

WCRP Statement for GEO XII Plenary

(Final version)

My name is Toshio Koike and I am delivering the following statement on behalf of WCRP

The World Climate Research Programme (WCRP) is sponsored by the World Meteorological Organization (WMO), the International Council for Science (ICSU), and the Intergovernmental Oceanographic Commission (IOC) of the UNESCO. The WCRP mission is to facilitate analysis and prediction of Earth system variability and change for use in an increasing range of practical applications of direct relevance, benefit and value to society, with two overarching objectives: to determine the predictability of climate and the effect of human activities on climate.

The WCRP coordinates global climate research of all major components of the Earth System (atmosphere, oceans, land and cryosphere) and their interactions. WCRP supports these studies through the activities of its five Core Projects (CLIVAR, GEWEX, SPARC, CliC and CORDEX) and a number of working groups coordinating model intercomparison efforts such as the successful CMIP which contributed very substantially to the 5th Assessment Report of the IPCC.

In close consultation with the scientific community and stakeholders, WCRP has identified five high-priority research topics that are referred to as WCRP Grand Challenges. These are:

- clouds, circulation and climate sensitivity,
- melting ice and global consequences,
- understanding and Predicting Weather and Climate Extremes,
- regional sea-level change and coastal impacts, and
- changes in water availability.

Two new grand challenges are also currently being developed, on decadal predictions and bio-geochemistry respectively.

WCRP leads, supports and promotes the development of observing systems, data sets, reanalyses and numerical models as tools for advancing climate understanding, prediction and projections for vulnerability, impact and adaptation studies. WCRP also conducts a wide range of education, training, and capacity-development activities. WCRP leads the Research, Modeling and Prediction pillar of the Global Framework for Climate Services.

WCRP has been instrumental in promoting the development of the Earth System Grid Federation (ESGF), including its observational (resp. obs4MIPs) and reanalysis (resp. ana4MIPs) components. The ESGF is now being adopted as the pan-WCRP archiving, exchange and dissemination infrastructure of climate data. It is planned to interface ESGF with the GEO Common Infrastructure in the near future.

WCRP has been a key partner of GEO and a major contributor to the GEO “Climate” Societal Benefit Area (SBA). Numerous WCRP-affiliated scientists are engaged with GEO to mainstream climate knowledge and help using climate research outcomes to address societal needs and support decision-making. WCRP benefits strongly from the GEO high-level advocacy for sustained Earth Observations, open and free access to data, and the data interoperability.

WCRP and the Prince Albert II of Monaco Foundation are promoting jointly a Polar Challenge that will reward the first team to complete a 2000km mission with an Autonomous Underwater Vehicle (AUV) under the Arctic or Antarctic sea-ice. WCRP is grateful to GEO for supporting this initiative and welcomes additional financial contributions from interested agencies, foundations and industry.

WCRP fully supports the GEO 2025 vision, the principles and lines of further GEO development, as expressed in the Geneva declaration, and looks forward to a continuing strong collaboration with GEO on all matters of mutual interest.