

Speaking Notes for Marine Seminar on 3rd May 2017, WMO

The Global Climate Observing System (GCOS) is a joint initiative of the World Meteorological Organization (WMO), the Intergovernmental Oceanographic Commission (IOC) of UNESCO, the United Nations Environment Programme (UNEP) and the International Council for Science (ICSU).

1990 IPCC FAR:

*“We need...to improve the systematic observation of climate-related variables on a global basis...”
(SMP)*

“It is necessary to develop a comprehensive Global Earth Observing System”. Require: Improvement of the Global Atmosphere and Land Surfaces Observing System, Development of a Global Ocean and Ice Observing System.”

1992: Second World Climate Conference

“There is an urgent need to create a Global Climate Observing System (GCOS) built upon the World Weather Watch Global Observing System and the Integrated Global Ocean Service System and including both space-based and surface-based components.....”.

Through the 1992 MOU, our four organisations agreed to cooperate in organising and supporting GCOS based on the coordination of existing and planned operational and research observing programs in support of all aspects of the World Climate Programme, the IPCC and the UNFCCC and relevant aspects of other climate-related global programmes.

The fundamental design concept for GCOS was that it be built as a system of climate relevant components of the established observing systems based on the WMO Global Observing System and Global Atmosphere Watch for the atmosphere and the then emerging Global Ocean Observing System (GOOS) and Global Terrestrial Observing System (GTOS) which were also co-sponsored by several of the co-sponsors of WCC-2.

In 1997 the Chairman of the WMO-UNEP Intergovernmental Panel on Climate Change (IPCC) drew the importance of accelerated implementation of GCOS to the attention of the Conference of the Parties (COP) to the UN Framework Convention on Climate Change (UNFCCC). The GCOS sponsoring organisations

have welcomed the subsequent strong support of the Convention bodies for the implementation of GCOS.

So, what does GCOS actually do ?

It assesses the current state of the global observing system for climate;

We are encouraging the establishment or enhancement of systems required to provide long-term and consistent data;

Promoting the transfer and accessibility of data to the user community;

We identify key variables that control physical, biological and chemical processes affecting climate, and which are indicators of climate change;

Ensure the consistency of requirements with overall programmes.

In brief: **observe-plan-do-check-act**, OPDCA

We are grateful to IOC which has a regular seat at the Steering Committee for GCOS, and which shares its ocean observing panel with GCOS and which supports GCOS with technical staff.

The joint sponsorship of GCOS serves as a prototype for the 'system of systems' concept of the much younger Global Earth Observation System of Systems (GEOSS) to which all four GCOS sponsors contribute as Participating Organisations.

We have just accomplished the new implementation Plan for a GCOS, which not only has GCOS publication but also a GOOS publication number on it.

What we will need now most urgently is a revised overall strategy for further progressive implementation of GCOS through the various WMO, IOC, UNEP and ICSU subsidiary bodies who are responsible for its main component systems. IOC is and will stay a key partner.