

Intergovernmental Board on Climate Services

Second session

Geneva

10–14 November 2014

Abridged final report with resolutions



**World
Meteorological
Organization**

Weather · Climate · Water

WMO-No. 1149



GFCS

GLOBAL FRAMEWORK FOR
CLIMATE SERVICES

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GENERAL SUMMARY OF THE WORK OF THE SESSION

1. ORGANIZATION OF THE SESSION (agenda item 1)

1.1 Opening of the session (agenda item 1.1)

1.1.1 On behalf of the Chairperson of the Intergovernmental Board on Climate Services (IBCS), the co-Vice-Chairperson, Ms Linda Makuleni, opened the second session of the Intergovernmental Board on Climate Services (IBCS) at 9:30 a.m. on Monday, 10 November 2014. She welcomed the members and all participants to the second meeting of the IBCS. Mr Michel Jarraud, Secretary-General of WMO, also welcomed participants to Geneva. H.E. Alexandre Fasel, Ambassador and Permanent Representative of Switzerland to the United Nations Office and other international organizations in Geneva, welcomed the participants to Geneva on behalf of the Swiss Confederation and delivered an opening statement, followed by His Excellency Ambassador Steffen Kongstad, Permanent Representative of Norway to the United Nations Office and other international organizations in Geneva. The list of participants is given in the [appendix to the present report](#).

Opening statements

1.1.2 H.E. Ambassador Alexandre Fasel informed the meeting that, as part of the national climate adaptation strategy, Switzerland established a National Centre for Climate Services to facilitate access to climate information by different users. He underlined the importance of the session to accelerate the implementation of the GFCS and recalled the contribution of the CLIMANDES project as a twinning activity between Switzerland and Peru to improve climate services for the Peruvian region and maximize socioeconomic benefits from climate information. Ambassador Fasel underscored the importance of regional platforms for climate services in the GFCS initial priority areas and recalled that Switzerland would support a GFCS Observation Meeting in Central Asia in 2015. He underlined the importance of the GFCS in light of the global climate agenda and the call by the United Nations Secretary-General's Climate Summit and the necessity for the GFCS to be developed as a partnership, as exemplified by the joint WMO-WHO Office to address health issues related to climate. In this regard, he emphasized the opportunities for partnerships offered by Geneva as the seat of numerous United Nations organizations, other international organizations and think tanks.

1.1.3 H.E. Ambassador Steffen Kongstad recalled the relevance of the "weather reports from the year 2050" produced by the weather broadcasting services of several Members to raise attention on the necessity of climate change mitigation and adaptation and on the importance of climate services. He recalled the contribution of Norway to the GFCS and in particular the Climate Services Adaptation Programme in Africa to building resilience in disaster risk management, food security and health. He underscored that after the GFCS was launched by the Third World Climate Conference in 2009 the IBCS has provided a solid foundation for supporting its implementation but that accelerated efforts are required to support in particular the countries that have only basic climate services capacities. In this regard, he emphasized the major investments required for the observations that underpin climate services and the modernization of NMHSs to develop climate services for the socioeconomic benefits of their Members. Ambassador Kongstad invited other Members and international agencies to join Norway in supporting the GFCS and to join the group of Friends of the GFCS Norway has convened to support the initiative.

1.1.4 Following the introductory statements of the Chairperson and the Secretary-General (see agenda item 2), the Chairperson proceeded with a number of organizational agenda items.

1.2 Establishment of committees (agenda item 1.2)

The following committees were established:

Credentials Committee

1.2.1 In accordance with General Regulations 23 and 24, the Intergovernmental Board for Climate Services established a Credentials Committee, comprising delegates of the following Members:

- Regional Association I – Liberia, Madagascar, Sudan
- Regional Association II – Japan, Oman
- Regional Association III – Chile
- Regional Association IV – Belize, Mexico
- Regional Association V – New Zealand
- Regional Association VI – Germany, Russian Federation, Spain

Mr Andrew Tait (New Zealand) was elected chairperson of the Credentials Committee. The Committee submitted reports to the Intergovernmental Board.

Nomination Committee

1.2.2 In accordance with the provisions of Regulations 25 and 26 of the General Regulations, the Nomination Committee was established comprising of the principal delegates of the following 12 Members:

- Regional Association I – Congo, Togo, Tunisia
- Regional Association II – China, Republic of Korea
- Regional Association III – Chile
- Regional Association IV – Curaçao and Sint Maarten, Honduras
- Regional Association V – Australia
- Regional Association VI – Croatia, Iceland, Slovakia

Mr Ivan Čačić (Croatia) was elected chairperson of the Nomination Committee. The Committee submitted a report to the Intergovernmental Board.

Coordination Committee

1.2.3 The Coordination Committee consisted of the Chairperson and the co-Vice-Chairpersons of the IBCS, the Secretary-General or his representative, and the chairpersons of the committees of the bodies other than the Credentials and Nomination Committees. The Committee was assisted by the Deputy Secretary-General and the GFCS Office.

Subcommittees

1.2.4 The following open sub-committees were established for in-depth discussion and detailed consideration of particular items:

- (a) Drafting Group on Document 5.1 – Consideration of the Terms of Reference of the Partner Advisory Committee;

- (b) Drafting Group on Document 7 – Budget for 2015 and the Operational and Resource Plan for 2016–2018.

1.3 Approval of the agenda (agenda item 1.3)

The Intergovernmental Board approved the provisional agenda, as contained in IBCS-2/Doc.1.3, on the understanding that amendments may be introduced in the course of the session.

1.4 Report of the Credentials Committee (agenda item 1.4)

The Credentials Committee submitted three reports concerning the credentials of the delegates of Members, non-members, organizations of the United Nations system, other intergovernmental organizations and other organizations. The Committee found that the credentials of the delegations of 97 IBCS Members were in order. These reports were approved by the Board.

1.5 Programme of work of the session (agenda item 1.5)

1.5.1 Working hours of the meetings were established as follows: Monday to Friday, from 9.30 a.m. to 12.30 p.m. and from 2.30 p.m. to 5.30 p.m.

1.5.2 The necessary arrangements concerning the allocation of agenda items were made. Agenda item 10 was moved from 13 November to the afternoon of 12 November.

2. INTRODUCTORY STATEMENTS (agenda item 2)

2.1 Statement by the Secretary-General (agenda item 2.1)

2.1.1 The Secretary-General of WMO, Mr Michel Jarraud, welcomed all participants to the meeting. He acknowledged the progress made in the implementation of the GFCS since the first session of IBCS. He expressed appreciation to the Members and partners for their great commitment to the GFCS and the important financial and in-kind contributions and support provided. The Secretary-General emphasized that several activities, directly related to the GFCS or contributing to it, had been initiated in various regions, ranging from national and regional consultations to multi-agency projects addressing the initial priorities.

2.1.2 He underlined that the early implementation of the GFCS had confirmed the importance of coordination at all levels and recalled the positive results achieved through coordination mechanisms and processes among partners. He called attention on the importance of sharing information on activities being implemented by, or planned by, Members and partners so as to have a clearer appreciation of progress with the development of climate services in under-capacitated countries that can guide future actions and investments. He also emphasized the need for tailored, including gender-sensitive, services. In conclusion, the Secretary-General drew the attention of the Board on the long-term nature of the GFCS and on the need to maximize project investments while adapting its governance and supportive machinery.

2.2 Statements by partners of the Global Framework for Climate Services (agenda item 2.2)

2.2.1 Statements on the GFCS were made by:

- (a) Dr Margaret Chan, Director-General of the World Health Organization (WHO) (video);
- (b) Ms Irina Bokova, Director-General of the United Nations Educational, Scientific and Cultural Organization (UNESCO) (video);
- (c) Mr Elhadj As Sy, Secretary-General of the International Federation of Red Cross and Red Crescent Societies (IFRC) (video);

- (d) Mr Neil McFarlane, Chief of the Coordination and Regional Programming Section of the United Nations Office for Disaster Risk Reduction (UNISDR);
- (e) Mr Francesco Pisano, Director of Research, Technology Applications and Knowledge Systems of the United Nations Institute for Training and Research (UNITAR);
- (f) Ms Xiangjun Yao, Director of the Geneva Liaison Office of the Food and Agriculture Organization of the United Nations (FAO);
- (g) Mr Daniel Kull, Senior Disaster Risk Management Specialist, World Bank Geneva Office;
- (h) Mr Jörg Schulz, European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT)
- (i) Mr Andrea Tilche, Head of the Climate Action and Earth Observation Unit, Directorate-General for Research and Innovation of the European Commission;
- (j) Mr Arthur Askew, Liaison officer of the International Union of Geodesy and Geophysics (IUGG) with WMO;
- (k) Mr Joppe Cramwinckel, Director of the Water Department, World Business Council for Sustainable Development (WBCSD);
- (l) Mr Brian Lander, Geneva Liaison Office of the World Food Programme (WFP);
- (m) Mr Espen Volden, Group on Earth Observations (GEO).

2.2.2 The IBCS noted with appreciation these introductory statements and requested that copies of the statements and videos should be made available through the GFCS website (<http://gfcs.wmo.int/>).

3. REPORT OF THE CHAIRPERSON OF THE INTERGOVERNMENTAL BOARD ON CLIMATE SERVICES (agenda item 3)

3.1 The Intergovernmental Board on Climate Service (IBCS) noted the report of the Chairperson, which provided an overview of the progress on the Global Framework for Climate Services (GFCS) and the overarching issues related to GFCS implementation, since its first session held in July 2013.

3.2 The Chairperson stated that significant progress had been made with the implementation of the GFCS as detailed in paragraphs 6.1.1–6.1.47, which present the specific projects and activities under implementation. However, despite this progress coordination to ensure planning, exchange of information and linkage of various initiatives by various stakeholders to increase the effectiveness in realizing the overall goal of developing and applying climate services in support of decision-making across the world remains a challenge. In this regard, the Chairperson reported the key findings of the meeting on the Implementation Coordination of the GFCS held from 29 September to 1 October at the WMO Secretariat with the participation of Programme managers, GFCS focal points and representatives from the respective technical structures of partner agencies leading/supporting the four priority areas; WMO Technical Programmes; WMO Technical Commissions; WMO Regional Associations; WMO Executive Council bodies; and key experts and stakeholders, which include:

- (a) The need to effectively coordinate and link the activities of various actors who are supporting climate services-related initiatives at global to the national levels such that these activities result in the establishment of enhanced climate services given that across the projects being implemented in many regions and countries there remains a

need to effectively address gaps, reduce duplication and identify areas where technical/scientific support, planning and coordination are needed;

- (b) The need for effective ways of coordinating efforts to support the pillars and priority areas of the GFCS and on-going projects at national level;
- (c) The need of a dedicated mechanism through which partners, including members of the Partner Advisory Committee (PAC), can coordinate technical, scientific, advisory services and planning support for designing and implementing climate services at the national level more systematically. Advisory services of WMO's Technical Commissions and programmes can be channelled to support GFCS implementation at national level.

3.3 Members and Partners have been contributing to the GFCS, which enabled various GFCS activities to be undertaken. In particular, financial contributions were provided by the following Members: Australia; Bangladesh; Canada; China; Finland; France; Hong Kong, China; India; Ireland; Islamic Republic of Iran; Mexico; Norway; Qatar; Switzerland and United Kingdom of Great Britain and Northern Ireland. In addition, in-kind contributions were made by China and the Republic of Korea who have seconded experts to the GFCS Office. These secondments are critical to ensuring that the GFCS Office has the human resources to effectively coordinate the activities with partners and Members, and respond to the ever increasing demand for guidance and assistance by Members and partners to implement the GFCS at regional and national levels.

3.4 Partners have been contributing to the GFCS through the support of the organization and their participation in GFCS-related activities such as national, subregional and regional consultations, thematic workshops and design and implementation of specific projects at the national level.

3.5 The GFCS requires support for: (a) implementation of GFCS-related projects and activities as contained in the implementation plan of the GFCS; (b) support for the functioning of the governance structure of the GFCS; and (c) support to the GFCS Office to enable it to carry out coordination with Members and partners and provide support to Members and partners in implementing GFCS-related activities. In this regard, the level of contributions in support of the GFCS, is less than needed in order to effectively address the capacity needs of the 70 countries that currently are unable to effectively produce and apply high quality climate services and to enable effective functioning of both the governance structure and secretariat functions. Based on lessons from the initial implementation, focus has been on implementing concrete projects at regional and national levels with a view to learn lessons and develop "a proof of concept" that could be replicated in other countries and regions. These lessons will also inform the development of guidelines to support Members and partners in implementing the GFCS. With respect to the governance, a "light touch approach" is being proposed. This will consist in reducing the number of the IBCS meetings to one every four years and revisiting the Terms of Reference of the Management Committee of the IBCS to have delegated powers to guide the work of the GFCS in the intersessional period (as recommended in paragraph 10.1). With respect to the Secretariat, secondment of experts by Members and Partners to the GFCS Office is essential to ensure its effective functioning.

3.6 At the current stage of development and implementation of the GFCS, efforts are needed to effectively engage partner agencies and relevant stakeholders in support of the GFCS and ensuring that GFCS is mainstreamed in their agendas. In this regard, health within GFCS is benefiting from the strong leadership of the World Health Organization (WHO). Health decision-makers and practitioners at all levels of the sector clearly voiced their critical need to access more relevant and reliable climate and weather information, at the recent global Conference on Climate and Health organized by WHO. To respond to this amplifying health sector demand, WHO active engagement with WMO and the GFCS, as the lead agency for health within GFCS, is critical.

3.7 In May 2014 a joint WHO-WMO Climate and Health Project Office was established as an important step to further accelerate the co-development and use of climate services in the health sector. The Office, located at the WMO Secretariat, has been established on an interim

2-year basis to advance the GFCS Implementation Plan, including its Annexes and Exemplars as they correspond to health; and to steer the creation of a formal, more sustainable WMO-WHO Programme for Climate and Health that can ensure WMO provides more systematic support to the health community. In the first months of activity of this Office the need for additional opportunities to coordinate across the GFCS priority areas has become clear. The health sector requires not only collaboration with meteorological and climate community, but active coordination with the water sector to provide safe drinking water, the DRR sector to manage extreme weather risks, and with agriculture to ensure nutritional security.

3.8 In the past without a dedicated entity responsible for health, WMO engagement with health actors has been weak and ad hoc. The establishment of a sustainable joint Climate and Health Programme is a vital mechanism to ensure that climate services have the most direct possible link to the operational, policy, and technical support mechanisms of the health sector, and can represent a new era of collaboration for GFCS to serve the health sector. In the coming months, the joint project office will lead the preparation of a full business case, including strategic plan and Terms of Reference that describe the proposed mechanism, structure, and mandate of a sustainable WMO-WHO Climate and Health Programme, along with options for financing and governance. This documentation will support appropriate decisions by both the Seventeenth World Meteorological Congress and the Sixty-eighth World Health Assembly in 2015.

3.9 In pursuing efforts to inform the constituent bodies of partner agencies on the benefits, need and progress with implementation of the GFCS, WMO has been coordinating with partners to ensure that the agendas of relevant sessions provide space for the Chairperson of the IBCS to address them. In this regard, statements were delivered to the 67th World Health Assembly and the 134th Executive Board. At the regional level, Permanent Representatives of the countries hosting WHO Regional Committees were requested to deliver statements on behalf of WMO reflecting aspects of the GFCS.

3.10 An MoU signed at the margins of IBCS-1 between WMO and IFRC was ratified by the IFRC Governing Board in September 2013 and shared with all national Red Cross and Red Crescent Societies to facilitate collaboration at the national level. Based on this MoU, partnerships are being established between NMHSs and Red Cross and Red Crescent Societies. For example, in Japan, an MoU was signed by the President of the Japan Red Cross with the Japan Meteorological Agency to promote disaster preparedness education. As part of the efforts to engage partners, in November 2013, WMO addressed the General Assembly of the IFRC.

3.11 Synergies were sought with the United Nations Economic Commission for Africa through its ClimDev Programme, European Commission, Green Climate Fund, World Bank, UNDP and UNFCCC to ensure that their initiatives and investments are informed by GFCS priorities and needs. This is exemplified by the cases of Burkina Faso and Niger where Action Plans developed to address gaps and needs identified as part of the implementation of the GFCS are being used to plan WB future investments in these countries. With a view to ensure more effective engagement with partners, partner agencies should accommodate GFCS in the agendas of relevant meetings and events they organize and invite the Chairperson to address these events.

