

**MEMORANDUM OF UNDERSTANDING BETWEEN  
THE WORLD METEOROLOGICAL ORGANIZATION  
THE INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION OF THE  
UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION  
THE UNITED NATIONS ENVIRONMENT PROGRAMME AND  
THE INTERNATIONAL COUNCIL FOR SCIENCE**

The WMO, the IOC of UNESCO, the UNEP, and the ICSU,

NOTING:

- (1) The recommendation of the Second World Climate Conference concerning the creation of a Global Climate Observing System;
- (2) Resolution XVI-8 of the sixteenth session of the IOC Assembly, to undertake the development of a Global Ocean Observing System and participate in the Global Climate Observing System;
- (3) Resolution 10 (Cg-XII) of the twelfth World Meteorological Congress, to continue the Global Climate Observing System;
- (4) Resolution 21 (Cg-XI) on the relationship between the Global Ocean Observing System and the Global Climate Observing System;
- (5) The decision of the sixtieth meeting of the ICSU Executive Board that ICSU should join WMO and IOC of UNESCO in the formation of the Global Climate Observing System;
- (6) The decision of the sixteenth session of the UNEP Governing Council that UNEP should support, within available resources, the creation of a Global Climate Observing System and assist in ensuring that its development and implementation are pursued with urgency;
- (7) Agenda 21 which calls for systematic observations in support of sustainable development;
- (8) The UN Framework Convention on Climate Change with Articles 4 and 5 committing parties to promote and cooperate in systematic observation;
- (9) Recommendations made by the Commission on Sustainable Development toward the development of global environmental observing systems;
- (10) The Climate Agenda, which supports, in Thrust 4, the Dedicated Observations of the Climate System;

RECOGNIZING the need to acquire comprehensive information on the properties and evolution of the earth's climate system, for detecting climate change, observing climate variability including its impact, supporting climatological applications for economic development, and developing climate system science and predictions,

CONSIDERING that the required information will encompass data from operational meteorological, hydrological, oceanographic and other relevant programmes, as well as observations from research programmes conducted by scientific institutions and space agencies.

AGREE:

(1) To cooperate in organizing and supporting a Global Climate Observing System (GCOS) based on the coordination of existing or planned operational and research programmes for observing the global climate system, and the further development of these programmes as required to ensure continuity of observations;

(2) That the GCOS shall, as its long-range objectives, support all aspects of the World Climate Programme and relevant aspects of other climate-related global programmes. Specifically the GCOS will ensure the data needs are met for climate system monitoring, for assessing the impacts of climate variability and change and applications to national economic development, as well as research leading to improved understanding, modelling and prediction of the climate system;

(3) To consult and call upon other relevant national and international agencies, institutions and organizations, to collaborate in the organization and participate in the implementation of the GCOS;

(4) To establish a GCOS Steering Committee, to provide scientific and technical guidance for the organization and further development of the GCOS, and a GCOS Secretariat;

(5) To support, through appropriate administrative and financial arrangements, the activities of the Steering Committee and Secretariat for GCOS.

AGREE FURTHER that the GCOS Steering Committee shall be regarded by the sponsoring organizations as the main scientific and technical body for formulating the overall concept and scope of the GCOS, and advising on the further development of the GCOS.

APPROVE the procedures to be followed in implementing this Memorandum of Understanding which are specified in the following Annexes:

ANNEX A: Concept of the Global Climate Observing System;

ANNEX B: Terms of reference, structure and functions of the GCOS Steering Committee and supporting staff;

ANNEX C: Financial arrangements.

AGREE: that this Memorandum of Understanding shall be reviewed every four years by the sponsoring organizations, and may be called for review at any time by one of the sponsoring organizations.

AGREE: that other organizations and agencies, which contribute to the implementation of the GCOS and wish to join in the sponsorship of the GCOS, may become a party to this Memorandum of Understanding, including its appropriate administrative and financial arrangements.

