IMPLEMENTATION OF THE GLOBAL FRAMEWORK
FOR CLIMATE SERVICES

SUMMARY

ISSUES TO BE DISCUSSED:

1. The structures to lead and manage the GFCS
2. The operational structure of the GFCS
3. The immediate actions to initiate implementation of the GFCS

ADDITIONAL FINANCIAL IMPLICATION:

As per Cg-XVI/Doc. 8.3 – Budget for the sixteenth financial period (2012-2015)

DECISIONS/ACTIONS REQUIRED:

(a) Adoption of the draft text in Appendix A for inclusion in the general summary of Cg-XVI;
(b) Adoption of draft Resolution 11.1/2 (Cg-XVI) given in Appendix B relating to the proposed implementation of the GFCS.

REFERENCE:

Report of the High-Level Taskforce on the Global Framework for Climate Services

CONTENT OF DOCUMENT:

Appendices for inclusion in the final report:

A. Draft text for inclusion in the general summary of Cg-XVI
B. Draft Resolution 11.1/2 (Cg-XVI) – Implementation of the Global Framework for Climate Services
11.1 **REPORT OF THE HIGH-LEVEL TASKFORCE ON THE GLOBAL FRAMEWORK FOR CLIMATE SERVICES** *(agenda item 11.1)*

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The process for implementation of the GFCS

11.1.25 Following the adoption of Resolution 11.1/1 (Cg-XVI) - Response to the Report of the High-Level Taskforce for the Global Framework for Climate Services, Congress recognized the need to initiate the actions that WMO would need to take to support the implementation of the GFCS.

11.1.26 Congress noted that the High-Level Taskforce recommended that the UN-system establish, as a matter of urgency, an *ad-hoc* technical group to develop a detailed implementation plan for the Global Framework for Climate Services based upon the broad strategy outlined in this report; that this plan be endorsed by governments through an intergovernmental process prior to its implementation (Recommendation 3); and that the first intergovernmental plenary meeting of the Global Framework for Climate Services be convened by the end of 2011 with WMO leading the process and putting in place arrangements to ensure the full participation of all interested UN agencies and programmes (Recommendation 5). Congress requested the Secretary-General to work with the WMO’s UN partners to carry out these Recommendations.

11.1.27 Congress also noted that the Taskforce had proposed the establishment of a Global Framework for Climate Services (GFCS) with five components, each supported by a technical Management Committee: Capacity Building, User Interface Platform, Climate Service Information System, Research, Modeling and Prediction, and Observations and Monitoring – recalling that each of these components has the potential to interact with, and gain support from existing programmes and activities that are being undertaken by WMO. Congress, therefore, emphasized that the WMO’s implementation strategy for GFCS would need to take account of these interactions as detailed in the following paragraphs.

**Roles of National Meteorological Services**

11.1.28 Congress noted a guiding principle for the implementation of the GFCS will be to build on many of the existing mechanisms and institutions developed over the years for the provision of climate services. Noting that NMSs collect meteorological observations, undertake activities directed at improving our understanding of weather and climate, and provide weather, climate and related services in support of relevant national needs, Congress encouraged NMSs to play a central role in the development and implementation of the GFCS. Congress urged the Executive Council to review the statement on roles and operation of NMHSs with a view to more clearly reflect their role in the implementation of the GFCS.

**User interface platform**

11.1.29 Congress noted that NMSs have a long history of working closely with a range of user communities and industries within the countries in provision of weather, climate and hydrological information and products to improve decision making within countries and key development sectors. In the climate domain, at national level, the dialogue between service providers and users has often been established through ad hoc mechanisms. Considering that most users prefer to deal with weather and climate information in a seamless manner, Congress concluded that it is most efficient to meet all their weather and climate (and where relevant hydrological) information
needs through a ‘single window’ and that, in most countries, NMSs can, and do provide such a single window and that the GFCS should build upon this capability.

11.1.30 Congress noted that central to the development of user-specific climate information is the recognition that the needs of the user community are diverse and complex. Depending on the financial, technical and infrastructural capacities of the NMSs, the required in-house expertise to support all the users in application of their climate products for effective decision making may be limited to varying degrees. As dealing with a full spectrum of individual users at the national level could be resource intensive, Congress encouraged NMSs to develop partnerships with relevant intermediary organizations and specialized sectoral institutions.