3.12 Building on partner's activities and capacities, activities related to the pillars of the GFCS are being implemented by various actors. For the User interface Platform (UIP), the Service Deliver Strategy of the WMO, whose characteristics include the promotion of service-culture through effective engagement of users; global, regional and national approaches to its implementation; short-term, medium-term and long-term milestones to measure progress; linkages with other WMO initiatives is a valuable contribution. In this regard, WMO has been making efforts to ensuring effective communication of information to users through the development of guidelines on communicating uncertainty to enable decision-making by users. Furthermore, guidelines are being prepared for Members on developing multi-hazard impact-based forecasts and warning services that will enable the public to know the expected impact of severe weather and climate hazards on their lives, livelihoods, property and economy. In parallel to the publication of these guidelines, the best way to demonstrate the steps needed to progress towards such services is through organizing training activities and establishing pilot projects involving partners active in the

implementation of activities under the initial four priority areas of the GFCS at country level using for example the countries participating in the Severe Weather Forecasting Demonstration Project (SWFDP) of WMO as test beds.

3.13 The Chairperson stressed that seasonal forecasts that may involve extremes such as droughts, dust storms, heat waves, unusual floods or a high number of tropical cyclones would require a “seamless” service, using both climate and weather timescale products. In this regard, seamless services should be developed as an integral part of NMHSs efforts in support of disaster risk reduction, food security, health and water, which could benefit from harmonization, implementation, interoperability and timely exchange of related data and products within a geographical region. In this context, the Commission for Basic Systems/Data Processing and Forecasting System and Data Processing and Forecasting System (DPFS) Programme have been working with CCI towards the development of the concept of Seamless Weather and Climate Watch for operational monitoring and anticipating extreme meteorological events, and plans for the demonstration of its effectiveness in Eastern Africa building on the legacy of the Severe Weather Forecasting Demonstration Project. The seamless service provision would provide a major contribution to the Climate Services Information System (CSIS) and the User Interface Platform of the GFCS and contribute to the capacity development pillar.

3.14 Under the water sector of the UIP, progress is being made through joint WMO-Global Water Partnership initiatives, such as the Associated Programme on Flood Management and the Integrated Drought Management Programme. These initiatives benefited from support provided by Canada, Denmark, Germany, Italy, Switzerland and the United States of America, and were further supported by the activities of Spain. UN-Water had designated a focal point on the Global Framework for Climate Services, further ensuring UN-Water’s contribution to the User Interface Platform from a water perspective.

3.15 WMO Technical Commissions play an important role in the implementation of the GFCS. The Commission for Agricultural Meteorology (Antalya, Turkey, 10–15 April 2014), which plays a critical role for the implementation of the agriculture and food security priority of the GFCS, has identified a set of global initiatives in agricultural meteorology corresponding to the five pillars of the GFCS and the inclusion of implementation of the UIP of the GFCS through collaboration with international organizations such as the Food and Agriculture Organization of the United Nations (FAO), World Food Programme (WFP), International Fund for Agricultural Development (IFAD) and others in the Terms of Reference of the Commission’s Focus Area 4 (capacity development in agricultural meteorology).

3.16 The Commission for Climatology (CCI) at its sixteenth session, held from 3 to 8 July 2014, in Heidelberg, Germany, adopted a new working structure consisting of five Open Panels of CCI Experts (OPACES) spanning five thematic areas of work, established an Implementation Coordination team on the CSIS, and identified a high level advisor for the GFCS. The new configuration will position CCI to guide generation of products and services of direct relevance to GFCS implementation and stressed the need for the necessary mechanisms be put in place or strengthened to channel CCI inputs into supporting GFCS implementation at country level.

3.17 The WMO Climate Information and Prediction Services (CLIPS) projects activities are coming to an end in 2015. CLIPS activities will be incorporated into the GFCS through the Climate Services Information System (CSIS). CSIS implementation offers excellent opportunities for consolidating the CLIPS legacy and for incorporating other World Climate Programme (WCP) elements which have been emerging in the past years, such as Regional Climate Centres (RCCs), Regional Climate Outlook Forums (RCOFs), climate watches and climate indices.

3.18 The World Climate Research Programme (WCRP), the World Weather Research Programme (WWRP) and the Global Atmospheric Watch (GAW) Programme are promoting and coordinating together research on climate, weather and the composition of the atmosphere directly relevant to the Observations and Monitoring and the Research, Modelling and Prediction (RMP) components of the GFCS Implementation Plan. Through these efforts the Programmes contribute to reliable science-based information to support, enhance and develop new climate services. In

particular the WCRP and WWRP mutual efforts on seamless prediction across weather and climate time scales, embodied in the developing Subseasonal to Seasonal (S2S) Prediction Project and the polar prediction and predictability research initiatives are directly aligned with the GFCS. In this regard, the development of WCRP grand challenges on water availability, regional sea level rise, climate extremes and reliable and accessible regional climate information, represent strong potential contributions to the research-oriented projects listed in the GFCS Compendium.

3.19 Support is being provided by the GFCS to facilitate and advance implementation of the Research, Modelling and Prediction Pillar of the GFCS, through the development of the Climate Research for Development Agenda for Africa (CR4D) that emerged from the Africa Climate Conference 2013 (Arusha, October 2013). In tandem, efforts are on-going for the development of the regional climate research priorities for Latin America and the Caribbean, following the WCRP conference in Latin America and the Caribbean (March 2014). However, it is important to note that vigorous actions are needed to attract and develop the next generations of both researchers and climate service professionals in support of the GFCS.

3.20 With a rapidly increasing trend, urbanization is becoming a dominant feature of the societal dynamics in the 21st Century as more than half of the global population now lives in cities and this percentage is expected to increase to approximately 70% by 2050. In this regard the Chairperson noted that the GFCS needs to consider the needs of the growing urban population by including it within its evolving priorities.

3.21 The IBCS welcomed the report of the Chairperson and expressed its appreciation for the financial and in-kind contributions made by countries to support the implementation of the GFCS. The IBCS raised a number of issues flowing from the report that would need to be considered under other agenda items, including, but not restricted to the following:

- (a) The role of the PAC and its relationship with both the IBCS and its Management Committee (agenda items 5);
- (b) The importance of preparations for the Seventeenth World Meteorological Congress in 2015 (agenda item 10), for example:
 - Establishing the linkage between the IBCS and the WMO Executive Council (agenda item 6);
 - Including proposals for new priority areas such as energy and urbanization (agenda item 7);
- (c) Increasing concerns over the climate-health issues and the role of the GFCS in this regard (agenda item 7);
- (d) A call for greater advocacy for the delivery of gender sensitive climate services (agenda item 7);
- (e) The need to get the technical work to focus on the requirements of the developing countries, especially with respect to observations systems, forecasting and communications (agenda items 5 and 7) in support of the GFCS; and
- (f) In-kind contributions to the GFCS Office, and the need to secure funds for the sustainable operations of the GFCS Office (agenda item 8).

4. REVIEW OF THE REPORT OF THE PARTNER ADVISORY COMMITTEE AND PROGRESS ON IMPLEMENTATION OF PARTNERSHIPS (agenda item 4)

4.1 Report of the Partner Advisory Committee (agenda item 4.1)

4.1.1 The Partner Advisory Committee (PAC) held its first meeting in Rome from 27 to 28 October 2014 at the headquarters of the World Food Programme (WFP). The meeting was co-hosted by the WFP and the Food and Agriculture Organization of the United Nations (FAO). The meeting was attended by representatives of the following PAC members: European Commission (EC), FAO, International Federation of Red Cross and Red Crescent Societies (IFRC), the International Union of Geodesy and Geophysics (IUGG), United Nations Institute for Training and Research (UNITAR), the World Business Council for Sustainable Development (WBCSD), the WFP and the World Meteorological Organization (WMO). Also in attendance were partners who have not yet joined the PAC, namely the International Council for Science (ICSU)/Future Earth, the United Nations International Strategy for Disaster Reduction (UNISDR) and the World Health Organization (WHO). The list of participants is provided as [Annex I to the present report](#).

4.1.2 In their introductory statements, Mr Stanlake Samkange, Director, Division of Policy and Innovations, WFP; Dr Paul Munro-Faure, Deputy Director, Climate, Energy and Tenure Division, FAO; and Mr Michael Jarraud, Secretary-General, WMO, stressed the relevance and timeliness of operationalizing climate services, particularly at national level in support of the broader post-2015 development agenda.

4.1.3 The PAC noted the need to engage more partners that are playing a role in the various aspects of climate services such as academia, the private sector and others beyond the UN system. In addition the PAC agreed that it has to ensure that user perspectives are reflected in its work. In this regard the PAC agreed that, in its initial phase, it should invite relevant partners (non-members) to participate and contribute to its work with a view to informing them of the implementation of the GFCS. By so doing, the PAC would open space for effective coordination and leveraging of major initiatives.

4.1.4 The PAC noted that, prior to convening its first meeting, the WMO Secretary-General had established at the technical level a Project Oversight Board (POB) as an informal structure. Its purpose was to contribute to effective ways of cooperation and coordination between the organizations of the UN system and key international agencies that are directly involved in the planning and implementation of GFCS-related activities in alignment with their mandates and priorities and thus advance the application of climate services in the initial four priority areas. The POB was composed of the IFRC, FAO, WFP, the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Development Programme (UNDP), UNISDR, the World Bank (WB), WHO and WMO. The PAC noted that the POB has contributed considerably to the planning and development of GFCS activities, particularly the development of the Implementation Plan of the GFCS that was adopted by the Extraordinary Session of the World Meteorological Congress in October 2012 and subsequently approved by the first session of the Intergovernmental Board on Climate Services (IBCS) in July 2013. It also contributed to the implementation of specific GFCS activities such as the planning of and participation in GFCS national and regional consultations, development of action plans to address priorities identified through the consultations and the design and implementation of flagship activities in Burkina Faso, Belize, Dominica, Niger, Senegal, United Republic of Tanzania and Malawi. The POB met regularly on a monthly basis providing a platform for sharing of information on GFCS-related activities and updates on the overall status of GFCS implementation. The Chairperson of the POB rotated among its members with WMO, WFP and WHO having served as Chairpersons and UNISDR and FAO as Vice-Chairpersons. Now that the PAC was operational, the meeting agreed that the POB should cease to exist. Its coordination, planning and sharing of information roles would be taken by the PAC so as to have a simple and cost-effective structure with greater focus on what needs to be done.

Designation of the Chairperson and Vice-Chairperson

4.1.5 The meeting designated UNITAR as the Chairperson of the PAC and WFP as the Vice-Chairperson, who would serve for a period of one year. As per Annex 1 to Resolution 7 (IBCS-1), the Chairperson and Vice-Chairperson will be the spokespersons of the PAC to the IBCS.

Progress on implementation of the Global Framework for Climate Services

4.1.6 The meeting reviewed progress on the implementation of the GFCS and partner's structures and activities that contribute or are relevant to the GFCS. It also reviewed the outcome of the Meeting on the Implementation Coordination of the GFCS, held from 29 September to 1 October 2014 at the WMO Secretariat in Geneva. The PAC recognized the large volume of investments being made by the various partners in activities related to the development and application of climate services and stressed the need for enhanced cooperation and coordination at global, regional and national levels with a view to enhancing the effectiveness of these investments. In this regard, the PAC called for the replication of the coordination function that it ensures at the global level at the national level through the establishment of frameworks for climate services as the coordination mechanism that would bring together all stakeholders to collectively identify gaps in the development and application of climate services, facilitate coordinated planning and assign roles and responsibilities for addressing priorities in a systematic manner. The PAC recommended that, in order to ensure the sustainability of these frameworks, they should be anchored to existing structures, where applicable. Such structures could be the emerging national climate services frameworks or initiatives being spearheaded by National Meteorological and Hydrological Services (NMHSs), disaster risk reduction platforms, national climate change adaptation committees and other similar structures that bring together stakeholders. In addition, the meeting recommended that the PAC establish effective mechanisms to connect to relevant national and regional coordination mechanisms so as to maximize the effectiveness of their actions.

4.1.7 The PAC noted that to increase effectiveness in the implementation of the GFCS focus should be on implementing projects and activities in an initial set of countries to develop a "Proof of Concept" that would allow lessons to be learnt for the development of guidelines for replication in other countries and regions. This should be guided by the basic needs for climate services at national level with a view to improve the current level of capacities in those countries with limited ability for the effective production and application of climate services, while being mindful of the regional and sub-regional context when considering investments to modernize and strengthen infrastructure such as observing systems for instance. The PAC noted the important role of NMHSs in facilitating and supporting coordination and implementation of climate services at national level.

Role of the Partner Advisory Committee

4.1.8 As a network composed of partners, the PAC needs to demonstrate synergies and how it can help fill current gaps in the production and application of tailored climate services. The PAC should promote more action by the partners under the pillars and priority areas to realize the overall GFCS goals, particularly through support to implementation on the ground. Given the various capacities that exist within each individual partner organization, these should be leveraged to provide support for the provision of services. Engagement of partners is needed to promote more systematic use of information that is currently available and improve production of higher quality services. In this regard, it is critical to understand what each partner can contribute to support the pillars and priority areas of the GFCS. This should be complemented by the identification of critical partners who need to be engaged. The meeting agreed that the roles of the PAC could focus on:

- (a) Advocacy and awareness raising in partners constituencies and beyond to ensure that climate services are part of major agendas, receive support from policy-makers and are effectively applied in support of decision-making. This should also ensure strong involvement of users in climate services development and application;

- (b) Leveraging of initiatives of the partners to optimize benefits and impacts of current and planned activities through improved use of available expertise and technical capabilities of each partner organization, enhanced coordination and more effective application of investments;
- (c) Ensuring effective integration of climate services in partner's plans and budgets and support to more update of climate information in decision-making in the priority areas;
- (d) Supporting the development of guidelines for the development and application of climate services in the priority areas;
- (e) Resources mobilization through identification of funding opportunities, facilitation of integration of major resource needs of the GFCS into broader investments and the establishment of partnerships or consortia for the development of joint bids. The partners for each bid will depend on the nature of the call for proposals.

Modus operandi

4.1.9 The PAC agreed that it should operate with a light and flexible structure. It agreed to meet quarterly with the first meeting planned at the beginning of 2015 (January–February). In setting its agenda, it should be guided by the major goals set by the IBCS and the need for user requirements to feed into investment and plans under the pillars and priority areas of the GFCS. The agenda of the PAC should aim at supporting major policy agendas such as the successor of the Hyogo Framework for Action, Sustainable Development Goals, National Adaptation Plans, etc.

4.1.10 A workplan will be developed with clear deliverables for the PAC. The workplan will support the priorities of the GFCS and the overall goals set by the IBCS and should drive the emphasis of the group in supporting policy and action on the ground. The workplan should include an events calendar to highlight events that could be targeted by the PAC as a group providing a platform for advocacy and engagement.

4.1.11 PAC members will be requested to provide input for the specific agendas of each session ahead of time and, once developed, each agenda will be shared with them for comments. The meetings will be organized along key issues and deliverables with a focus on moving forward.

4.1.12 To facilitate its work, the PAC agreed that a communication strategy is critical. Communication focal points of the various agencies should coordinate action with a view to ensuring common messaging. In particular, the communication strategy should ensure the clear articulation of the benefits of climate services, why they should be provided operationally and how they contribute to current agendas such as the post-2015 frameworks (WCRDD, SDGs, etc.).

Recommendations

4.1.13 Based on its discussions, the PAC made the following recommendations to be included in its report to, and for consideration by, the IBCS:

- (a) There is a need for a mechanism to link the PAC with the Management Committee of the IBCS so as to ensure that the PAC can provide input to the work of the Management Committee and that the PAC can benefit from guidance from the Management Committee;
- (b) The membership of the PAC should be broadened to include those who need to be engaged in the discussions as they relate to the production and application of climate services;
- (c) A meeting of the communications officers/focal points should be organized to address GFCS communication aspects in a more coherent manner.

4.1.14 The IBCS noted the report of the PAC and agreed to discuss the recommendations of the PAC under agenda item 5. In particular, the following points were raised:

- (a) The support to the development of guidelines, standards and recommended practices for the development and application of climate services in the priority areas should be through appropriate intergovernmental mechanisms;
- (b) Support to resource mobilization efforts for the GFCS should be through facilitation of integration of major resource needs of the GFCS into broader investments of partner agencies and identification of funding opportunities to support GFCS activities;
- (c) Any decisions on the membership of the PAC should be in compliance with IBCS resolutions; and
- (d) The outreach and communications efforts of partner agencies should support the communications efforts of the IBCS and its Management Committee in close collaboration with the GFCS Office.

4.2 Stakeholder engagement mechanisms (agenda item 4.2)

4.2.1 The Intergovernmental Board on Climate Services (IBCS) was informed of the development of the institutional context as well as the progress on the GFCS Implementation Plan, particularly with respect to the involvement of partner organizations in ongoing and future GFCS-related projects and activities.