AGREE that this Memorandum of Understanding shall come into force on signature by all four parties.

Secretary-General  
WMO

Executive Secretary  
IOC

Secretary-General  
ICSU

Executive Director  
UNEP

Place  
Date

Place  
Date

Place  
Date

Place  
Date

## ANNEX A

### CONCEPT OF THE GLOBAL CLIMATE OBSERVING SYSTEM

1. The goal of the Global Climate Observing System (GCOS) is to provide comprehensive information on the total climate system, involving a multi-disciplinary range of physical, chemical and biological properties, and atmospheric, oceanic, hydrologic, cryospheric and terrestrial processes.
2. The GCOS is intended to meet the needs for:
  - (a) Climate system monitoring, climate change detection and monitoring the impacts of and the response to climate change, especially in terrestrial ecosystems and mean sea-level;
  - (b) Data for application to national economic development;
  - (c) Research toward improved understanding, modelling and prediction of the climate system.
3. The GCOS will build, as far as possible, on existing operational and scientific observing, data management and information distribution systems, and further enhancements of these systems. The GCOS will be based upon, *inter alia* :
  - (a) Improved World Weather Watch systems and the Integrated Global Ocean Services System;
  - (b) The Global Atmosphere Watch and related atmospheric constituent observing systems;
  - (c) The Global Ocean Observing System for physical, chemical and biological measurements;
  - (d) The Global Terrestrial Observing System for land surface ecosystem, hydrosphere, and cryosphere measurements;
  - (e) The maintenance and enhancement of programmes monitoring other key components of the climate system, such as terrestrial ecosystems (including the International Geosphere-Biosphere Programme), as well as clouds and the hydrological cycle, the earth's radiation budget, ice sheets and precipitation over the oceans (including the World Climate Research Programme);
  - (f) Programmes to monitor the key physical, chemical and biological aspects of the impacts of climate change (including the World Climate Impact Assessment and Response Strategies Programme);
  - (g) Data communication and other infrastructures necessary to support operational climate forecasting (including the World Climate Data and Monitoring Programme and the Climate Information and Prediction Services).

## ANNEX B

### TERMS OF REFERENCE, STRUCTURE AND FUNCTIONS OF THE GCOS STEERING COMMITTEE AND GCOS SECRETARIAT

#### 1. Terms of reference

1.1 The functions of the GCOS Steering Committee are to formulate the overall concept and scope of the GCOS, and to provide scientific and technical guidance to sponsoring and participating organizations, and agencies for the planning, implementation and further development of the GCOS.

1.2 Specifically, the Steering Committee will be called upon:

- (a) To identify observational requirements, define design objectives and recommend coordinated actions by sponsoring and participating organizations and agencies, in order to optimize the system's performance and coherence, taking cognizance of the responsibilities, working arrangements and recommendations of established scientific and technical bodies of such organizations and agencies;
- (b) To review and assess the development and implementation of the components of the GCOS, and report to the sponsoring organizations, and to the participating agencies as required;
- (c) To facilitate the exchanges of information among sponsoring and participating organizations and agencies, and in general make the objectives, resource requirements capabilities and outputs of GCOS known to relevant national and international bodies.

#### 2. Membership

2.1 The Steering Committee shall be appointed jointly by the Executive Heads of the sponsoring organizations by mutual consent.

2.2 The Steering Committee shall consist of up to sixteen scientific and technical experts selected on the basis of their personal expertise. The Chairs of standing panels will be members *ex officio*.

2.3 The membership of the Steering Committee shall aim to include a balanced geographical representation of major operational and research observing programmes contributing to the GCOS, as well as an appropriate mix of disciplines in atmospheric, oceanic, hydrological, cryospheric and biospheric sciences. Experts in both *in situ* and remote sensing techniques will be included.

2.4 The members will be appointed for an initial term of appointment of two years. The membership shall be reviewed regularly by the Executive Heads of the sponsoring organizations, bearing in mind the need to ensure reasonable continuity and influx of new members. Members shall not normally serve more than six years.