11.1.31 Recognising that for seasonal timescales Regional Climate Outlook Forums (RCOFs) facilitate the development of so-called “consensus” forecasts, regional networking of NMSs and interact with users at regional level, Congress emphasized the importance of continuing these mechanisms and extend them to national level by establishing operational periodic National Climate Outlook Forums and/or National Climate Users Platforms.

**Climate services information system**

11.1.32 Congress recalled that some NMSs currently participate and benefit from global modelling centres that produce seasonal predictions and climate scenarios on global spatial scales. These global products are exchanged and in some instances downscaled to meet regional and national needs, with some of these outputs being coordinated and made available through research institutes.

11.1.33 In view of the above, the Congress emphasized that a coordinated climate services information system (CSIS), which, through a network of collaborating institutions would: ensure that climate information and products are generated at the global level (through a range of global climate centres) to adequately incorporate the global-scale aspects of the climate system; incorporate the regional and local climate information at a finer scale (through RCCs); and ensure that they are available and easily accessible for the application to various sectoral uses at the national and local levels. Congress also recognized the important role of Regional Climate Centres (RCCs) in tailoring global climate products to regional needs on a sustainable operational mode, and also in supporting national requirements of NMSs where needed through mutual arrangements. Congress encouraged Members to support such centres and ensure global coverage of climate services. Consistent with the principle of building upon what is already in place rather than duplicating existing institutions and efforts, Congress expected that the WMO Information System (WIS) could serve the key dissemination mechanism under GFCS.

**Observations and monitoring**

11.1.34 Recognizing that the climate services provided through the GFCS will be fundamentally reliant upon the meteorological observations collected by NMHSs, and noting that establishing and operating national weather, climate and water observing systems requires significant human and financial resources due to the range of measurements and the density of stations required, Congress emphasized the need to sustain the observations over many decades, and the need to continuously meet high standards for data quality. Congress emphasized that a key objective of the GFCS must be to ensure that the observation networks that NMHSs currently operate are strengthened and upgraded, with long-term commitment to meet the highest possible quality to serve the needs of climate analyses and prediction. Congress appealed to the Members to provide adequate resources to their NMSs for strengthening these data networks, and to the development aid agencies to support developing countries in strengthening observing networks where large gaps exist.
11.1.35 Congress also noted that the global climate models and the regional climate models used for development of climate information and products require sharing of climate data and information across national, regional and global boundaries. Recognizing that the exchange of data required for making weather forecasts is supported by Resolution 40 (Cg-XII), which identifies a limited set of climate information that should be exchanged, Congress requested the Executive Council to review Annex I of the resolution with a view to ensuring that the climate data needed for the GFCS’s climate services are included therein.

**Climate research, modelling and prediction**

11.1.36 Congress recognized that many NMSs undertake or participate in research that contributes to the improvement of understanding of climate systems, the development and improvement of global and regional climate models and developing methodologies for seasonal and annual to decadal predictions. In many countries, NMSs have actively worked with universities and other academic institutions and act as the nuclei to consolidate the research efforts and improve operational practices. These efforts of NMSs also contribute to the work of the World Climate Research Programme (WCRP). Additionally many NMSs also engage in applied climate research in support of national decision making, while these and others also support other NMSs in their region to develop capacities to be able to interpret the outputs from the global climate models for downscaling them to regional and national or local levels. Considering that there is considerable disparity in research efforts on regional and national scales, leading to large gaps in climate knowledge at the regional and national levels, Congress stressed that an important role of the GFCS will be to assist NMSs in developing countries to build the capacity to participate in, and undertake the research necessary to address climate problems of national interest.

**Capacity building**

11.1.37 Congress noted that the capacity of many NMSs to adequately meet the user needs for national climate services is currently limited and that the NMSs need to build skills in climate prediction, modelling and analysis for developing, producing, accessing, interpreting and analyzing global and regional climate products. Congress also noted that the downscaled projected climate change scenarios for assessing climate change impacts are required at a much finer scales than present as the climate service provision is made operational in the countries.