4.2.2 The Board welcomed that the European Organization for the Exploitation of Meteorological Satellites (EUMETSAT), the Food and Agriculture Organization of the United Nations (FAO), the International Union of Geodesy and Geophysics (IUGG), the United Nations Environment Programme (UNEP), the World Business Council for Sustainable Development (WBCSD), the World Food Programme (WFP), the World Meteorological Organization (WMO), the European Commission (EC), the United Nations Institute for Training and Research (UNITAR) and the International Federation of Red Cross and Red Crescent Societies (IFRC) had replied to the call by the Secretary-General to become GFCS Partner and PAC members. There is a general agreement that partner organizations could mostly contribute to the GFCS implementation in line with IBCS resolutions in the following ways:

- (a) Active participation, in providing recommendations in the design, establishment and functioning of the User Interface Platforms, at regional and national levels, as appropriate;
- (b) Active participation in the design and implementation of GFCS-related activities and projects, including where appropriate, joint resource mobilization for projects and activities;
- (c) Nominations of experts to take part in IBCS substructures;
- (d) Provision of their experts to work within other partner organizations bodies and substructures, as may be feasible, with each organization's regulations, rules and agreed practices.

4.2.3 The Board welcomed the involvement of partner organizations in several GFCS ongoing and future projects. Of particular relevance are the GFCS Adaption Projects in Africa (involving, WHO, WFP, IFRC, CGIAR Research Programme on Climate Change Agriculture and Food Security – CCAFS, Centre for International Climate and Environmental Research – Oslo, Chr. Michelsen Institute) with the focus on Malawi and the United Republic of Tanzania intended to provide climate services to support health, nutrition and disaster risk reduction; and the regional and national consultations to facilitate the formulation of action plans to roll out climate services at regional and national levels in support of decision making in the four priority areas of the GFCS.

4.2.4 The Board also noted that to enable involvement of the partner agencies in the implementation of GFCS activities, it is critical that each partner provides details of its contributions to the 2-, 6-, and 10-year deliverables envisaged under the Implementation Plan. A clear identification of activities would enable effective monitoring and evaluation of the implementation of the GFCS. In this respect, the Board welcomed the conclusions of the GFCS Coordination Meeting held from 29 September to 1 October 2014, which stressed the importance of partnerships and coordination involving governments, international and regional organizations, and stakeholders implementing activities that contribute to the overall goals of the GFCS at global, regional, national and local levels. The GFCS was recognized as providing opportunities to link and align initiatives in ways that increase cost-effectiveness, leverage partner investments, respond to user needs, promote exchange of information across sectors, and to more effectively share available technical expertise and climate knowledge.

4.2.5 The Board recognized the active involvement of GFCS partner organizations in the development of regional and national User Interface Platforms as appropriate, within the policies, laws, and regulations of countries to ensure proper interaction between the GFCS partner organizations and the IBCS. In this regard the IBCS invited the Secretary-General to instruct the GFCS Office to inform partner organizations of all regional and national consultations aimed at establishing new or strengthening existing fora to serve as User Interface Platforms.

4.2.6 The Board recognized the benefit of the full involvement of regional and/or sub-regional economic groupings, in understanding the specific societal needs and priorities in order to develop climate services in the GFCS priority areas.

4.2.7 The Board agreed to further discuss the issues raised under the relevant agenda items.

4.3 Partnerships (agenda item 4.3)

4.3.1 The Board noted with satisfaction that to advance implementation of the four initial priority areas of the GFCS, joint offices were established with the Global Water Partnership (GWP) and the World Health Organization (WHO). These offices are located within the Climate and Water Department and the GFCS Office to support implementation of the Water and Health Exemplars.

4.3.2 The Board was informed that Directors and senior staff members of NMHSs represented WMO at the WHO Regional Committees for: Africa (Brazzaville, Republic of the Congo, September 2013); South-East Asia (New Delhi, India, September 2013); Europe (Izmir, Turkey, September 2013); the Western Pacific (Manila, Philippines, October 2013); and the Eastern Mediterranean (Muscat, Oman, October 2013), contributing to the discussion on Climate and Health.

4.3.3 WMO and the United Nations Economic Commission for Africa (UNECA) have recognized the benefits to be derived from increased collaboration, cooperation and interaction in the area of climate science research and applications, addressing user-driven priorities towards climate resilience and sustainable development. The Board welcomed the signature of an MoU between WMO and UNECA.

4.3.4 The Board noted that a Meeting on the Implementation Coordination of the GFCS recognized that effective responses to user-needs for climate services can be addressed through enhanced partnerships and coordinated approaches by governments, international and regional organizations, and stakeholders implementing activities that contribute to enhanced development and application of climate services at national, regional, and local levels. The GFCS provides opportunities to link and align initiatives in ways that increase cost-effectiveness, leverage partner investments, respond to user needs, promote exchange of information across sectors, and to more effectively share available technical expertise and climate knowledge. In particular, the Board expressed the need to encourage partner organizations to increase their contributions to NMHSs, avoiding overlap and supporting the infrastructure and capabilities of NMHSs, to ensure future sustainability of operational climate services.

4.3.5 The IBCS decided to further discuss issues raised under agenda items 5.1 and 7.

5. REVIEW OF PREVIOUS DECISIONS OF THE INTERGOVERNMENTAL BOARD ON CLIMATE SERVICES (agenda item 5)

5.1 Consideration of the Terms of Reference of the Partner Advisory Committee (agenda item 5.1)

5.1.1 The IBCS noted with appreciation the invitations sent by the Secretary-General to potential partners of the GFCS and welcomed that the following partners had submitted requests to become members of the PAC: the European Organization for the Exploitation of Meteorological Satellites (EUMETSAT), the Food and Agriculture Organization of the United Nations (FAO), the International Union of Geodesy and Geophysics (IUGG), the United Nations Environment Programme (UNEP), the World Business Council for Sustainable Development (WBCSD), the World Food Programme (WFP), the World Meteorological Organization (WMO), the European Commission (EC), the United Nations Institute for Training and Research (UNITAR) and the International Federation of Red Cross and Red Crescent Societies (IFRC).

Recommendations of the Management Committee

5.1.2 The Management Committee recommended that the first meeting of PAC be held before IBCS-2. It further recommended that the agenda of the first PAC meeting be developed quite in advance of any proposed date of such a meeting and be sent to the same list of invited organizations to join the PAC as a way to further clarify the role and importance of the PAC for informing and providing advice to the IBCS at its second session.

5.1.3 In view of the functions of the PAC, the Management Committee invited the GFCS Office to include in its quarterly newsletters updates of the GFCS implementation, with a particular emphasis on the involvement and contribution of organizations associated in the various ongoing projects.

5.1.4 The Management Committee also recommended that a draft recommendation be submitted by the Chairperson of the IBCS to IBCS-2 to amend Resolution 7 (IBCS-1, Establishment of a Stakeholder Engagement Mechanism and Participation of GFCS Stakeholders in the Work of the Intergovernmental Board on Climate Services) with a view to enrich the Partner Advisory Committee to accommodate other interaction mechanisms between the IBCS and potential GFCS stakeholders, in particular those with no legal status, as well as to accommodate technical advisory matters.

5.1.5 In view of the recommendations of the Management Committee, the IBCS adopted [Resolution 1 \(IBCS-2\) – Amendment of Annex 1 to Resolution 7 \(IBCS-1\) – Establishment of a stakeholder engagement mechanism and participation of GFCS stakeholders in the work of the Intergovernmental Board on Climate Services](#).

5.2 Establishment of bodies reporting to the Intergovernmental Board on Climate Services: Consideration of the Technical Advisory Committee (agenda item 5.2)

Consideration of technical issues

5.2.1 The Intergovernmental Board on Climate Services (The Board) recognized the need to ensure that the technical expertise of all GFCS partners and stakeholders be captured appropriately for the success of the GFCS Implementation Plan. Noting the recommendation of the IBCS Management Committee which had invited the Secretary-General to develop a structured proposal to be discussed at IBCS-2 on the involvement of partner organizations and WMO technical bodies in the IBCS substructures, the following options were discussed:

- (a) Participation through a Technical Advisory Committee whose Terms of Reference should clarify in particular its functions to avoid overlap with other IBCS governance mechanisms and those of existing partner technical entities;
- (b) Participation in the Partner Advisory Committee, with revised Terms of Reference to accommodate technical advisory matters;
- (c) Participation in technical committees established for specific purposes to address specific technical questions as might be required, as per practice of WMO Technical Commissions. In the latter case, the Board considered the following:
 - (i) When, during its sessions, the IBCS considers that a specific technical question has to be analyzed in depth by relevant experts, it may decide to establish a Working Group (WG) or Expert Team (ET) along with its membership and Terms of Reference and decide whether this WG or ET will report to the IBCS, its Chairperson or its Management Committee for further consideration of its recommendations. Such a WG or ET will have a limited term mandate and its continuation or termination will have to be decided by the IBCS during its next sessions as appropriate;
 - (ii) If the Chairperson of the IBCS is informed via the Management Committee or a set of principal members that a specific technical question has to be analyzed in depth by relevant experts, the Chairperson should consult by correspondence the IBCS principal members on a proposal to establish a Working Group (WG) or Expert Team (ET) along with its membership and Terms of Reference. If a majority of Members agree with the proposal, the Chairperson will establish such a WG or ET on behalf of the IBCS which will report to him/her. Such a WG or ET will have a limited term mandate and its continuation or termination will have to be decided by the IBCS or the MC during its next sessions as appropriate;
 - (iii) In both cases, the Chairperson of the IBCS will consult the IBCS Members and the GFCS partners, and as a matter of priority, the PAC Members, to invite them to designate no more than two experts to be members of such WG or ET, taking into account the recommendations of the IBCS, if any, with respect to the membership.

5.2.2 The Board also recalled the views put forward by its Management Committee with respect to the interaction between the IBCS and the constituent bodies of WMO. In this respect, the Management Committee had noted the need to establish and improve the relationship and interaction between the IBCS and the constituent bodies of WMO, such as the Executive Council and the relevant technical commissions as well as with substructures of partner organizations, and had suggested the following (in the case of WMO):

- (a) *Executive Council:* The IBCS Chairperson, with the Vice-Chairperson as alternate, unless they are EC members themselves, shall be invited to inform the WMO EC at its sessions, on progress and requirements and needs of the IBCS. The IBCS Chairpersons shall extend an invitation to the Executive Council of WMO to designate a representative to attend IBCS sessions as well as the Management Committee sessions;
- (b) *Regional Associations:* Regional associations shall invite the IBCS to their sessions, to inform the Associations on progress and requirements and needs of the IBCS for that specific Region as appropriate. The IBCS shall delegate the responsibility to a member of its Management Committee from that Region or to the Chairperson or Vice-Chairperson/co-Vice-Chairpersons as appropriate;
- (c) *Technical Commissions:* Technical commissions shall invite the IBCS to their sessions, to inform the Commissions on progress and requirements and needs of the IBCS as appropriate. The IBCS shall delegate the responsibility to a member of its Management

Committee or to the Chairperson or Vice-Chairperson/co-Vice-Chairpersons as appropriate. The Chairperson of the IBCS shall invite the presidents of the WMO Technical Commissions, as deemed appropriate, to attend the IBCS as well as the Management Committee sessions;

- (d) *Relevant WMO Commissions and Programmes*: Relevant WMO Commissions and Programmes should, if they have not done so, identify a GFCS Liaison, as the Commission for Climatology has already done. These individuals can report through the technical commission management groups on ways to better align technical commission operating plans with GFCS activities and, conversely, inform IBCS of relevant technical commission activities that support the GFCS;
- (e) *WMO*: WMO should reach out to these technical commissions, as needed, for input into PAC activities. WMO should also submit relevant activities as GFCS contributions via the existing process(es) established for other members and partners.

5.2.3 These mechanisms should be evaluated for their effectiveness at the next IBCS session and modified as needed. If effective, they could be used as a model for other GFCS partner agencies or members of the Partner Advisory Committee to ensure that their full technical capability is accessible to IBCS.

5.2.4 The Board discussed the three options provided for means through which GFCS Partners and Stakeholders with technical capability could play a role in relevant GFCS-related discussions and decisions and agreed that a further option was preferable which is an extension of option (c). This option also provides an opportunity to implement the GFCS in an effective and open manner and thus assist those Members who cannot provide the full range of the required climate services, especially the 70 countries identified as not reaching the minimum level of ability to provide climate services.

5.2.5 The agreed option is therefore to ensure that technical expertise of IBCS partners, including but not limited to WMO, is engaged appropriately for the successful implementation of the GFCS, by:

- (a) Adopting the process as outlined in option (c) above;
- (b) Using a combination of existing mechanisms and targeted groups;
- (c) Developing targeted groups for specific topics; and
- (d) Requesting the Management Committee, with advice from the Partner Advisory Committee, to consider in their workplan a section on addressing technical expertise needed at the national level, especially to address the needs of the least developed and developing countries.

5.2.6 The Board requested its Chairperson to inform the World Meteorological Congress on how the IBCS, or its Management Committee in the intersessional period, will be organized concerning technical matters. The information provided should also include an analysis on better linkages with WMO constituent bodies, to ensure a robust two-way interaction and avoid duplication of efforts.

5.3 Consideration of the Terms of Reference of the Management Committee of the Intergovernmental Board on Climate Services (agenda item 5.3)

5.3.1 The IBCS reflected on its decisions pertaining to the important role that **the** Partner Advisory Committee (PAC) should play in supporting the GFCS objectives and Implementation Plan. In particular, the IBCS recognized the need to strengthen the interface and linkages between its Management Committee and the PAC.

5.3.2 In view of the above, the IBCS adopted [Resolution 2 \(IBCS-2\) – Amendment of the annex to Resolution 1 \(IBCS-1\) – Establishment of the Management Committee of the Intergovernmental Board on Climate Services](#).

6. REVIEW OF IMPLEMENTATION OF THE GLOBAL FRAMEWORK FOR CLIMATE SERVICES (agenda item 6)

6.1 Projects and activities (agenda item 6.1)

6.1.1 The Intergovernmental Board on Climate Services (IBCS) recalled that the Management Committee of the IBCS at its first meeting on 15 and 17 June 2014 (Geneva) had requested that IBCS reports to the Seventeenth World Meteorological Congress should reflect the status of the implementation of the GFCS relative to the deliverables and targets, along the 2-, 6-, and 10 years' time frames, as they were decided by Congress. In this regard, this report is presented in a way to show the efforts undertaken towards achieving the milestones for the first two years, as indicated in the Implementation Plan (items listed in the Implementation Plan (IP) under 4.3.1).

Implement the agreed governance structure of the Framework, including establishing a secretariat in support thereof

6.1.2 The IBCS recalled that at its first session (IBCS-1), held from 1 to 5 July 2013 in Geneva it had approved the Implementation Plan of the GFCS; the establishment of the Management Committee of the IBCS; had established a stakeholder mechanism formalizing the Partners Advisory Committee (PAC) and elected the Chairperson and co-Vice-Chairpersons of IBCS. With these decisions the GFCS had transitioned into a full implementation phase.

6.1.3 The IBCS noted that for the operationalization of the PAC the partner agencies were requested by the WMO Secretary-General to join the PAC. To date, the following partners had submitted their membership forms for the PAC: the European Organization for the Exploitation of Meteorological Satellites (EUMETSAT), the European Commission (EC), the Food and Agriculture Organization of the United Nations (FAO), the International Federation of Red Cross and Red Crescent Societies (IFRC), the International Union of Geodesy and Geophysics (IUGG), the United Nations Institute for Training and Research (UNITAR), the United Nations Environment Programme (UNEP), the World Business Council for Sustainable Development (WBCSD), the World Food Programme (WFP), and the World Meteorological Organization (WMO).

6.1.4 The IBCS welcomed the efforts of the WMO Secretary-General in establishing, at the technical level, a Project Oversight Board (POB) as an informal structure to contribute to effective ways of cooperation and coordination between the organizations of the UN system and key international agencies that are directly involved in the planning and implementation of GFCS-related activities in alignment with their mandates and priorities to advance the application of climate services in the initial four priority areas. The POB was composed of the IFRC, FAO, WFP, the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Development Programme (UNDP), the United Nations International Strategy for Disaster Reduction (UNISDR), the World Bank (WB), the World Health Organization (WHO) and WMO. The POB has contributed considerably to the planning and development of the GFCS activities. It met regularly on a monthly basis providing a platform for sharing of information on GFCS-related activities and updates on the overall status of GFCS implementation. The chairperson of the POB rotated among its members with WFP being the last chairperson.