#### 3. Officers

3.1 The officers of the Steering Committee shall consist of a Chair, and First, Second, and Third Vice-Chairs selected by the Executive Heads of the sponsoring organizations and appointed for two-year terms.

3.2 The duties of the Chair of the Steering Committee shall be:

- (a) To preside over the sessions of the Committee and respond to its decisions;
- (b) To act on behalf of the Committee between meetings;
- (c) To guide the activities of the GCOS Secretariat, with respect to the fulfilment of GCOS plans and tasks;

(d) To conduct, either directly or through appropriate sponsoring organizations, correspondence on matters related to the organization, planning and implementation of GCOS;

(e) To carry out specific duties as prescribed by decisions taken in agreement by the sponsoring organizations;

(f) To ensure that the activities and recommendations of the Steering Committee are in accordance with the joint objectives of the sponsoring organizations, as recorded in this Memorandum of Understanding;

(g) To arrange for the views of the Steering Committee to be presented to the sponsoring organizations;

(h) To prepare annually, with the GCOS Secretariat, a report of GCOS planning and implementation activities, including the considerations and recommendations by the JSTC, and to present this report to the sponsoring organizations.

3.3 The duties of the Vice-Chairs are to assist the Chair in his tasks and to substitute for him/her when necessary.

#### 4. Sessions

4.1 The Steering Committee shall meet at least annually, the venue and dates to be decided by the Chair of the Committee in consultation with the Secretary-General of WMO. Sessions shall normally be arranged so as to avoid scheduling conflicts with meetings of executive bodies of the sponsoring organizations.

4.2 The Director of the GCOS Secretariat, acting on behalf of the Chair of the Committee, shall inform the sponsoring and participating organizations and agencies, notify the members and make appropriate practical arrangements for the session.

4.3 Each sponsoring organization shall nominate one or two representatives to participate in the sessions of the Committee. The attendance of these representatives shall not be charged to the GCOS Fund.

4.4 Representatives of participating organizations and agencies and of the other observing systems, GOOS and GTOS, may be invited to attend the sessions, in the capacity as observers.

4.5 Individual experts may be invited to participate in the sessions upon decision of the Chair of the Committee. The sponsoring organizations shall be informed of such invitations.

4.6 The Secretary-General of WMO shall provide such interpretation facilities as may be required, within budgetary provisions. Documents will normally be distributed in the original language in which they were submitted.

#### 5. Working Groups and Consultants

5.1 The Steering Committee shall be authorized to establish and convene working groups, panels of scientific and technical experts, special study groups, etc. within its field of responsibility and within the budget approved by the sponsoring organizations, taking account of relevant scientific or technical groups established by the sponsoring organizations and their constituent bodies.

5.2 The membership, terms of reference and special requests addressed to working groups will be

documented by the Director of the GCOS Secretariat on behalf of the Chair of the Committee.

## 6. GCOS Secretariat

6.1 The general functions of the GCOS Secretariat shall be to assist the Steering Committee in formulating the concept and in organizing the implementation of the GCOS, and any other organizational or technical task, as the Steering Committee may decide. In particular, the Secretariat, under the responsibility of its Director, shall take charge for:

- (a) Assisting the Steering Committee in preparing plans and other guidance material for the development and implementation of the GCOS;
- (b) Providing secretarial support to the Steering Committee;
- (c) Maintaining scientific and technical liaison with relevant departments and constituents bodies of the sponsoring organizations, and all other relevant institutions or agencies, as required for the development and implementation of GCOS;
- (d) Serving as the documentation and information centre for GCOS and preparing information or action documents pertaining to GCOS, as required by the sponsoring organizations;
- (e) Making arrangements for GCOS planning and coordination activities, in accordance with the provisions of Annex C on Financial Arrangements and following the guidelines provided by the Steering Committee.

