

Contribution of the World Meteorological Organization (WMO) to the preparation of the document for WSIS Prepcom2 by the Group of Friends of the Chair

Introduction

1. Provision of weather, climate and water climate information, including analyses and forecasts, to the large range of weather-sensitive economic sectors is of enormous socio-economic benefit. Agriculture, fishery and forestry, energy and water resources management, land, marine, and aviation transports, banking and insurance, construction and urban design, and also human health, recreation activities and tourism all directly benefit from access to meteorological, hydrological and related information. Major societal and economic benefits for countries are expected from the access to climate information, including in particular climate predictions and assessment of climate change.
2. Access to meteorological, hydrological and climatological information produced and provided by National Meteorological and Hydrological Services is of crucial importance for the sustainable development of developing and less-developed countries, which are mostly situated in areas exposed to severe weather. It includes in particular applications of weather, climate and water information to urban development and management in the context of population pressures, water supply, pollution, transportation and sanitation.
3. Weather- and climate-related extreme events including tornadoes, thunderstorms, storms, cyclones, floods and drought, which account for nearly 75 per cent of all disasters, have led to an enormous toll of human suffering, loss of lives and economic damage. Monitoring of these events, prediction of their evolution and movement and the timely issuance of warnings are essential for mitigating the disastrous impact of such events on population and economy. WMO gives utmost priority to the production, provision, exchange and delivery of accurate and reliable early warnings and information for mitigating the impact of natural disasters and environmental emergencies.
4. An ongoing challenge for WMO and its Member countries lies in the fact that the developing countries, which are among the most exposed to natural disasters and least able to benefit from the advances in the application of weather, climate and water information, have limited access to Information and Communication Technologies (ICTs), as services continue to be unavailable or too expensive. WMO is devoting important cooperation efforts for sustainable development in the less developed and developing countries to alleviate these shortcomings.
5. The information society therefore needs to further strengthen the capabilities of the National Meteorological and Hydrological Services in producing and delivering information, warnings and comprehensive and effective services to population in support of safety of life and property and the general welfare of the people in a wide range of weather-sensitive economic sectors. For this purpose, access to information provided by National Meteorological and Hydrological Services is of crucial importance for the sustainable development of all countries.
6. The availability of information technology has a key role to play in enabling and fostering access to weather, climate and water information and services. The information technology should help to pave the way for sustainable development in developing and least developed countries, enabling populations and various economic sectors to benefit from comprehensive and effective information and warnings in support of safety of life and property and of economic and social development.

Contribution of WMO in the implementation of the Geneva decisions

7. The Declaration of Principles (Part 7) and the Plan of Action (Part C7) of the Geneva Phase emphasizes the usage and deployment of ICTs to create benefits in all aspects of daily life as regard, inter alia, agriculture, transport, protection of environment and management of natural resources, disaster prevention, and to promote eradication of poverty and other agreed development goals. Relevant actions were identified in the sectors of E-environment and E-science, including the establishment of monitoring systems using ICTs and promoting efficient collection, dissemination and preservation of essential scientific digital data and metadata related to weather, water and climate.

8. Through many of its programmes, WMO is highly committed to the promotion, coordination and support of implementation of ICTs, for improving the global, regional and national production, exchange and distribution of information and warnings on weather, climate and water, and is pursuing several implementation actions in line with the Geneva decisions.

9. Since first weather networks took off in the 19th century with the telegraph, ICTs have played a key role in meteorology. Within the framework of the WMO World Weather Watch (WWW) Programme, more than 200 national meteorological centres of the National Meteorological and Hydrological Services (NMHSs) of countries are exchanging real-time data via the Global Telecommunication System (GTS) consisting of dedicated links, data communication networks and satellite-based systems. Weather, water and climate know no borders, and effective services to users, economic sectors and the public at large depend on these exchanges of information. The Internet plays an increasing role for information exchange, in particular with users, including scientific and research sectors.

10. WMO has launched the development of a coordinated global information infrastructure, the Framework of the WMO Information System (FWIS) for the collection and sharing of weather, water and climate information for all WMO and related international programmes. FWIS implementation would build upon the most successful components of existing WMO information systems in an evolutionary process. It includes the development of a comprehensive global electronic (on-line) catalogue, including the necessary metadata information, of all related data, and is intended to serve the whole relevant user community including operation and research. FWIS is based on the use of international ICT industry standards, as well as modern data communication services, including the Internet. The FWIS is expected to be a major component of the Global Earth Observation System of Systems (GOESS).

11. WMO, which has a long experience in developing international recommended practices for weather, water and climate operations and research, actively promotes the use of international standards. The use of such standards ensures a cost-effective implementation of information systems, and greatly facilitates a sustainable implementation in developing countries. In this respect, WMO has given special interest to initiatives for fostering the interoperability of ICT systems, and noted with satisfaction that the WSIS Plan of Action of the Geneva Phase includes the promotion of metadata standards to facilitate cooperation and effective use of scientific information and data. WMO is currently developing weather, water and climate metadata standards in the framework of ISO metadata standards for geographic information (ISO 19100 series) with a view to enabling the universal search, access and use of weather, water and climate information.

Contribution to the Political chapeau of the document for Prepcom2

12. The Political chapeau should reaffirm the determination of Member States and other stakeholders to foster the development of ICTs adapted to the capacities of countries for:

- The collection and exchange of earth observations, especially related to weather, climate and water, required for the analysis, monitoring and forecasting of the state of the earth;
- The delivery of weather, climate and water information and warnings as comprehensive and effective services to population in support of safety of life and property, and to the large range of weather-sensitive economic sectors in support of development.
- The interoperability of ICT scientific systems by fostering international standards for the access and use of scientific information.