6.1.5 The IBCS also welcomed the initiative of the WMO Secretary-General in establishing at management level an Interagency Coordination Group (ICG) as an informal mechanism to ensure engagement and ownership of the key partners involved in the GFCS initiative across UN bodies and organizations. The ICG involves so far only UN agencies namely: FAO, WFP, UNESCO, UNDP, UNISDR, WB, WHO and WMO.

6.1.6 The IBCS noted that a joint WHO/WMO office for climate and health was established in May 2014 on an interim 2-year basis to ensure the successful implementation of GFCS activities within the priority sector of health. This office leads the coordination of health implementation within the GFCS; provides coordination and technical support to WHO climate-related programming and research; and will propose to the Seventeenth WMO Congress in 2015 the necessary structure and mechanism for WMO to sustainably support the health sector, and accelerate the demand for and use of climate services for health. To help further identify the specific needs of the health sector for weather and climate services, the IBCS was informed that the joint office had established two coordination mechanisms. The first group consists of multiple WHO headquarters departments who actively use climate and weather information; the second, an ad hoc expert group of government, academic, and multilateral partners who are thought leaders in climate and health. Similarly a joint office was established with the Global Water Partnership (GWP) to support flood and drought management programmes as contributions to the GFCS. The GWP seconded an expert to WMO to manage the office.

6.1.7 The Board noted with appreciation that the Management Committee, at its first session (June 2014), had reviewed the principles and criteria for funding of projects and activities through the GFCS Trust Fund and developed Criteria for Projects to be designated as GFCS projects or contributing projects (Annex II to paragraph 4.3.2 of the general summary of the report of the first session of the Management Committee of the Intergovernmental Board on Climate Services (WMO-No. 1144)). The Board approved the updated principles and criteria for funding of projects and activities as contained in [Annex II to the present report](#).

Initiate a reporting structure that enables national, regional and global entities to report on their efforts to meet near-term targets and address gaps in current climate services capabilities

6.1.8 The IBCS noted with appreciation that the WMO Secretary-General had invited Members and Partners to designate their projects and activities to be recognized as contributing to the GFCS should they comply with a set of criteria as approved by the meeting of the Management Committee in June. The IBCS was pleased to note that a web-based platform had been developed that would allow Members and Partners to designate activities. To access the platform, Members and Partners were requested to nominate a focal point who would receive the credentials to upload the information on the platform. So far 36 focal points were designated by Members and Partners. These focal points are providing data that will be used to build a database of projects that will be displayed on the GFCS website.

6.1.9 The Board expressed its concern at the low number of focal points designated and urged Members and Partners to nominate focal points.

Design and implement a set of projects that demonstrate the value of climate services, primarily in climate vulnerable developing countries, to ensure sustained and expanding interest on the part of the donors

Project 1 (IP): Establish frameworks for climate services at national level in developing countries

6.1.10 The IBCS noted with appreciation that, to facilitate the establishment of frameworks for climate services at national level as flagships, activities were initiated in 2012 in Burkina Faso, Chad, Mali and Niger through the organization of national consultations. In these countries, following the consultations the GFCS Office is facilitating the development of action plans to address the gaps and needs identified at the national consultations. Partners such as the World Bank and the UNDP have been engaged in the development of the actions plans, which have been used to inform their investments in these countries. Linkages were also established with the UN Framework Convention on Climate Change (UNFCCC) to consider the integration of these Action Plans into National Adaptation Plans (NAPs) that are currently being developed by several countries around the world. In addition, using a facility provided by the Norwegian Refugee Council through its Norwegian Capacity Programme (NORCAP), the GFCS has deployed a regional

coordinator in the Office of the FAO in Dakar (Senegal) to support these countries with implementation of the GFCS.

6.1.11 The IBCS also noted that the GFCS Office had been supporting and facilitating national consultations around the world to identify gaps and priorities as well as to establish the internal coordination mechanisms needed to ensure effective implementation of the Framework at the national level. National consultations were held in Belize, Dominica, Malawi, Senegal, South Africa, and United Republic of Tanzania in addition to the ones underway as flagship activities in Burkina Faso, Chad, Mali and Niger. Plans are underway for conducting similar consultations in Tonga, Kiribati, Papua New Guinea, Suriname, and Maldives, among others (see <http://gfcs.wmo.int/events>). The outcomes of these consultations are being used to develop guidelines that will help Members in establishing Frameworks at the national level. In addition, regional consultations were organized in Thailand for the Least Developed Countries in Asia, in Trinidad and Tobago for the Caribbean, in Cook Islands for Pacific Small Island Developing States, and in Costa Rica for Latin America. Additional consultations are planned for South Eastern Europe and North Africa and Middle East (dates to be decided). These consultations are facilitating identification of regional priorities which are essential for the expansion or update of the projects contained in the compendium of initial GFCS projects and activities to ensure that the compendium responds to the evolving needs of Members for projects at the regional and national levels.

6.1.12 A number of countries are making progress in implementing frameworks for climate services at national level. These countries are building on their experiences in providing weather forecasts to provide seamless weather and climate information products and services. Engagement of users has been a key characteristic in these countries for the provision of tailored climate services. Examples of countries where national frameworks have been developed include China, Germany, Switzerland, and Nigeria. Belize, Samoa and South Africa have initiated the establishment of their national frameworks with the support of the GFCS.

6.1.13 A new partnership for strengthening weather and climate services in Small Island Developing States (SIDS), in the Caribbean, South Pacific, Indian Ocean and other regions, was launched at the Third International Conference on SIDS. The new partnership will reinforce the capacity of SIDS to cope with weather-, climate-, and water-related extreme events. It will strengthen preparedness and multi-hazard early warning systems, and improve access to timely and user-friendly weather and climate information. By integrating weather and climate information into the decision-making process, it will also contribute to sustainable development and climate adaptation. The partnership will seek to do this in a systematic manner, rather than through a series of stand-alone projects. It focuses on agriculture and food security, disaster risk reduction, health, and water resource management. The expected results include:

- (a) Improved delivery of weather and climate information services in support of national, regional and international stakeholders;
- (b) Enhanced human and technical capacities at Regional Climate Centres and National Meteorological and Hydrological Services;
- (c) An increased range of products and services delivered to stakeholders;
- (d) Expansion of the infrastructure needed for weather and climate research and services.

6.1.14 The IBCS noted that regional and national GFCS consultation processes have been supported and benefited from active participation of partner agencies such as FAO, IFRC, UNISDR, WFP, WHO, UNESCO, and various regional and national organizations. In August 2014, a National GFCS Consultation in Dominica was hosted by the Ministry of Health and the Pan American Health Organization PAHO/WHO. This represented the first GFCS consultation to be initiated and led by a user-sector, in this case, the Health Sector. This dialogue identified the need to conduct a baseline study on the impacts of climate and weather on the health sector, and take steps to develop an integrated database, as the foundation for future programmatic and policy related activities.

6.1.15 The IBCS noted the implementation of the “*Climate Services Adaptation Programme in Africa*” a partnership aimed at co-designing and co-producing climate services involving WMO and partner agencies. This first multi-agency initiative implemented under the GFCS with funding from Norway (10 million USD) was launched in October 2013. The programme will build capacities of producers and users of climate information and products to develop and apply information and knowledge to support decision-making in the priority areas of agriculture and food security, health and disaster risk reduction with Malawi and United Republic of Tanzania as the two focus countries. Consultation meetings to define national structures for the management and implementation of the programme were held in the United Republic of Tanzania (7–9 May 2014) and in Malawi (9– 11 June 2014). The project hinges on multi-agency collaboration involving the following agencies:

- (a) CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS);
- (b) Centre for International Climate and Environmental Research – Norway;
- (c) Chr. Michelsen Institute – Norway;
- (d) IFRC including Norwegian Red Cross and Red Cross/Red Crescent Climate Centre;
- (e) WFP;
- (f) WHO;
- (g) WMO.

6.1.16 The IBCS noted that WFP and WHO and IFRC Country offices in Malawi and the United Republic of Tanzania are supporting the relevant ministries and institutions to establish management and action plans that will build capacity, integrate climate services into decision-making, and pilot test climate services to understand the linkages of climate with food security, health and disaster risk reduction. These activities are actively coordinated with the national GFCS project development team.

Project 2 (IP): Strengthening capacity for disaster risk reduction and early warnings

6.1.17 The IBCS noted with satisfaction that the “*Climate Services Adaptation Programme in Africa*” under implementation in Malawi and the United Republic of Tanzania has as one of its key objectives the improvement of disaster risk reduction through building technical capacity for effective development and communication of early warnings. The project will contribute to building the capacity for the production of early warning information and its application for disaster risk reduction.

6.1.18 The IBCS noted with appreciation that the World Bank Group (WBG) is increasing its investments in strengthening climate, weather and hydrologic services in low and middle income countries, with a current global portfolio of over US\$ 500 million in related modernization projects. WBG invests through a combination of mechanisms including the International Bank for Reconstruction and Development (IBRD, for middle-income countries), the International Development Association (IDA, for low-income countries), Climate Investment Funds (particularly the Pilot Programme for Climate Resilience - PPCR), the Global Environment Facility (GEF) and trust funds such as the Global Facility for Disaster Reduction and Recovery (GFDRR). The GFDRR serves as a global service centre to support the majority of these projects, and is also the WBG's focal point for engagement with the GFCS and WMO. Through these investments, capacities for disaster risk reduction and early warning system are being developed in a number of countries (see WB relevant projects reported at the Meeting on the Implementation Coordination of the GFCS available at: <http://www.gfcs-climate.org/node/573>).

6.1.19 The IBCS was pleased to note that the WBG climate, weather and hydrologic service modernization projects are informed by the GFCS priorities and needs, contribute to its goals, and are aligned with the activities of GFCS partners. Investments focus on the activities needed to strengthen service delivery, emphasizing the strengthening of relationships between information providers and users, and building capacity to both, produce and use climate, weather and hydrologic information for decision-making across time-scales. As an example, in Africa the WBG, together with the African Development Bank and WMO, is exploring a regional framework programme for strengthening hydrometeorological services. GFCS is participating in the development of this initiative, both through coordination meetings and participation in preparation missions. The WBG, through GFDRR, also continues to engage in the GFCS Project Oversight Board (POB).

6.1.20 The IBCS further noted with appreciation that an IFRC and WMO joint initiative relating to GFCS entitled “Early Warning Early Action (EWEA) - Reducing the impact of weather-related disasters for people” is being planned in the Lake Victoria region. This project is currently being developed to be implemented in the Lake Victoria basin and is expected to strengthen EWEA mechanisms and enhance climate sensitive disease control at the community level through better use of weather information.

6.1.21 The IBCS also noted that the “Early Warning Early Action in East Africa” project contributed to disaster risk reduction and early warning. It is a research project led by the IFRC, in partnership with Oxfam, Save the Children, FAO and WFP. The initiative aims to develop mechanisms for rapid decision-making for drought preparedness and response in arid and semi-arid lands of Ethiopia, Kenya and Uganda, and in the East Africa Region.

6.1.22 The IBCS noted work currently being undertaken in the Caribbean by the CIMH with funding from the US Higher Education Development programme and the IRI programme at Columbia University to develop a Caribbean Climate Impacts Database. The database will record impacts data from climate sensitive sectors in the region and will support climate-based damage and loss analyses, risk forecasting and risk reduction activities in the region. The British Caribbean Territories informed the IBCS that the Caribbean region had received funding under EDF 10 from the European Commission to support a range of DRR activities and that the CIMH intended to apply for some of these funds to extend DRR activities under the GFCS.

6.1.23 The IBCS was informed of WHO plans to publish a collection of global case studies for Climate Services for Health; guidance on Heat Health Early Warning Systems; Principles and Practices of Health Early Warning Systems, along with a series of technical fact sheets.

6.1.24 The IBCS was also informed of the support of Canada to Haiti (6.5 million CAD) that will provide essential support to re-establish weather, climate and hydrology forecasting activities in Haiti under the coordination and management of WMO.

6.1.25 The IBCS recalled with appreciation the achievements under the Norwegian funded programme “*GFCS – Adaptation and DRR in Africa*”, which is currently in its 3rd year and will end in 2015. It recalled that the programme is divided into two separate but interlinked overarching modules: Strategy Development - supporting the GFCS Secretariat and the African Ministerial Conference on Meteorology (AMCOMET); Technical Capacity and Service Delivery, which aims at increasing the National Hydrological and Meteorological Services (NMHS) human and technical capacities in providing timely and accurate severe weather forecasts. The subcomponents of the second module include support for Data Rescue, Fellowships, the Severe Weather Forecast Demonstration Project, Public Weather Service and Meteorological Services for Agriculture. The IBCS noted with appreciation the establishment of a joint WMO/WHO Climate & Health office in the GFCS Secretariat in 2014, as a key development under this programme.

6.1.26 The IBCS noted the work towards the development of the concept of a Seamless Weather and Climate Watch for operational monitoring and forecasting of extreme meteorological events, and the plans for the demonstration of its effectiveness in Eastern Africa, by developing synergies with and taking the advantage of the well-established Severe Weather Forecasting

Demonstration Project (SWFDP) that is being implemented in that geographical region. The IBCS agreed that such “seamless” service would match with the user needs, and therefore would provide a major contribution to both the Climate Services Information System (CSIS) and the User Interface Platform (UIP) of GFCS, as well as the Capacity Development Pillar and the DRR Exemplar. Following the demonstration, the IBCS encouraged the implementation of such “seamless” service for Members in all Regions, as needed.

6.1.27 The IBCS noted with appreciation that the WMO Disaster Risk Reduction (DRR) Work Plan is significantly contributing to the implementation of the GFCS. Specifically, the: (i) holistic national DRR and climate adaptation capacity development projects with regional cooperation frameworks in Southeast Europe (to be completed in October 2014), the Caribbean (completed), and Southeast Asia (to be developed); and (ii) the national Costa Rica Early Warning System Project funded by the World Bank (completed in December 2013) strongly relate to several projects of the GFCS Implementation Plan, such as IP-2, UIP-3, CD-4, and DRR-1. These projects are designed to demonstrate the benefits of leveraging WMO Programmes, constituent bodies, global operational network, and partners to address capacity development needs of NMHSs and demonstrate the benefits of the crosscutting DRR framework.

Project 3 (IP): Improving communications between the climate and agriculture and food security communities

6.1.28 The IBCS was informed that a pilot on National Climate Outlook Forum (NCOF) for Mozambique was kick-started with a meeting in March 2014 in Maputo. The meeting provided an opportunity to identify specific user needs that could benefit from the use of climate services through a participatory process. It also agreed on user interface mechanisms to strengthen the interaction of the NMHSs and users to ensure feedback and improvement of service provision. Similarly a NCOF was performed in Belize.

6.1.29 The IBCS noted that the METAGRI and METAGRI OPS projects, funded mainly by Spain and Norway, have trained more than 12,000 farmers in 17 Western Africa countries in the use of climate and weather information for decision-making at final user level. The project METAGRI has been implemented in Mauritania, Senegal, Cabo Verde, Gambia, Mali, Niger, Burkina Faso, Guinea Bissau, Guinea, Ghana, Côte d'Ivoire, Benin, Togo and Nigeria. In addition the METAGRI OPS is also being implemented in Liberia, Chad and Sierra Leone. Roving Seminars have created a practical link between experts in climate and farmers, shepherds and fishermen bridging the gap between them. The use of mobile phone and local radio messages as communication tools and simple plastic rain gauges to measure precipitation and to provide information for decision-making such as the right seeding time and crop variety selection showed a practical example of simple and cost effective User Interface Platform elements. The IBCS encouraged the continuation of the development of those practices in Western Africa and to expand or increase them into other African regions and other continents. The IBCS also expressed the need to strengthen capacity building on the use and application of technical tools as remote sensing products, crop modelling and Geographical Information Systems (GIS) to support agricultural climate services.

Project 4 (IP): Partnering climate services and water resources management

6.1.30 The IBCS noted that the Associated Programme on Flood Management (APFM) is a joint initiative of the World Meteorological Organization (WMO) and the Global Water Partnership (GWP) and it contributes to GFCS. Whilst it was founded in 2001 with the objective to promote the concept of Integrated Flood Management (IFM) as an alternative approach in dealing and living with floods, it has, since the establishment of the GFCS, incorporated an additional emphasis on climate services related to floodplain management. To this end, it facilitates dialogue and provides governmental agencies (in particular National Meteorological and Hydrological Services) with multi-disciplinary guidance on flood management for the implementation of IFM national strategies. The IBCS further noted that APFM activities include the provision of guidance on flood management policy, strategy, and institutional development for countries that want to adopt the IFM concept. Users have the possibility either to request custom-made technical support through

the Get Help function or to find flood management solutions by themselves using the literature in the Help Yourself section.