11.1.38 Congress emphasized the need for GFCS to facilitate collaboration between NMSs, universities, climate research institutions, and regional and national training centres. Congress encouraged Members to support the establishment of sustainable mechanisms that need to be put in place for education and training for climate science and services, and appropriate credentials and good practices established for the operational climate providers and ensure the application of quality management framework. Partnerships with intermediary organizations that transmit information from providers such as NMSs to end-users, as well as the various sectoral users within the countries, will undoubtedly supplement these efforts.

11.1.39 Congress recognized that for the implementation of the Framework, the skills for developing climate services are technology- and knowledge-extensive and intensive. Congress therefore emphasized the need for improved computing capabilities; upgraded communications to make best use of the WIS; robust, high quality instruments for climate-related observations; systematically archived and managed climate data; and enhanced access to the services to the users through the WIS as a part of the GFCS CSIS.
Roles of the WMO’s constituent bodies

Executive Council

11.1.40 Congress requested the Executive Council to establish appropriate mechanisms to provide oversight and guidance to those elements of the WMO that would participate in the implementation of the GFCS. Congress recognized that key tasks for these mechanisms would include reaching out to the UN System and other partners in the creation of the implementation strategy, in support of the intergovernmental meeting to be convened before the end of 2011, in guiding the development of the detailed implementation plan and in ensuring that the working mechanisms of the WMO are well aligned to support the implementation of the GFCS.

Regional Associations

11.1.41 Congress recalled that the Taskforce’s proposal for the GFCS called for operations to be implemented on three spatial scales; global, regional and national, and that the regional scale will be particularly important in capacity building and in building capabilities that are beyond the resources of single nations. Congress urged the regional associations to assist the implementation of the GFCS through the establishment and active support to RCCs, RTCs and appropriate regional centres by developing regional/sub-regional collaborative capacities, in the development of user requirements, in the identification of experts to assist in implementation activities, and through support to implementation projects.

Technical Commissions

11.1.42 Congress recognized that while CCI will have a central role in the implementation of the GFCS other technical commissions will also have important roles to play: CBS in the areas of service delivery strategies, observations systems and information systems; JCOMM for marine observations, for climate data management and for services to marine sector; CIMO for the advice and support in developing new and improved instrumentation for collecting climate-related data; CAS in terms of research for improved climate services; CHy and CAgM in terms of the full range of interactions with users in water and agriculture sectors; and CAeM in working with the aeronautical sector that has a requirement for climate services. Congress urged each technical commission to build links, through the provision of experts, to the technical Management Committees of the GFCS. Congress also urged the technical commissions to keep under review their work plans as the implementation of the GFCS proceeded so that they could give effective support to the initiative and also take advantages of the opportunities that it offered.

The Roles of the WMO’s Technical Programmes

11.1.43 Congress recognized that a range of technical activities within ten major Programmes, and four co-sponsored programmes directly or indirectly contribute to the objectives of GFCS:

WMO Programmes:

- The World Weather Watch (WWW) Programme;
- World Climate Programme (WCP);
- Atmospheric Research and Environment Programme (AREP);
- Applications of Meteorology Programme (AMP);
- Hydrology and Water Resources Programme (HWRP);
- Education and Training Programme (ETRP);
- Technical Cooperation Programme (TCOP);
- Regional Programme (RP);
Co-sponsored Programmes:

- Intergovernmental Panel on Climate Change (IPCC);
- World Climate Research Programme (WCRP);
- Global Climate Observing System (GCOS) - led by WMO;
- Global Ocean Observing System (GOOS) – led by IOC;
- Global Terrestrial Observing System (GTOS) – led by FAO.

11.1.44 Congress noted that each of these Programmes would have a part to play in the implementation of the GFCS and urged managers and experts involved in the work of these Programmes to keep under review their work plans as the implementation of the GFCS proceeded so that they could give effective support to the initiative and also take advantages of the opportunities that it offered.

11.1.45 Congress noted that the GFCS has been identified as one of the five priority areas under the Strategic Plan and that a number of activities that are expected to contribute to the proposed GFCS implementation plan have already been included under the regular budget while others are planned to be taken through extrabudgetary resources and projected as part of the Compendium of Projects, which formed the building blocks of the GFCS. Congress encouraged Members to financially support the implementation of these proposed projects.