6.2 The Secretariat shall be composed of a Director and supporting scientific, technical and clerical staff seconded by the sponsoring organizations and other participating agencies, or supported directly by the Climate Observing System Fund (COSF).

6.3 The Director will be selected by consensus agreement of the Executive Heads of the sponsoring organizations and the Officers of the GCOS Steering Committee. The Director will normally have the status of a staff member of WMO and will be appointed by the Secretary-General of WMO.

6.4 The Director will be responsible, for scientific and technical tasks discharged by the Secretariat, to the Chair of the Steering Committee acting on behalf of the sponsoring organizations, and for administrative and financial matters, to the Secretary-General of WMO, in accordance with the provisions in Annex C.

6.5 The duties of the Director shall be:

- (a) To direct the work of the GCOS Secretariat;
- (b) To guide and support the activities of working groups set up by the Steering Committee;
- (c) To maintain liaison with the Chair and the members of the Steering Committee;
- (d) To serve as the channel for communication between the Steering Committee and the sponsoring and participating organizations and agencies;
- (e) To collaborate, as required, with the Executive Heads of the sponsoring organizations.

6.6 The climate-related component of the GOOS will form the oceanographic component of the Joint Planning Office for GCOS, under the authority of the Director of the GCOS Secretariat.

6.7 The climate-related component of the GTOS will form the terrestrial component of the GCOS, under the authority of the Director of the GCOS Secretariat.

## ANNEX C

### FINANCIAL ARRANGEMENTS

1. The planning and implementation activities for the Global Climate Observing System (GCOS) will be financed by the sponsoring organizations, each from funds appropriated in their budgets for this purpose, and from extra-budgetary resources.
2. The Secretary-General of WMO shall administer the Climate Observing System Fund (COSF) made available from the sponsoring organizations and extra-budgetary resources in support of GCOS activities. The Fund will be administered in accordance with WMO Financial Regulations.
3. Each sponsoring organization will make appropriate annual financial contributions to the Climate Observing System Fund or through other agreed upon arrangements.
4. Other contributions in kind such as secondment of staff, provision of facilities, or support for meetings, publications, or other expenses may be made by sponsoring organizations, supporting nations and participating organizations and agencies.
5. The Fund will adopt a biennial budget and reporting cycle, consistent with the practice of WMO. Corresponding periodic financial reports will be made available to the sponsoring organizations.
6. The cost of staff seconded to the GCOS Secretariat will normally be supported by the responsible sponsoring organizations. Alternatively, a sponsoring organization or participating agency may choose to make a financial contribution to the COSF, in the appropriate amount, to cover the cost of a position. WMO Regulations shall apply to staff positions.
7. A comprehensive budget estimate for all GCOS planning activities and the activities of the Steering Committee and its supporting staff will be submitted by the Chair of the Steering Committee to the Executive Heads of the sponsoring organizations, in due time for consideration in the preparation of programme and budget proposals, as required.
8. Additional contributions and grants to the COSF from sources other than sponsoring organizations may be accepted by the Secretary-General of WMO, provided the purposes of such contributions and grants are consistent with the overall objectives and tasks of GCOS, as described in this Memorandum of Understanding. The specific activities funded from such grants will be treated as an addition to the programme and level of expenditure approved for GCOS.
9. Should the activities of the GCOS be brought to an end, then the remaining balance of the COSF, after the settlement of all financial commitments by the Secretary-General of WMO, will either be donated to WMO for the execution of specific scientific and technical activities subject to the agreement of the sponsoring organizations and other donors of GCOS or it will be shared among the sponsoring organizations and other donors in proportion to their respective contributions to the Fund over the previous two years immediately preceding the end of GCOS.
10. These financial Arrangements may be modified at any time by mutual agreement among the sponsoring organizations provided that no modification would result in conflict with applicable WMO Financial Regulations.
11. In case of doubt as to the interpretation or application of any of the present provisions, the Secretary-General of WMO is authorized to rule thereon, subject to prior consultation with the Executive Heads of the sponsoring organizations.