6.1.31 The IBCS noted with appreciation that over its period of activity APFM has implemented various field demonstration projects, developing strategies for flood management either at the national level (e.g. Kenya, Zambia, and Thailand) or at the local scale (e.g. India, Bangladesh) through community-based flood management approaches. Funding has been provided by the Swiss Federal Office for Environment and USAID, with in-kind contributions from Germany and Italy.

6.1.32 The IBCS was informed that based on the APFM experience in service delivery, during the High-Level Meeting on National Drought Policies in March 2013 WMO and GWP launched the Integrated Drought Management Programme (IDMP). The scope of the Programme is to contribute to national efforts for poverty alleviation in drought-affected regions of the world through an integrated approach to drought management cutting across sectoral, disciplinary, and institutional jurisdictions. IDMP is currently working on the set up of a HelpDesk on Drought Management, while in the meantime various projects have been launched at the regional level through the GWP network (e.g. the IDMP Central and Eastern Europe, the IDMP West African and the IDMP Horn of Africa), or in support to National Meteorological or Hydrological Services for the development of national strategies through the WMO network (e.g. in Mexico, supporting the CONAGUA PRONACOSE – national programme against droughts; or in Turkey, supporting the establishment of a national drought policy and providing international expertise). Funding has been provided by Canada and the Danish International Development Agency (DANIDA), with in-kind contributions from WMO and GWP.

Project 5 (IP): Developing National Climate and Health working groups

6.1.33 The IBCS noted that WMO had assisted Madagascar to form a National Climate and Health Working Group (NCHWG) engaging the Meteorological Service of Madagascar (DGM) and the Ministry of Health. Activities had also been initiated to form a similar Working Group in the United Republic of Tanzania. The main aim of the Working Groups is to provide national institutional mechanisms for collaboration between climate and health actors and to develop capacity for health and climate institutions to collaborate more effectively in the delivery of climate and health services. The IBCS further noted that through the same project in which WMO collaborated with the International Research Institute for Climate and Society (IRI), several objectives had been met in Madagascar and the United Republic of Tanzania including: the installation of IRI Data Library and development of Map rooms; training of staff of the Meteorological Services of both countries; and holding of a workshop for stakeholders to introduce new climate and health products and services to the public. The IBCS agreed that this was a good contribution to the User Interface Platform (UIP) of GFCS and encouraged continued implementation of similar projects for Members in all Regions, as needed.

Project 6 (IP): Improving decision-making processes concerning climate-related risks

6.1.34 The IBCS emphasized that improved climate information is an incentive to mainstream and adopt new methods or concepts. A “Weather index-based financing scheme” was piloted by the German Red Cross and the Red Cross and Red Crescent (RCRC) Climate Centre in Uganda and Togo. This initiative aims to bridge the funding gap between disaster response and long-term disaster risk reduction and adaptation taking into account that response to disasters has been the mode of operation of various agencies. Practical science-based methodologies have been developed that help identify which early actions should be triggered by which forecasts.

6.1.35 The IBCS noted that the partnership between IFRC, RCRC Climate Centre and IRI to analyse and jointly provide guidance for use of weather and climate information by practitioners of Disaster Management/Disaster Risk Reduction and other sectors within and outside of the RCRC Movement has contributed to enhancing decision-making.

6.1.36 The IBCS was pleased to learn that the Red Cross Global Disaster Preparedness Centre and the RCRC Climate Centre have initiated a research partnership to catalogue and analyse the costs and benefits of early actions that could be taken based on forecasts at different timescales in ten countries, namely Guatemala, Kenya, Philippines, India, Mali, Ethiopia, United States, Netherlands, Argentina and Uganda. The results will feed into forecast-based financing and impact analyses of disaster risk reduction investments.

Project 7 (IP): Strengthening regional systems for providing climate services

6.1.37 The IBCS noted that the organization of regional consultations is facilitating the identification of priorities for GFCS implementation at regional level.

6.1.38 The IBCS recalled that the three pronged approach hinged on a cascading process from global to regional to national levels in support of provision of climate services. The regional component is ensured by the operationalization of Regional Climate Centres (RCCs). Currently a number of candidate centres have started a demonstration phase to demonstrate their abilities to perform the mandatory functions of a RCC. The meeting was pleased to learn that the African Centre for Meteorological Applications for Development (ACMAD) had been considered by the Commission of Climatology as being able to perform as a RCC.

6.1.39 The IBCS noted that Canada is providing support through the Programme for Implementing the GFCS at Regional and National Scales that includes support to strengthening RCCs and organization of Regional Climate Outlook Fora (6.2 million USD). The programme also supports the development of capacities of Small Island Developing States (SIDs) in the Indian Ocean, Caribbean and Pacific regions, as well as central and south-east Asia and Polar Regions.

6.1.40 The IBCS was informed of the support of the United States Government to the Caribbean region through the Caribbean Institute for Meteorology and Hydrology (CIMH) and WMO. In particular, the United States has provided more than USD 5 million to: (i) support the establishment and initial operation of the WMO RCC for the Caribbean SIDs; (ii) strengthen the CIMH to improve its delivery of training services; (iii) strengthen regional and international participation in the Caribbean Climate Outlook Forum; and (iv) support the establishment of the Caribbean Centre for Climate and Environmental Simulations. In addition, the British Caribbean Territories informed the IBCS that the CIMH will utilize funding under the Strategic Programme for Climate Resilience (SPCR) component of the Pilot Programme for Climate Resilience (PPCR) for the Caribbean to support a range of GFCS-related activities including strengthening of the NMHSs in the Caribbean region to enable them to develop and deliver climate services and products for national stakeholders.

6.1.41 The IBCS noted with appreciation that building from the Climate Services Adaptation Programme in Africa a joint programmatic approach is being pursued with FAO for the Sahel. A comprehensive programme to implement the GFCS in the Sahel with the involvement of other UN agencies with regional and national components is being developed. The IBCS was informed that this programme will be facilitated by a GFCS regional coordinator for the Sahel deployed to the FAO Office in Dakar (Senegal) through a partnership with the Norwegian Refugee Council. The coordinator will provide system-wide substantive leadership to effectively coordinate the mainstreaming and use of climate services in different sectors and will provide high-level policy and technical advice on using climate services to the countries in the Sahel.

6.1.42 The IBCS noted that the Commission for Basic Systems (CBS) and the Commission for Climatology (CCI) have been collaborating in the implementation of a number of projects related to developing a Climate Services Information System (CSIS), in particular: (1) strengthening existing and establishing new Regional Climate Centres (RCCs); (2) establishing and coordinating operational support for frameworks for climate services; (3) strengthening cooperation and enhanced exchange of data, methods and tools between GPCs and RCCs, and ways to improve operational practice in long-range forecasting, including in support of NMHSs and RCOFs; (4) standardizing and promoting the use of operational CSIS products; (5) developing and

producing the Global Seasonal Climate Update (GSCU); and (6) capacity development, including training on the use of operational climate prediction products. The IBCS agreed that these projects are good contributions to the CSIS of GFCS and the Capacity Development Pillar, and encouraged continued implementation of such projects for Members in all Regions, as needed.

6.1.43 The Board took note of the organization of a regional workshop on the proposed establishment of a Regional Climate Centre of Central Africa, in N'Djamena (Chad) from 22 to 24 October 2014. Organized by the Economic Community of Central African States (ECCAS) in collaboration with the Economic and Monetary Community of Central Africa (CEMAC) and the Government of the Republic of Chad, the workshop helped to review and adopt the feasibility study for the proposed establishment of the Regional Climate Centre for Central Africa, to develop a roadmap for the implementation of this centre, together with relevant recommendations addressed to the next meeting of Ministers of Central Africa in charge of Meteorology for the adoption of this project.

Project 8 (IP): Large-scale data recovery and digitization

6.1.44 The IBCS noted the organization of an International Workshop on the Recovery and Digitization of Climate Heritage in the Indian Ocean Rim Countries and Islands, in Maputo, Mozambique in April 2014. The workshop developed an implementation plan for an Indian Ocean Data Rescue Initiative (INDARE) that will accelerate identification of data that need to be rescued and digitized, including historical records that are not held in the participating countries. As a follow-up to the meeting, the Steering Committee for the INDARE initiative met in Geneva from 29 September to 1 October and finalized its Implementation Plan and also approved the Work Plan for 2014–2015. At this meeting, Kenya was elected the Chairperson and India as the co-Chairperson to steer the process during this period. The IBCS noted with appreciation that WMO had developed a template to assist Member countries submit project proposals on Data Rescue for potential funding.

6.1.45 The IBCS welcomed the support of Australia to Small Island Developing Countries in the Pacific in establishing climate database management systems and efforts for the rescue of data under risk of degradation or loss given the poor state in which the data are kept. Despite these efforts additional support is needed to accelerate data rescue.

6.1.46 The IBCS further emphasized the need for undertaking this activity with the required synergy and sustainability keeping in view the need for such activities to be based on internationally agreed standards and best practices. It agreed that WMO should continue playing its leadership role in coordinating and guiding the international efforts in data rescue and the implementation of related Climate Data Management Systems and analysis tools.

6.1.47 The IBCS noted that WMO EC-64 had established a Task Team on WMO Policy for International Exchange of Climate Data and Products to support the Implementation of the GFCS. The Task Team had developed a draft resolution on the WMO Policy for International Exchange of Climate Data and Products to Support the implementation of the GFCS for consideration by Cg-17. The resolution reiterates and complements Resolution 40 (Cg-XII) – *WMO Policy and Practice for the Exchange of Meteorological and Related Data and Products Including Guidelines on the Relationships in Commercial Meteorological Activities* and Resolution 25 (Cg-XIII) – *Exchange of Hydrological Data and Products*. It proposes the application of the policy and practices from these resolutions and identifies a set of data and products that should be exchanged in a free and unrestricted manner.

Other activities

6.1.48 The IBCS recognized that one of the long-term objectives for the Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM) Strategy (2012–2017) refers to: “ the coordination of the development, enhancement and delivery of climate services related to the marine atmosphere and coastal and deep oceans, based on the core competencies within the Commission in marine meteorology and oceanography, as a contribution by JCOMM to the Global

Framework for Climate Services (GFCS)". Therefore, IBCS was informed that JCOMM will consider the inclusion of ocean-related activities to the GFCS implementation.

6.1.49 The IBCS noted the support made by Finland to several countries in support of the GFCS in all for around 8 million Euro.

6.1.50 The IBCS noted that given the role of energy in contributing to development, and the demand for climate services from the energy sector, WMO had convened an ad hoc group of experts on 13 June 2014 to scope out an Energy Exemplar. Since then a draft has been developed by the expert group. The Exemplar explains how improved climate services can benefit the Energy Sector. It illustrates a vision as to how the development and application of targeted climate products and services through the GFCS can help improve efficiency and reduce risk associated with hydrometeorological hazards of energy systems.

6.1.51 The IBCS noted the efforts to advance implementation of the research component of the GFCS Implementation Plan with the development of the Climate Research for Development Agenda for Africa (CR4D) following the Africa Climate Conference 2013 (October 2013) and the ongoing efforts for the development of the regional climate research priorities for Latin America and the Caribbean, following the WCRP Conference for Latin America and the Caribbean (17–21 March 2014).

6.1.52 The IBCS took note of relevant data aspects accommodated in the GFCS Implementation Plan Annex 'Observing and Monitoring component'. The Board recalled the overall importance of these aspects, including but not limited to implementation of WMO Integrated Global Observing System (WIGOS), implementation of WMO Information System (WIS), implementation of Global Climate Observing System (GCOS), data rescue, data management, quality control and assurance, data homogenization, data analysis as integral part of a modern climate data management, which links observations and monitoring to climate products and services.

6.1.53 The IBCS noted the importance of liaising closely with space agencies on dedicated space-based observations for climate, in particular through the Committee on Earth Observation Satellites (CEOS), the Coordination Group for Meteorological Satellites (CGMS) and their Joint CEOS/CGMS Working Group on Climate, the WMO Space Programme and the development of the architecture for climate monitoring from space, as a key component of WIGOS. A first element of developing an end-to-end system is an Essential Climate Variables (ECV) inventory, which provides information on the physical representation of the Architecture. The IBCS requested the WIGOS and GCOS to remain engaged actively in the next stages of development and implementation of the architecture.

6.1.54 The IBCS noted with appreciation the hosting of the EUMETSAT 11th Users Forum in Africa in Benoni, Johannesburg, South Africa from 7 to 12 September 2014. The meeting resulted in the signing of the Benoni Statement which affirmed the support of RA I for the GFCS, the Integrated African Strategy on Meteorology (weather and climate) and the Addis Ababa declaration, and called for financial support for the GFCS-Africa-Caribbean and Pacific (ACP) programme within the EDF 11th European Development Fund framework programme.

6.1.55 The IBCS was pleased to note that at this stage of implementation, WIGOS is ready to fully support and contribute to the implementation of the GFCS. It also noted the request of the sixty-sixth session of the WMO Executive Council that better understanding and more concrete specification of the WIGOS role to the Observation and Monitoring Pillar, and contribution from ICG-WIGOS is needed from the GFCS community.

6.1.56 The IBCS agreed on the need to integrate observations supporting a broad range of application areas from a large and heterogeneous variety of sources, both NMHS and non-NMHS owned, into the WIGOS framework and on the importance of the free and unrestricted exchange of such observations. It agreed that addressing these issues is critical for the success of WIGOS as one of the key WMO priorities serving the GFCS, and consequently for the effective and successful implementation of GFCS.

6.1.57 The IBCS noted that urbanization is rapidly becoming a dominant feature of the societal dynamics in the 21st Century. More than half of the global population now lives in cities and this percentage is expected to increase to approximately 70% by 2050. Urbanization is particularly noticeable in the developing world and in low-lying areas, exerting high demands on sustainable urban development.

6.1.58 The IBCS acknowledged that the GFCS should, within its evolving priorities, ensure addressing the needs of the ever growing urban populations. Long-term planning which considers weather, climate, water, and environment-related risks will build more resilient and energy efficient cities. The IBCS recognized that climate services in urban areas are needed across all current GFCS priority areas (agriculture and food security, DRR, health, and water) and for emerging priorities, including that on energy, considering that about 75% of the global energy consumption takes place in cities.

6.1.59 The IBCS further noted that the urban environment is complex and sensitive and relatively small environmental perturbations can have large impacts. The risks in the urban environment include but are not limited to: (1) flooding; (2) poor air quality; (3) sea-level rise; (4) extreme heat and human thermal stress; (5) energy and water sustainability; and (6) associated public health problems. These urban risks are largely related to weather and climate variations and extremes. Cities require the development of mitigation and adaptation strategies that balance resilience and the real-time use of weather and climate information to, for instance, optimize the use of energy and other resources in the urban environment while at the same time contributing to the quality of the life of the inhabitants. Urban issues are likely to feature prominently in the post-2015 development agenda to be adopted in 2015 and the HABITAT-III Conference, which will take place in 2016.

6.1.60 The Chairperson requested for the IBCS to consider whether the GFCS activities for urban areas should be taken on board as a new priority area, or if these should be incorporated into the existing and proposed ones in a cross-cutting manner. The IBCS agreed that urban activities related to climate be included as a specific cross-cutting element within the priority areas of the GFCS and adopted [Resolution 3 \(IBCS-2\) – Inclusion of urban activities related to climate in the Global Framework for Climate Services](#).

6.1.61 The Board expressed its appreciation to the Secretariat for the commendable progress that has been made in implementing the GFCS at international, regional and national levels.

6.1.62 The Board noted that cryosphere data and products support the development and delivery of climate, weather and water services by Members, including in the key Global Framework for Climate Services (GFCS) areas of food security, water, health, and disaster risk reduction. The Board agreed that the Global Cryosphere Watch (GCW) will provide information for decision-making and policy development related to climate, water and weather, for use in real-time, for climate change adaptation and mitigation, and for risk management. In this way, GCW will provide foundational support to the GFCS, as well as other WMO and international programmes. Furthermore, GCW should be considered as a contributing project to the GFCS. The Chairperson of the GCW encouraged members to seek investments in cryosphere-related projects that support the goals of the GCW and GFCS including the need to advance Polar Region Climate Outlook forums to engage stakeholders and to improve our understanding of the connections between changes in polar climate and their impacts on the Earth System including temperate and equatorial regions.

6.1.63 The Board emphasized the importance of ensuring proper coordination of GFCS supported projects to ensure that they are complementary and not overlapping.