11.1.46 Congress adopted Resolution 11.1/2 (Cg-XVI) to facilitate the range of activities that needed to be undertaken by the WMO throughout the sixteenth financial period in support of the implementation of the GFCS.
DRAFT RESOLUTION

Res. 11.1/2 (Cg-XVI) – IMPLEMENTATION OF THE GLOBAL FRAMEWORK FOR CLIMATE SERVICES

THE CONGRESS,

Noting:

(1) The Report of the High-Level Taskforce on the Global Framework for Climate Services,

(2) The urgent need to put in place improved climate services for all, but most particularly for climate-vulnerable developing countries, particularly African countries, least developed countries, land-locked developing countries and small island developing states where climate services are also often weakest,

Considering that:

(1) Internal working methods for the Framework, particularly for communications and for debating and deciding on implementation priorities, including for the observations, information systems, research and capacity building components need to be established,

(2) Mechanisms are needed to strengthen the global cooperative system for collecting, processing and exchanging observations and for using climate-related information,

(3) A set of projects that target the needs of developing countries, particularly those currently least able to provide climate services, must be designed and implemented,

(4) Strategies for external communications, resource mobilization and capacity building programmes for the Framework need to be developed,

(5) Targets need to be set and procedures established for monitoring and evaluating the performance of the Framework,

Decides to support the implementation of the GFCS as a priority of the Organization in the sixteenth financial period;

Requests Members to:

(1) Collaborate in, and give all possible intellectual and financial support to, the implementation of the GFCS; in particular through [participation in the first session of the intergovernmental board – option A and joint board – option B] making experts available to participate in, and support the work of the Executive Committees and in financing the national and regional components of GFCS;

(2) Assist in the development of the implementation plan for GFCS by further developing national and regional requirements for climate services so that capacity development projects can be designed and implemented;

(3) Facilitate coordination and collaboration among various institutions within the countries required for the generation and use of climate services through appropriate legal and institutional arrangements;
(4) Improve infrastructural requirements of the NMSs in respect of robust, high quality instruments for the taking of climate-related observations, systematically archive and manage climate data, computing capabilities, and communications;

(5) Provide adequate resources to the NMHSs for strengthening weather, climate and water data networks and recruiting experts in new technical skills required for generating and delivering climate services;

(6) Support research in climate science at national, regional and global levels to improve the understanding of climate systems and provision of better climate services;

**Urges** NMSs to:

(1) Develop partnerships with relevant intermediary organizations and specialized sectoral institutions within the countries including establishing NCOFs/National Climate User Platforms;

(2) Collaborate with universities, climate research institutions, and regional and national training centres to continuously improve the technical skills for developing climate services and serving the needs of various users;

(3) Continue to improve the technical skills of the staff within their institutions through regular in-service trainings;

**Requests** the Executive Council to:

(1) Provide support for, and guidance to, the process of developing the detailed implementation plan and monitoring of its implementation through appropriate working mechanisms;

(2) Review Annex I of Resolution 40 (Cg-XII) with a view to ensuring that the climate data needed for the GFCS’s climate services are included therein;

(3) Review the role and operation of NMHSs specifically addressing the needs of GFCS;

**Invites** the presidents of regional associations to:

(1) Regularly review and prioritize the need for climate services within their Region and encourage collaboration with regional user sectors;

(2) Encourage regional collaboration so as to enable the building of regional institutions such as RCCs and collaborative mechanisms such as RCOFs for sharing climate data, and developing climate information and services;

(3) Improve coordination of ongoing activities between Regions;

**Invites** the presidents of technical commissions to:

(1) Regularly review the technical needs of the Framework as they relate to the activities and competencies of their Commission, guide establishment and improvement of procedures and processes on technical matters to support GFCS operations, and assist with the implementation of the Framework to the extent possible;

(2) Improve coordination of ongoing activities relevant to the Framework within, and between, technical commissions;
Requests the Secretary-General to:

(1) Establish the nucleus of an ad hoc planning group within the Secretariat to commence the development of the detailed implementation plan in collaboration with other UN-system partners;

(2) Put in place arrangements whereby the WMO Secretariat can provide appropriate support to each of the Framework’s technical Management Committees.