Cryosphere Project

1 The Parties

The Parties to this MoU are the World Climate Research Programme (WCRP), the International Arctic Science Committee (IASC), and the Scientific Committee on Antarctic Research (SCAR).

1.1 World Climate Research Programme

The World Climate Research Programme (WCRP) was established in 1980, under the joint sponsorship of the World Meteorological Organization (WMO) and the International Council for Science (ICSU), and has also been sponsored by the Intergovernmental Oceanographic Commission (IOC) of UNESCO since 1993. A WMO/ICSU/IOC Joint Scientific Committee (JSC) has the responsibility of formulating the overall scientific concepts and goals of the WCRP, as well as organizing the required international co-ordination of research efforts. The Joint Planning Staff for WCRP provides day-to-day planning and organizational support to the Programme. The Director of the WCRP manages the Programme. The two major objectives of the WCRP are to determine the extent to which climate can be predicted and the extent of human influence on climate. To achieve these objectives the WCRP promotes essential research into understanding the basic behaviour of the physical climate system, and its relation to the broader Earth system and the needs of society.

1.2 International Arctic Science Committee

The International Arctic Science Committee (IASC) is an International Scientific Associate of ICSU, and was established in 1990. IASC's main aim is to initiate, develop, and co-ordinate leading edge scientific activity in the Arctic region, and on the role of the Arctic region in the Earth system. It also provides objective and independent scientific advice to the Arctic Council and other organizations on issues of science affecting the management of the Arctic region. The decision-making organs of IASC are the Council and the Executive Committee. The day-to-day operations of IASC are supported by its Secretariat headed by the Executive Secretary. IASC's geographical remit covers the Arctic Ocean and the surrounding landmasses.

1.3 Scientific Committee on Antarctic Research

The Scientific Committee on Antarctic Research (SCAR) is an Interdisciplinary Body of ICSU. It was established in February 1958 to continue the international coordination of Antarctic scientific activities that had begun during the ICSU-led International Geophysical Year of 1957-58. Its main aim is to initiate, develop, and coordinate high quality international scientific research in the Antarctic region, and on the role of the Antarctic region in the Earth system. In addition it provides objective and independent scientific advice to the Antarctic Treaty Consultative Meetings and other organizations on issues of science and conservation affecting the management of Antarctica. The decision-making organs of SCAR are the Meeting of Delegates and the Executive Committee. The day-to-day operations of SCAR are supported by its Secretariat headed by the Executive Director. SCAR's remit covers Antarctica and the surrounding Southern Ocean including the Antarctic Circumpolar Current south of the Subantarctic Front.

2 Climate and Cryosphere (CliC) Project

CliC was established as a core project of the WCRP in March 2000. Since 2004 it has been cosponsored by SCAR. CliC addresses the entire cryosphere (i.e., snow cover, sea-, lake- and river- ice, glaciers, ice sheets, ice caps and ice shelves, permafrost and frozen ground) and its relation to climate. A major part of CliC's activity is naturally concentrated in the polar areas including the Arctic, Antarctic, and the Southern Ocean. The Scientific Steering Group (SSG) of CliC has the responsibility of formulating the overall scientific concepts and goals of the project, as well as organizing the required international co-ordination of research efforts. The CliC International Project Office (CIPO) provides day-to-day planning and organizational support to the project. The CIPO director reports to the Director of the WCRP.

The principal goal of CliC is to assess and quantify the impacts that climatic variability and change have on components of the cryosphere and the consequences of these impacts for the climate system, and to determine the stability of the global cryosphere. In order to achieve this goal CliC has the supporting objectives to:

- enhance the observation and monitoring of the cryosphere and the climate of cold regions in support of process studies, model evaluation, and detection of change;
- improve understanding of the physical processes and feedbacks through which the cryosphere interacts within the climate system;
- improve the representation of cryospheric processes in models to reduce uncertainties in simulations of climate and predictions of climate change;
- facilitate assessment of changes in the cryosphere and their impact, and to use this information to aid the detection of climate change.

3 Rationale for the MoU

The Parties share common goals in seeking to observe, understand, and predict climate variability and change in the polar regions, including the Arctic Ocean and Southern Ocean. The cryosphere is a vital part of the climate system, especially in the polar regions, and is of high importance to activities of the Parties.

This Agreement is between WCRP, IASC, and SCAR. It does not preclude the Parties agreeing to other MoUs with other programmes and organizations and bilaterally between the Parties. It supersedes the MoU between WCRP and SCAR in the part related to co-sponsorship of CliC.

3.1 Co-sponsorship of the Climate and Cryosphere (CliC) project and cooperation between WCRP, IASC and SCAR in studies of the polar regions and their role in climate

By virtue of this MoU, the WCRP/SCAR Climate and Cryosphere (CliC) project is renamed as the WCRP/IASC/SCAR Climate and Cryosphere (CliC) project. It remains a core project of the WCRP. The goals and objectives of the WCRP/SCAR CliC project fully encompass the scientific interests of IASC. These goals and objectives remain unchanged for the WCRP/IASC/SCAR CliC project.

The CliC SSG will include twelve members. At least two of them will be considered as representatives of the IASC community. At least two of them will be considered as representatives of the SCAR community. The CliC SSG Chair will continue reporting to the WCRP JSC. A report by the CliC SSG will be presented to the IASC Council and to the SCAR Meeting of Delegates.

IASC and SCAR activities in the area of climate studies will be considered as contributing to the goals of WCRP. WCRP activities related to the Arctic will be considered as contributing to the

goals of IASC. WCRP activities related to the Antarctic will be considered as contributing to the goals of SCAR. All these types of activities will be considered as inputs to CliC.

Parties will share datasets related to climate and cryosphere studies, for the benefit of their scientific communities, with due regard to protection of intellectual property rights. As much as possible, the Parties will try to coordinate their data management activities.

WCRP, IASC and SCAR will promote the coordinated establishment, development and maintenance of long-term climate observations in the Arctic and Antarctic, on land and in the ocean. They will promote modelling efforts to synthesise observations, enhance the representation of the polar regions and cryosphere in climate models and improve the studies of impact of climate change on the polar regions.

4 Financial Implications of the Agreement

Parties to this Agreement will continue to be responsible for the costs of their own activities, but this does not preclude one party meeting the costs of the other if they so wish. Actual financial contributions to the activities of the CliC SSG and other implications of this MoU will be considered and agreed by representatives of the Parties. They may be changed in accordance with the Parties requirements without any effect on the substance of this Agreement.

5 Duration, Revision and Termination of this MoU

This MoU remains in force for 5 years, at which time it should be reviewed for possible extension. The MoU may be revised at any time by mutual agreement between the Parties. The CliC SSG may propose alterations to the MoU.

The WCRP may propose cancelling the MoU. IASC and SCAR may withdraw from this Agreement by a formal letter signed by the Executive Secretary of IASC or the Executive Director of SCAR, respectively. The MoU will go out of force at the time when the CliC project will be declared finished.

Signed

Ghassem Asrar

Kristján Kristjánsson

Chris Rapley

Director, WCRP

President, IASC

President, SCAR

Date 2 July 2008

Date 8 July 2008

Date 8 July 2008