Communication of progress

6.1.64 The Board noted that it is essential that the progress with the implementation of the GFCS be appropriately communicated and proposed the following as possible actions in this regard:

- (a) Members of the IBCS should be advocates for the GFCS in their own countries. In this regard, it would be helpful if the GFCS office could produce an updated short two-page document that summarizes the high-level activities and especially the impacts that the GFCS is making at global, regional and national levels;
- (b) Ensure sufficient time for dialogue to advance collaboration when we engage partners and facilitate collaboration for the Framework;
- (c) Most of these activities represent only one and a half years of active implementation and future reports should emphasize the impacts and outcomes that the activities are having, rather than descriptions of the activities themselves; and
- (d) The IBCS would also benefit from hearing about lessons learned, to inform future activities. For example, the heads of the Joint Offices for the priority sector areas, such as Climate and Health, are innovative approaches to implementing the GFCS and could serve as a model for approaches in other areas.

Additional priority areas for the Global Framework for Climate Services (Energy)

6.1.65 Energy systems are the engine of economic and social development. Energy investments represent a sizeable portion of a country's GDP. The IBCS recognized that energy planning and operations are markedly affected by meteorological events and that, with ever-growing global demand, energy systems are increasingly exposed to the vagaries of weather and climate. Although this is certainly true for renewable sources such as wind, solar and hydropower and for electrical distribution and transmission systems, the more traditional energy sources can also be severely impacted by climate events. The IBCS noted that by taking into account weather and climate information, energy systems can therefore considerably improve their resilience to weather extremes, climate variability and change, as well as their full chain of operations during their entire life cycle.

6.1.66 The demand for energy, especially in densely populated urban areas, is closely related with weather and climate. The IBCS noted that, through partnership and stakeholder engagement, the application of weather and climate information can provide useful support to energy management decisions and relevant policymaking. The IBCS also noted that some Members have been working closely with the energy sector towards this goal with significant progress.

6.1.67 The IBCS noted with appreciation that a preparatory scoping exercise was undertaken following the first session of IBCS (IBCS-1, June 2013) to prepare a draft outline for a potential GFCS exemplar on energy which explains how improved climate services can benefit the energy sector (both conventional and renewable energy). The IBCS agreed that an exemplar providing a vision as to how the development and application of targeted climate products and services to help improve energy efficiency and reduce risks associated with hydrometeorological hazards of energy systems would be consistent with the overall approach and mandate of the GFCS, and that through the exemplar the GFCS could contribute to enabling the energy sector to better manage the risks and opportunities arising from extreme events, climate variability and change. The IBCS underscored the need for this to be done through stakeholder engagement and development and incorporation of science-based climate information, predictions and climate change projections into planning, policy and operational activities.

6.1.68 The IBCS urged further development of an exemplar on energy. It requested that the exemplar incorporate three (sequential) principles: (i) the work under the GFCS in the sector should include taking stock of relevant current activities in the area of meteorology/climate and energy; (ii) the GFCS should assist in the coordination of relevant activities whenever there is a perceived benefit for doing so by a range of stakeholders; and (iii) the GFCS should add value by providing a platform for collaboration amongst energy sector stakeholders with a need for improved climate services.

6.1.69 Whilst there was strong support from the IBCS with respect to the inclusion of energy as a priority area of the GFCS, the IBCS also expressed concern that there remained considerable work to be done to address the existing four priority areas: disaster risk reduction, health, agriculture and food security and water. The IBCS noted that many Members were already undertaking activities within the area of climate services for the energy sector, including studies of the socioeconomic benefits and the availability and use of renewable energy. Towards this end the IBCS adopted [Resolution 4 \(IBCS-2\) – Additional priority areas for the Global Framework for Climate Services \(Energy\)](#).

6.2 Monitoring and evaluation of implementation of the Global Framework for Climate Services (agenda item 6.2)

6.2.1 The Intergovernmental Board recalled Resolution 1 (Cg-Ext.(2012)) – Implementation of the Global Framework for Climate Services, and Resolution 2 (Cg-Ext.(2012)) – Establishment of the Intergovernmental Board on Climate Services, and noted the need for an effective monitoring and evaluation mechanism to foster adequate oversight for monitoring the overall progress of projects and activities, checking progress of activities implemented under the GFCS and assessing their effectiveness to ensure that the Framework promotes effective decision-making about climate-related issues that need to be established and maintained as a continuous process.

6.2.2 The Board further noted that the first session of the Intergovernmental Board (IBCS-1) had adopted Resolution 6 (IBCS-1) – Monitoring and Evaluating Implementation of the Global Framework for Climate Services, which requested the Management Committee to design the monitoring and evaluation criteria and process for implementation of the GFCS, and to bring this back to the Board for approval.

6.2.3 The Board discussed the monitoring and evaluation criteria and process amended by the Management Committee and retained the elements provided in [Annex III to the present report](#).

6.2.4 The Board adopted [Resolution 5 \(IBCS-2\) – Monitoring and evaluating implementation of the Global Framework for Climate Services](#).

7. OPERATIONAL PLAN FOR 2015–2018 (agenda item 7)

Budget for 2015 and Operational and Resource Plan for the period 2016–2018

7.1 The Intergovernmental Board on Climate Services (IBCS) recalled Resolution 1 (Cg-Ext.(2012)) – Implementation Plan for the Global Framework for Climate Services, Resolution 2 (Cg-Ext.(2012)) – Establishment of the Intergovernmental Board on Climate Services, Resolution 2 (IBCS-1) – Implementation Plan of the GFCS, and Resolution 8 (IBCS-1) – Resources Mobilization, and noted that for the effective implementation of the GFCS resources are required for: (a) implementation of GFCS-related projects and activities as contained in the implementation plan of the GFCS; (b) support for the functioning of the governance structure of the GFCS; and (c) support to the GFCS Office to enable it to carry out coordination and provide support to Members and Partners in implementing GFCS-related activities.

7.2 The IBCS stressed the vital need of resources to enable implementation of the GFCS and noted the need to secure appropriate support from Members and partnerships with UN and international agencies, regional organizations including regional development banks, funding initiatives supporting major global issues and GFCS-related activities under the pillars and initial priority areas.

7.3 The IBCS stressed the need to promote and make accessible the Compendium of projects to Members and partners as well as the criteria for designation of projects as contributing to the GFCS.

7.4 The IBCS considered the GFCS budget for 2015 and the Operational and Resource Plan for the period 2016–2018 (see [Annex IV to the present report](#)) and recognized the need for providing resources to support implementation of project and activities, the governance structure of the GFCS and the GFCS Office. The IBCS requested more details on the costs and justification on governance, the GFCS Office and project activities to be provided as part of the WMO budget to be submitted to Seventeenth Congress, in support of the proposed increase in the GFCS regular budget.

7.5 The IBCS adopted [Resolution 6 \(IBCS-2\) – The Global Framework for Climate Services budget for 2015 and Operational and Resource Plan for the period 2016–2018](#).

Outcomes of the Conference on the Gender Dimensions of Weather and Climate Services

7.6 The Intergovernmental Board on Climate Service (IBCS) welcomed the outcomes of the Conference on the Gender Dimensions of Weather and Climate Services (Geneva, 5–7 November 2014). It noted with appreciation the Conference Statement and the range of identified issues and proposed actions formulated by the Conference participants.

7.7 The Board requested the IBCS Management Committee to incorporate gender-related recommendations into the GFCS Implementation Plan and to ensure that GFCS projects and activities are gender-sensitive.

8. FINANCIAL MATTERS (agenda item 8)

Financial matters were discussed under agenda item 7.

9. ELECTION OF OFFICERS AND SELECTION OF MANAGEMENT COMMITTEE MEMBERS (agenda item 9)

Chairperson and Vice-Chairperson

9.1 In order to fulfil the mandate given to the Board by the Congress in order to oversee and provide the overall management of the development and implementation of the GFCS, the Board unanimously reconfirmed that the Board shall be managed until the end of the next ordinary session of the Board by one Chairperson, and that the office of the Vice-Chairperson shall be shared by two co-Vice-Chairpersons.

9.2 The Intergovernmental Board for Climate Services unanimously elected Mr Jens Sunde (Norway), Regional Association VI, as its Chairperson.

9.3 The Intergovernmental Board for Climate Services unanimously elected Mr Laxman Singh Rathore (India), Regional Association II, and Ms Linda Makuleni (South Africa), Regional Association I, as its co-Vice-Chairpersons.

9.4 To ensure transparency, this decision of the Board shall be reported to the next session of Congress.

9.5 The Intergovernmental Board for Climate Services expressed its deep gratitude to the IBCS Chairperson, Mr Anton Eliassen, and two co-Vice-Chairpersons, Ms Linda Makuleni and Mr Laxman Singh Rathore, for their initial stewardship of the Intergovernmental Board for Climate Services.

Members of the Management Committee

9.6 Reflecting on the Terms of Reference of its Management Committee, the work it performed at its first meeting as well as its main tasks before the Seventeenth World

Meteorological Congress, the IBCS decided to keep the membership and composition of the Management Committee as defined in the Annex to the Resolution 1 (IBCS-1).

9.7 The IBCS designated the members of the Management Committee, in addition to the Chairperson and the co-Vice-Chairpersons of the IBCS, from amongst the principal members nominated by WMO Members, as reflected in [Annex V to the present report](#).

9.8 Taking into account financial resources required to support the Management Committee, the IBCS was of the view that at least one meeting of the Committee should be held following the closure of the IBCS regular session and before the Seventeenth World Meteorological Congress.

10. CONSIDERATION OF RECOMMENDATIONS TO THE SEVENTEENTH WORLD METEOROLOGICAL CONGRESS (agenda item 10)

10.1 The IBCS recalled the recommendations of its Management Committee with respect to the holding of its sessions after the Seventeenth session of the World Meteorological Congress, which are the following:

- (a) Have ordinary plenary meetings of the IBCS only once in the intersessional period prior to WMO Congress sessions to prepare its report to Congress from Cg-17 onwards, considering the cost implications;
- (b) The Management Committee to meet once a year to provide advice, oversight and management of implementation of the GFCS in the intersessional period.

10.2 The Board decided that its Chairperson would submit a document to Congress for its consideration on the following topics:

- (a) Frequency of IBCS ordinary sessions;
- (b) GFCS budget and workplan;
- (c) Links to the Executive Council, technical commissions and regional associations.

11. CLOSURE OF THE SESSION (agenda item 11)

Date and place of the third session of the Intergovernmental Board on Climate Services

11.1 Pursuant to Resolution 2 (Cg-Ext.(2012)) the Intergovernmental Board on Climate Services considered the options for holding its third session.

11.2 The Board decided that the Management Committee should decide the dates and place of the third session of the Intergovernmental Board on Climate Services.

Closure of the session

11.3 The second session of the Intergovernmental Board on Climate Services closed on Thursday, 13 November 2014 at 4.40 p.m.

RESOLUTIONS ADOPTED BY THE SESSION

Resolution 1 (IBCS-2)

AMENDMENT OF ANNEX 1 TO RESOLUTION 7 (IBCS-1) – ESTABLISHMENT OF A STAKEHOLDER ENGAGEMENT MECHANISM AND PARTICIPATION OF GFCS STAKEHOLDERS IN THE WORK OF THE INTERGOVERNMENTAL BOARD ON CLIMATE SERVICES

THE INTERGOVERNMENTAL BOARD ON CLIMATE SERVICES,

Noting Resolution 7 (IBCS-1) – Establishment of a stakeholder engagement mechanism and participation of GFCS stakeholders in the work of the Intergovernmental Board on Climate Services,

Recognizing that implementation of the Global Framework for Climate Services (GFCS) requires the strengthening of relations with all interested partners in accordance with the purposes and principles of the GFCS Governance,

Recognizing also the positive outcomes of the first meeting of the Partner Advisory Committee, held in Rome from 27 to 28 October 2014, and its willingness to advance the objectives of the Global Framework,

Recognizing further the importance of cooperation among the GFCS partner organizations, and the benefits to the GFCS Governance of such cooperation, including the most exhaustive possible identification of GFCS-related activities worldwide, especially in terms of committed resources and assessed achievements,

Decides to adopt the amended Annex 1 to Resolution 7 (IBCS-1) as given in the annex to this resolution;

Requests the Chairperson of the Intergovernmental Board on Climate Services to report to the third session of the Board on implementation of the adopted stakeholder engagement mechanism including a review of its composition and criteria for membership;

Invites the Secretary-General to inform partner organizations on the implementation of the modalities set out in the annex to the present resolution.

Annex to Resolution 1 (IBCS-2)

TERMS OF REFERENCE OF THE PARTNER ADVISORY COMMITTEE OF THE INTERGOVERNMENTAL BOARD ON CLIMATE SERVICES

These terms of reference specify functions and responsibilities, membership, mode of operation and financing of the Partner Advisory Committee (hereunder referred as the “PAC”) of the Intergovernmental Board on Climate Services (hereunder referred as the “IBCS”).

I. Functions of the Partner Advisory Committee

1. The PAC shall operate under the guidance of the IBCS. The PAC has the mandate to discuss GFCS Stakeholders issues relating to the implementation of the GFCS. In particular, the PAC is asked to provide expert advice and recommendations on such issues to the IBCS, to raise

awareness within the GFCS Stakeholders and to prepare and share information accordingly. The PAC shall discharge its mandate through the following specific functions:

- (a) To provide comments on draft decisions and to present recommendations for the consideration of the IBCS before and during IBCS sessions, and to interact accordingly with the IBCS Management Committee during the intersessional period;
- (b) To facilitate, as appropriate, relevant decisions and recommendations of GFCS Stakeholders participating in the GFCS, by providing a forum for the examination of GFCS-relevant issues;
- (c) To prepare a synthesis and consolidated report on the GFCS implementation within the GFCS Stakeholders with a view to identify gaps and priorities in order to facilitate effective resource mobilization and increase synergy and coordination between GFCS partners, including in the scientific and technical domains, for GFCS implementation;
- (d) To contribute to the monitoring of the GFCS strategy, objectives and targets, and the Implementation Plan and present their views in collaboration with the Management Committee thereon to the IBCS; and
- (e) To engage technical expertise, as needed and appropriate, to support its work.

II. Membership

2. Membership in the Partner Advisory Committee is open to UN organizations, non-UN intergovernmental organizations, international organizations, international development partners, and international non-governmental organizations in strict compliance with the UN (the agreement concluded between the UN and WMO which came into force 20 December 1951) and WMO policies and regulations (WMO Convention Art. 26 as well as paragraph 2 (f) of the Terms of Reference of the IBCS).

3. In accordance with Regulation 19 of the General Regulations, the Chairperson of the IBCS may invite experts to participate in sessions or meetings of the PAC as observers.

III. Mode of operation

4. The PAC shall work as a structured network. In this respect, the GFCS Office, under the supervision and guidance of the WMO Secretary-General, shall register the partner organizations willing to be members of the PAC as well as experts invited by the Chairperson of the IBCS as observers in the PAC, and maintain this register up-to-date.

5. The PAC members shall designate its Chairperson and Vice-Chairperson, who shall act as its representatives vis-à-vis the IBCS, and replace them as may be required under the circumstances. The WMO Secretary-General shall inform the Chairperson of the IBCS accordingly.

6. The duties of the Chairperson, of the PAC, and the Vice-Chairperson when acting as his/her representative, shall be:

- (a) To guide and coordinate the activities of the PAC;
- (b) To engage PAC, as appropriate, in consultations and meetings as may result from decisions of the IBCS;
- (c) To ensure that the activities of the PAC are in accordance with the Terms of Reference of the PAC;
- (d) To submit the synthesis and consolidated report on the GFCS implementation within the GFCS stakeholders, with a view to identify gaps and priorities to the GFCS Office for distribution at least one month in advance of the Management Committee meetings;

- (e) As may be decided by the Chairperson of the IBCS, to report on the activities of the PAC and present its views to the IBCS at its sessions.

IV. Funding

7. The cost of administrative arrangements, including those for conference services for meetings of the PAC, shall be borne by partner organizations.

Resolution 2 (IBCS-2)

AMENDMENT OF THE ANNEX TO RESOLUTION 1 (IBCS-1) – ESTABLISHMENT OF THE MANAGEMENT COMMITTEE OF THE INTERGOVERNMENTAL BOARD ON CLIMATE SERVICES

THE INTERGOVERNMENTAL BOARD ON CLIMATE SERVICES,

Noting Resolution 1 (IBCS-1) – Establishment of the Management Committee of the Intergovernmental Board on Climate Services,

Recognizing that implementation of the Global Framework for Climate Services (GFCS) requires the strengthening of relations with all interested partners in accordance with the purposes and principles of the GFCS Governance,

Recognizing further the relevance of cooperation among GFCS partner organizations and the benefits that they would derive from implementation of the Framework, as well as the importance of establishing proper interaction between the Management Committee and the Partner Advisory Committee,

Decides to adopt the amended annex to Resolution 1 (IBCS-1) as given in the annex to this resolution;

Requests the Chairperson of the Intergovernmental Board on Climate Services (IBCS) to report to the third session of the Board on the interaction between the Management Committee and the Partner Advisory Committee;

Invites the Secretary-General to inform the IBCS Members and the GFCS partner organizations on the implementation of the modalities set out in the annex to the present resolution.

Annex to Resolution 2 (IBCS-2)

TERMS OF REFERENCE OF THE MANAGEMENT COMMITTEE OF THE INTERGOVERNMENTAL BOARD ON CLIMATE SERVICES

These terms of reference specify functions and responsibilities, membership, mode of operation and financing of the Management Committee of the Intergovernmental Board on Climate Services (hereunder referred as the “IBCS”).

I. Functions of the Management Committee

1. The Management Committee shall operate under the guidance of, and be accountable to, the IBCS. The Committee has the mandate to carry out the decisions and requests of the Board during the intersessional period. In particular, the Committee is asked to provide advice and recommendations on technical, scientific or organizational issues to the IBCS and take decisions on behalf of the IBCS on specific matters as defined in the Terms of Reference. The Committee shall discharge its mandate through the following specific activities supporting IBCS functions:

- (a) To support the IBCS in carrying out the decisions and requests of the Board in the intersessional period;
- (b) To assist the IBCS Chairperson in discharging his/her duties as defined in IBCS Terms of Reference 7;
- (c) To support the Board on the establishment of sub-structures of the IBCS with due consideration of the expertise available in existing bodies of WMO and Partners;
- (d) To ensure that the views of the Partner Advisory Committee (PAC) are considered in the planning and execution of Management Committee duties and relevant information and proposals are submitted to PAC for its consideration and advice;
- (e) To support IBCS functions 2 (a), (b), (d), (e), (g) and (h);
- (f) To perform such other functions as may be conferred on it by the IBCS.

2. The Management Committee may establish working groups and task teams and define their Terms of Reference and membership, as may be required, in carrying out its work. Their continued existence should be reviewed at each meeting of the Management Committee and the IBCS.

II. Membership

3. The membership of the Committee is limited to principal members of the IBCS designated by the WMO Members with due consideration of regional balance, gender balance and required expertise, and is decided at each regular sessions of the IBCS.

4. The Management Committee shall be composed of 28 members including the Chairperson and Vice-Chairperson, or co-Vice-Chairpersons, with the following distribution across RAs: Region I (Africa): 6; Region II (Asia): 5; Region III (South America): 3; Region IV (North America, Central America and the Caribbean): 4; Region V (South-West Pacific): 4; and Region VI (Europe): 6.

5. The following principles will apply to the membership of the Management Committee:

- (a) The selection of Management Committee members, beside the Chairperson and the Vice-Chairperson, or co-Vice-Chairpersons, is decided by the IBCS, based on a proposal by the Chairperson, to be adopted by consensus;
- (b) Should a Management Committee member cease to be an IBCS principal member at any point in the intersessional period, he/she will be replaced on the Management Committee by that person's replacement as principal member to the IBCS;
- (c) In the case of a principal member not being able to attend a session of the Management Committee, he/she can be represented by an alternate nominated by the same WMO Member;
- (d) The Board will review and determine the size of the membership and approve the composition of the Management Committee at each regular session;

- (e) Regional associations will be invited by the Chairperson to suggest changes to Management Committee member representation from their Regions.

III. Chairperson and Vice-Chairperson

6. The Chairperson or co-Vice-Chairpersons of the IBCS are the Chairperson and/or co-Vice-Chairperson(s) of the Management Committee.

7. The duties of the Chairperson of the Management Committee shall be:

- (a) To preside over sessions of the Management Committee;
- (b) To guide and coordinate the activities of the Management Committee;
- (c) To carry out such specific duties as prescribed by decisions of the IBCS;
- (d) To ensure that the activities and decisions of the Management Committee are in accordance with the Terms of Reference of the Management Committee;
- (e) To report to the IBCS.

IV. Sessions

8. The sessions of the Management Committee shall be held as planned by the IBCS during each intersessional period, or at the request of a least one third of its members taking into account resource implications. A majority of the Management Committee members should have indicated in writing their willingness to attend to the GFCS Office, with copy to the Chairperson, for a session to be organized.

9. The date and place of each session of the Management Committee shall be determined by its Chairperson in consultation with the GFCS Office and the Secretary-General.

10. Management Committee sessions shall be open to other IBCS members as observers at their own cost. Session documentation and reports of its meetings shall be made available by the GFCS Office and distributed to IBCS principal members and the partner organization members' representatives.

11. The Chairperson of the Management Committee should invite the PAC Chairperson to attend its sessions.

V. Funding of sessions

12. The cost of administrative arrangements, including those for conference services for the sessions of the Management Committee, shall be financed from the GFCS Trust Fund in accordance with norms and tariffs applied by WMO and consistent with UN system practice.

13. The cost of participation of members of the Management Committee in its sessions shall be borne by members' governments. Subject to availability of funds, participation of members from Least Developed Countries, as a matter of priority, and members from developing countries and countries with economies in transition, may be supported from the GFCS trust fund upon request.

14. The cost of participation of invited WMO Members and partner organization experts in the sessions of the Management Committee and of its working groups and task teams shall be borne by them.

Resolution 3 (IBCS-2)**INCLUSION OF URBAN ACTIVITIES RELATED TO CLIMATE
IN THE GLOBAL FRAMEWORK FOR CLIMATE SERVICES**

THE INTERGOVERNMENTAL BOARD ON CLIMATE SERVICES,

Noting:

- (1) That half of the world's population currently lives in urban areas, and that by 2050 this proportion is projected to rise to 70%,
- (2) That urban dimensions are under consideration for inclusion in the new Sustainable Development Goals,
- (3) That a United Nations system-wide new Urban Agenda is being developed,

Recognizing that urban areas will need climate services specifically tailored to their needs especially for agriculture and food security, disaster risk reduction, health, water and energy,

Recognizing further that these services will be relevant for many aspects of urban living such as resilience and sustainable development; climate change adaptation and mitigation; city planning; anticipation and mitigation of natural hazards (including flooding and droughts); reducing the vulnerability of the urban poor to natural hazards; transport; power supply; food safety; and the health of citizens,

Decides to include urban activities related to climate as a specific cross-cutting element within the priority areas of the Global Framework for Climate Services (GFCS);

Requests the Chairperson of the Intergovernmental Board on Climate Services to bring the above decision to the attention of all concerned;

Invites the Secretary-General to take the appropriate measures for the development of guidelines and relevant documentation on the inclusion of urban activities related to climate in the GFCS.

Resolution 4 (IBCS-2)**ADDITIONAL PRIORITY AREAS FOR THE GLOBAL
FRAMEWORK FOR CLIMATE SERVICES (ENERGY)**

THE INTERGOVERNMENTAL BOARD ON CLIMATE SERVICES,

Noting:

- (1) *The Abridged Final Report with Resolutions of the First Session of the Intergovernmental Board on Climate Services* (WMO-No. 1124),
- (2) *The Implementation Plan of the Global Framework for Climate Services*, approved by the Intergovernmental Board on Climate Services (IBCS) at its first session, along with its annexes and exemplars,

Recognizing:

- (1) The importance of sustainable energy for global sustainable development,

- (2) The sensitivity and relevance of the energy sector to climate,

Recognizing further:

- (1) The potential for the Global Framework for Climate Services (GFCS) to contribute to improved energy-related outcomes, both in terms of promotion of renewable energy sources and energy saving, and through protection of energy infrastructure and delivery systems from weather and climate extremes,
- (2) That implementation of the Global Framework has already started in four key climate-sensitive sectors, and that this experience can now be extended to the energy sector,

Supports the development of an energy exemplar;

Requests the Management Committee of the Intergovernmental Board on Climate Services to oversee the further development of the energy exemplar with the support of the Secretariat, taking into account the work already undertaken;

Requests the Partner Advisory Committee to advise on how it can contribute to the exemplar and to its conclusions and recommendations;

Invites the Chairperson of the Intergovernmental Board to present to the Seventeenth World Meteorological Congress a report on progress made in the implementation of this resolution and a proposal for consideration of energy as an additional priority sector for the GFCS;

Invites the Secretary-General to support the further development of the exemplar and mobilize resources and expertise for its completion.

Resolution 5 (IBCS-2)

MONITORING AND EVALUATING IMPLEMENTATION OF THE GLOBAL FRAMEWORK FOR CLIMATE SERVICES

THE INTERGOVERNMENTAL BOARD ON CLIMATE SERVICES,

Noting Resolution 6 (IBCS-1) – Monitoring and evaluating implementation of the Global Framework for Climate Services,

Considering:

- (1) Resolution 1 (Cg-Ext.(2012) – Implementation Plan of the Global Framework for Climate Services,
- (2) Resolution 2 (Cg-Ext.(2012) – Establishment of the Intergovernmental Board on Climate Services,
- (3) Resolution 1 (IBCS-1) – Establishment of the Management Committee of the Intergovernmental Board on Climate Services,
- (4) Resolution 47 (Cg-XVI) – Response to the Report of the High-level Taskforce on the Global Framework for Climate Services,
- (5) Resolution 48 (Cg- XVI) – Implementation of the Global Framework for Climate Services,

Recognizing the need for effective criteria and process for monitoring and evaluating implementation of the Global Framework for Climate Services (GFCS),

Having considered the discussion about the Implementation Plan of the Global Framework for Climate Services, the five Annexes to the Implementation Plan and the four Exemplars, as summarized in the *Abridged Final Report with Resolutions of the First Session of the Intergovernmental Board on Climate Services* (WMO-No.1124), paragraphs 4.1.1–4.1.17,

Decides:

- (1) To approve the monitoring and evaluation criteria and process for the implementation of the Global Framework;
- (2) To implement the monitoring and evaluation criteria and process;

Requests the Management Committee:

- (1) To oversee the monitoring and evaluation activities, to update and refine the criteria and process, when required, and to report back to the Intergovernmental Board on Climate Services;
- (2) To create an ad hoc Task Force or Working Group, drawing on experts, to further develop the criteria and process and quantifiable metrics, avoiding the creation of a complicated, onerous and expensive process;

Invites partner organizations and stakeholders to monitor and evaluate GFCS-related projects and activities (Contributing Projects) they implement or contribute to using the approved monitoring and evaluation criteria and process, and to report on the outcomes to the Management Committee for consideration of the Intergovernmental Board;

Requests the Secretary-General to inform GFCS stakeholders of this resolution, and to facilitate its implementation and follow-up actions.

Resolution 6 (IBCS-2)

THE GLOBAL FRAMEWORK FOR CLIMATE SERVICES BUDGET FOR 2015 AND OPERATIONAL AND RESOURCE PLAN FOR THE PERIOD 2016–2018

THE INTERGOVERNMENTAL BOARD ON CLIMATE SERVICES,

Noting:

- (1) Resolution 47 (Cg-XVI) – Response to the Report of the High-level Taskforce on the Global Framework for Climate Services,
- (2) Resolution 48 (Cg- XVI) – Implementation of the Global Framework for Climate Services,
- (3) Resolution 1 (Cg-Ext.(2012)) – Implementation Plan of the Global Framework for Climate Services,
- (4) Resolution 2 (IBCS-1) – Implementation Plan of the Global Framework for Climate Services,
- (5) Resolution 8 (IBCS-1) – Resource mobilization, and

- (6) Resolution 5 (IBCS-1) – Compendium of projects under the Global Framework for Climate Services,

Noting further the Financial Regulations of the World Meteorological Organization, in particular Articles 3, 4 and 6,

Recognizing the need to effectively implement the Global Framework for Climate Services (GFCS),

Having considered:

- (1) Progress on the implementation of the Global Framework,
- (2) The resource requirements for implementation of the Framework,
- (3) The extrabudgetary part of the 2015 GFCS budget, which would depend on the availability of voluntary contributions,
- (4) The proposed Operational and Resource Plan for the period 2016–2018, which is based on the GFCS Implementation Plan, and taking into account the Compendium of GFCS projects,

Requests the Management Committee to further refine and prioritize, in consultation with the Partner Advisory Committee, the Operational and Resource Plan at the first meeting of the Management Committee in 2015;

Encourages Members and GFCS partners and stakeholders to recognize the benefits of the Global Framework in the achievement of their goals;

Requests Members and GFCS partners to promote further the benefits of the Framework and to integrate GFCS-related projects and activities into their plans at the national, regional and global levels;

Urges Governments:

- (1) To make voluntary contributions to the GFCS Trust Fund to finance the Global Framework budget for 2015, which includes governance, secretariat functions associated with the GFCS Office, as well as programmes, projects and activities;
- (2) To make sustainable long-term commitments for the financing of the Framework activities in line with the Implementation Plan of the GFCS and the Compendium of projects;
- (3) To provide in-kind contributions by supporting and seconding experts to the GFCS Office as well as supporting specific activities of that Office;

Invites all stakeholders, including United Nations system entities and relevant national, regional and international organizations, whether governmental or non-governmental,

- (1) To contribute to the GFCS Trust Fund and to commit resources for the implementation of specific activities, as contained in the Implementation Plan and Compendium of GFCS-related projects and activities;
- (2) To promote further the benefits of the Framework and to integrate GFCS-related projects and activities into their plans at the national, regional and global levels;

Invites the Secretary-General:

- (1) To consider the specific GFCS requirements for 2016–2018, in particular with regard to:
 - (a) Governance and the GFCS Office, when developing the WMO regular budget proposal for the financial period 2016–2019; and
 - (b) The WMO Compendium of projects for the same period, which are to be funded through voluntary contributions;
 - (2) To bring this resolution to the attention of all concerned.
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ANNEXES

ANNEX I

Annex to [paragraph 4.1.1](#) of the general summary

FIRST MEETING OF THE PARTNER ADVISORY COMMITTEE (ROME, 27–28 OCTOBER 2014)

LIST OF PARTICIPANTS

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ANNEX II
Annex to paragraph 6.1.7 of the general summary

**CRITERIA FOR PROJECTS TO BE DESIGNATED AS GFCS PROJECTS
OR CONTRIBUTING PROJECTS¹**

Introduction

A crucial aspect of the successful implementation of the Framework, to ensure it meets its Goals, is the implementation of suitable projects. This document contains two sets of criteria:

1. A set of 9 criteria (Annex 1), all of which must be met for projects to be designated as GFCS Projects. These projects will be funded by the GFCS or from other funding mechanisms provided by Members and partners;
2. A set of 5 criteria (Annex 3), all of which must be met, based on a subset of the 9 criteria in Annex 1, but less restrictive. These projects will be designated by partners and Members as Contributing Projects and will be aligned with the Framework's Goals and Principles. These projects will be funded by implementing entities and are not intended to be funded by the GFCS.

The criteria for GFCS Projects are to be used by the Intergovernmental Board on Climate Services for recognizing projects such as those that are essential for successfully implementing the Framework. Given that resources and funding are limited, consideration must be given to prioritizing (see below) a selection of urgent (priority) projects, ensuring that they adhere to the Principles of the Framework which have been set and agreed through widespread international consultation. The projects should promote integration, interaction and capacity development across the pillars of the Framework (see Figure 1) with a view to operationally delivering products and services to support effective decision-making and better meet user needs in the priority areas (initially disaster risk reduction, water resources management, agriculture and food security, and health).

GFCS projects are listed in the Compendium of GFCS Projects, which will be reviewed and updated as directed by the Intergovernmental Board on Climate Services. The projects are complementary in nature and require the coordination and involvement of various actors, including stakeholders and partners. GFCS Projects that are funded by the GFCS will be monitored and evaluated according to the standards set in the Monitoring and Evaluation of GFCS Projects document, and reported to the Intergovernmental Board on Climate Services, to ensure that the projects are successful and the resources are utilized effectively. The progress of GFCS Projects that are funded by Members and partners will also be reported to the Intergovernmental Board on Climate Services to ensure that overall progress of the Framework's implementation can be monitored and evaluated to maximize the effectiveness of climate service development and delivery to the benefit of all. The monitoring and evaluation approach should include metrics and measures of success, describe how lessons learned from past and present activities will be captured and shared, and identify and manage risks.

The Intergovernmental Board on Climate Services also needs to be kept informed about other relevant projects which are developing and delivering climate services worldwide (the Contributing Projects) to ensure that GFCS Projects do not duplicate these other activities, and benefit from relevant outcomes from such activities. Whilst it will be challenging to identify all Contributing Projects, Members are urged to bring their Contributing Projects to the attention of the Intergovernmental Board on Climate Services by completing the project template in Annex 4.

¹ This is an updated version of the criteria first published as Annex II to the *Abridged Final Report of the First Session of the Management Committee of the Intergovernmental Board on Climate Services* (WMO-No. 1144)

These projects will not be listed in the Compendium of GFCS Projects, but they will be recognized as contributing to the goals of the Framework, and Members are encouraged to use the GFCS monitoring and evaluation approach for their own purposes. A database of Contributing Projects will be maintained by the GFCS Office and made available through the GFCS website.

Prioritization

The Intergovernmental Board on Climate Services may need to prioritize the funding of projects if there are insufficient resources (financial and other) to implement all of the projects. In this case, the following should be considered:

1. To what extent does the project build upon something that already exists by expanding the area, locating in a new place, enhancing it, making it operational, ensuring its sustained operation, or broadening its scope?
2. To what extent does the project address the Feedback, Dialogue, Evaluation or Outreach outcomes of the User Interface Platform?
3. To what extent does the project fill the objectives, agendas, work plans, goals and missions that have already been agreed to by the partner organizations?
4. What is the anticipated value (economic, social, environmental, etc.) and impact of the proposal and how cost effective will it be?

Goals of the Framework:

1. Reducing the vulnerability of society to climate-related hazards through better provision of climate information;
2. Advancing the key global development goals through better provision of climate information;
3. Mainstreaming the use of climate information in decision-making;
4. Strengthening the engagement of providers and users of climate services;
5. Maximizing the utility of existing climate service infrastructure.

Principles for the Framework:

1. All countries will benefit, but priority shall go to building the capacity of developing countries most vulnerable to the impacts of climate change and variability.
2. A primary goal will be to ensure greater availability of, access to, and use of enhanced climate services for all countries.
3. Activities will address three geographic domains: global, regional and national.
4. Operational climate services will be the core element.
5. Climate information is primarily an international public good provided by governments, which will have a central role in its management.
6. Promote the free and open exchange of climate-relevant data, tools and scientifically based methods while respecting national and international policies.
7. Facilitate and strengthen, not to duplicate.
8. The Framework will be implemented on the basis of user–provider partnerships that include all stakeholders.

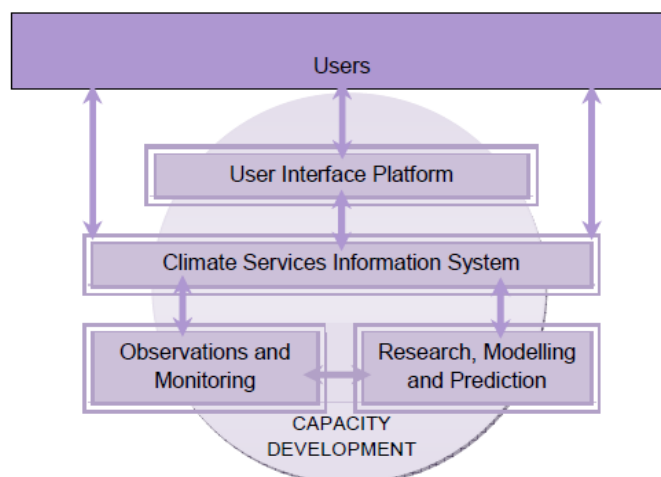


Figure 1: A schematic illustration of the five pillars of the Framework.

Annex 1: Criteria for projects designated as GFCS Projects

For a project to be identified as a GFCS Project, it must meet all of the criteria below which are designed to ensure that the project is: (a) **relevant**, with a clear climate focus, strong user engagement and service delivery; (b) **aligned**, with the Framework's priority areas and Principles; and (c) **achievable**, with realistic objectives and sufficient funding and resources. Annex 2 will be used to ensure that all GFCS Projects:

1. **Are aligned with at least one of the Framework's priority areas.** The initial priority areas are disaster risk reduction, water resources management, agriculture and food security, and health;
2. **Have a strong climate service focus, with operational services as a core element.** While it is important to coordinate weather and climate service activities, projects that are primarily focussing on weather capabilities and services with little or no climate service element are out of scope. Projects that address scientific or technical research priorities alone are of great value, but are also out of scope;
3. **Ensure that their outcomes will address the needs of decision-makers and users of climate services, and therefore build the User Interface Platform.** The project should ensure close engagement between users, developers and providers and include all relevant stakeholders; and address the gaps that have been identified in the Implementation Plan, since these have been identified as the gaps that need to be filled to meet user needs;
4. **Develop national or regional capacities.** Countries and regions with limited capacity and capability need assistance to enable them to provide improved quality products and services. Ultimately the need is to develop sufficient capabilities in all countries – in some cases this may be best done at the national level, and in others it may be best done at the regional level to support the national level. The project must therefore either upgrade the national climate service providers, particularly the NMHSs, which currently have basic climate service capabilities, or develop regional capacities to assist national capacities;
5. **Ensure that the project strengthens and supports existing activities and doesn't duplicate.** Note that some projects will undertake new activities and this criteria is intended to avoid duplication, or conflict with, existing activities where relevant;

6. **Involve, or contribute to activities in, LDCs, SIDSs, Land Locked Developing Countries or other regions or countries highly vulnerable and sensitive to climate-related risks.** The project should reduce the vulnerability of society to climate-related hazards (Goal number 1 of the Framework), particularly poor and vulnerable groups;
7. **Have strong prospects for successful delivery.** The project needs to be well conceived and described, ensure that the required resources (including financial, human, technological where appropriate) will be available, represent good value for money, be likely to make a significant impact and be sustainable beyond the project duration;
8. **Ensure the country or region in which the project is being implemented has (or, through capacity development activities, will rapidly have) demonstrated interest and commitment for successful delivery, will build connections across institutes and disciplines, and involve institution(s) with a record of achievement and financial probity.** The institutions must take on a level of ownership of the project to ensure the outcomes, benefits, infrastructure and operations are sustained. Ensuring the engagement of users is essential;
9. Are implemented at the national, regional or global domain.

Annex 2: Template for assessing criteria for GFCS Projects

This template should be completed by the organization proposing the project

1.	Which priority area(s) of the Framework does the project align with?
2.	What is the climate service focus? (and describe any synergies with weather services and a description of the operational nature of the project)
3.	How will the project's outcomes address the needs of decision-makers and users, and build the User Interface Platform? (include a description of how the project will ensure close engagement between users, developers and providers) What gaps in scientific and technical capabilities will the project address?
4.	How will the project develop national or regional capacities? (Include a description of: how the project will ensure that the project strengthens and supports existing activities; whether the project will upgrade the national climate service providers, or will develop regional capacities to assist national capacities)
5.	How does the project strengthen and support existing activities, or are there no relevant existing activities?
6.	Will the project involve or contribute to activities in LDCs, SIDSs, land-locked developing countries or other regions or countries highly vulnerable and sensitive to climate-related risks? If so, which ones? How will the project reduce the vulnerability of society to climate-related hazards?
7.	How will the project successfully deliver, and how will it be monitored and evaluated? (include a description of likely impact, and sustainability beyond the project duration) What are the available confirmed funding and resources (including human and technological where appropriate)?
8.	What are the institutional capacities in the country or region in which the project is being implemented? (In the case of capacity development activities, describe when the institutions will have sufficient capacity to ensure successful delivery? How will these institutes take on a level of ownership?)
9.	Will the project be implemented at the national, regional or global domain?

Annex 3: Criteria for projects designated as Contributing Projects

1. **Have a climate service focus, with operational services as a target at least.** While it is important to coordinate weather and climate service activities, projects that are primarily focusing on weather capabilities and services with little or no climate service element are out of scope. Projects that address scientific or technical research priorities alone are of great value, but are also out of scope.
2. **Ensure that the outcomes will address the needs of decision-makers and users of climate services.** This would typically, but not necessarily, involve building the User Interface Platform. The project should relate to gaps that have been identified in the Implementation Plan.
3. **Ensure that the project strengthens and supports existing activities and doesn't contradict or duplicate.** Note that projects can undertake new activities and this criterion is intended to avoid duplicating, or conflicting with, existing activities.
4. **Involve, or contribute to activities in, LDCs, SIDSs, Land Locked Developing Countries or other regions or countries highly vulnerable and sensitive to climate-related risks.** The project should reduce the vulnerability of society to climate-related hazards (Goal number 1 of the Framework), particularly poor and vulnerable groups.
5. **Ensure the country or region in which the project is being implemented has, or will have, demonstrated interest and commitment to ensure successful delivery, and will build connections across institutes and disciplines.** These institutes should take on a level of ownership of the project to ensure the outcomes, benefits, infrastructure and operations are sustained. Ensuring the engagement of users is essential.

Annex 4: Template for assessing criteria for Contributing Projects

This template should be completed by the organization proposing the projects as Contributing Projects to ensure that they meet the above criteria.

1.	What is the climate service focus? (describe any synergies with weather services and a description of the operational prospects of the project)
2.	How will the project's outcomes address the needs of decision-makers and users, and build the User Interface Platform? What gaps in scientific and technical capabilities will the project address?
3.	How does the project strengthen and support existing activities, or are there no relevant existing activities?
4.	Will the project involve or contribute to activities in LDCs, SIDSs, Land Locked Developing Countries or other regions or countries highly vulnerable and sensitive to climate-related risks? If so, which ones? How will the project reduce the vulnerability of society to climate-related hazards?
5.	What are the institutional capacities in the country or region in which the project is being implemented?
	Please briefly describe the project:
	Project title: Goal: Pillar: Submitting agency: Partners:
	Scope:

	Objectives: Activities: Benefits: Deliverables/Outcomes: Indicators and assessment measures: Inputs: Risks:
	Timeline:
	Resource requirements:

ANNEX III

Annex to [paragraph 6.2.3](#) of the general summary

PROCESS AND CRITERIA FOR MONITORING AND EVALUATING IMPLEMENTATION OF THE GLOBAL FRAMEWORK FOR CLIMATE SERVICES

I. PROCESS

The Intergovernmental Board on Climate Services (IBCS) oversees the monitoring and evaluation process on behalf of the World Meteorological Congress during the intersessional periods and has delegated this task to the IBCS Management Committee (IBCS-MC). The IBCS-MC has the routine responsibility of monitoring and evaluating GFCS Projects, and reporting back to IBCS, and in turn to Congress, as well as updating the procedures on an ongoing basis. Monitoring and evaluating the effectiveness of the Framework is the responsibility of Congress.

The monitoring and evaluation process should be dynamic and effective and be able to demonstrate progress, benefits and outcomes.

Monitoring and evaluation needs to be established at the global, regional and national levels. At the global level it should be overseen by the IBCS-MC. For projects operating at the regional level, it should be overseen by project steering committees, and report back to the IBCS-MC. At the national level the monitoring and evaluation will need to be set up on a case-by-case basis, depending on the particular involvement of government departments, funding bodies and the focus and scope of projects. Each project should establish a project steering committee to work with the project delivery team.

In addition to the GFCS Projects, other projects (Contributing Projects) will be developing and delivering climate services worldwide, aligned with the Framework's Goals and Principles. Contributing Projects will be funded by various implementing entities and they are encouraged to use the same monitoring and evaluation criteria and process as the GFCS Projects.

II. CRITERIA

The sources of information for defining the monitoring and evaluation approach are the GFCS Implementation Plan and individual project plans. The monitoring and evaluation approach should include qualitative and/or quantitative metrics and measures of success, describe how lessons learned from past and present activities will be captured and shared, and identify and manage risks.

For projects

The following are proposed as key criteria for monitoring and evaluating projects:

- (a) Have the project milestones and deliverables been delivered on time, on budget and to the required standard?
- (b) Have sustained operations been created (at global, regional or national level) regularly providing inputs for the generation of regional or national-scale products and services?
- (c) Are products and services being used appropriately (for example with respect to limitations and uncertainty in the information contained within them)?
- (d) Has the use of products and services increased, and has the utility of the products and services improved in planning and other decision-making in target communities, as confirmed by surveys of user communities?
- (e) Has the value (economic, social, environmental, etc.) of the project been assessed, and is it being run cost effectively?
- (f) Were experiences of successful implementations transposed successfully to other places or other priority areas?
- (g) Where appropriate, have sustained partnerships been built that can contribute to the GFCS?

For the Framework

The progress and effectiveness of the overall objectives of the Framework should be monitored and evaluated through the GFCS User Interface Platform, in particular the extent and rate of uptake of climate information within the priority areas by users. The long-term success of Framework implementation will be measured by:

- (a) Its recognition by governments, along with the level of their tangible support and central role in the Framework, the orientation of national programmes towards its goals and the quality of its intergovernmental nature;
- (b) Its ability to leverage necessary inputs through partnerships from UN agencies and programmes, stakeholders representing users, managers of observation and climate information systems, research and development organizations, including NGOs, and regional and national climate institutions;
- (c) Its success in increasing the overall use of climate services and the economic and social impact of climate services provided under its auspices on planning and other decision-making in target communities as confirmed by systematic surveys of user communities;
- (d) The increase in climate data and information collected, stored and exchanged globally and regionally;
- (e) The effectiveness of transforming climate research outcomes into sustained climate services as measured by the increase in the range and quality of services available, including number and types of decision support tools and reduction in the uncertainties associated with key climate products;
- (f) Its ability to undertake projects funded by aid agencies and other donors; and
- (g) Its ability to attract the resources necessary to sustain its ongoing, long-term activities.

The GFCS Implementation Plan² outlines the deliverables and targets for the Framework which should be used for monitoring and evaluating the Framework on an annual basis.

² See Section 4.3.1 of the Implementation Plan <http://gfcs-climate.org/implementation-plan>

ANNEX IV

Annex to [paragraph 7.4](#) of the general summary

THE GLOBAL FRAMEWORK FOR CLIMATE SERVICES BUDGET FOR 2015 AND OPERATIONAL AND RESOURCE PLAN FOR 2016–2018

I. LEGISLATIVE MANDATE

1. At the first session of the Intergovernmental Board on Climate Services held in 2013, Resolution 2 (IBSC-1) was adopted through which the IBCS approved the GFCS Implementation Plan calling for its immediate implementation. By adopting Resolution 3 (IBCS-1), IBCS approved the activities contained in the Annexes of the Implementation Plan that specify the five pillars of the GFCS, namely: (i) User Interface Platform (UIP); (ii) Climate Services Information System (CSIS); (iii) Observations and Monitoring (O&M); (iv) Research, Modelling and Prediction (RMP); and (v) Capacity development (CD). IBCS also specified that those Annexes are essential for effective implementation of the Plan. By adopting Resolution 5 (IBCS-1), IBCS also specified that for the implementation of the Plan, the projects and activities contained in the GFCS Project Compendium should be carried out. Furthermore, by adopting Resolution 8 (IBCS-1), IBCS considered the investment requirements to support the institutional structure of the GFCS, including the IBCS, its substructures and activities, and the GFCS Office, as well as the implementation of GFCS-related projects and activities.

2. This document contains the proposed GFCS budget for 2015 and the proposed Operational and Resource Plan for 2016–2018 which have been prepared on the basis of the above legislative mandates. The proposed budget is structured in accordance with the five pillars. The proposed project activities have been developed based on the GFCS Project Compendium. Finally, the proposed Operational and Resource plan for 2016–2018 has been developed, taking into account the requirements of the GFCS Implementation Plan, the affordability of WMO Members and partners for the financing of the proposed projects as well as the capability of the GFCS Office for project delivery.

II. OVERARCHING GOALS, OBJECTIVES AND STRATEGIC PRIORITIES OF THE GFCS BUDGET FOR 2015 AND THE GFCS OPERATIONAL AND RESOURCE PLAN FOR 2016–2018

3. The overarching goals of the GFCS are as follows:

- (a) Reducing the vulnerability of society to climate-related hazards through better provision of climate information;
- (b) Advancing the key global development goals through better provision of climate information;
- (c) Mainstreaming the use of climate information in decision-making;
- (d) Strengthening the engagement of providers and users of climate services;
- (e) Maximizing the utility of existing climate service infrastructure.

4. To effectively implement climate services, the IBCS at its first session approved the Implementation Plan of the GFCS (IP) with its Annexes and Exemplars as well a Compendium of initial projects and activities. These documents and the processes to achieve the expected results and realize the overall goals of the GFCS are the basis of the GFCS budget for 2015 and the Operational and Resource Plan for the period 2016–2018 (see Table 1). Improved provision of climate services will facilitate the reduction of society's vulnerability to climate-related hazards and the advancement of key global development goals.

5. The GFCS is being implemented over 2-, 6-, and 10-year timeframes to facilitate review at the World Meteorological Congress sessions. The first two years are a start-up phase for establishing the appropriate coordination mechanisms, GFCS's infrastructure and for initiating and facilitating demonstration projects in the four priority areas. The GFCS's implementers will emphasize strengthening regional support networks and institutional capacities that will be needed for subsequent development of national climate service capacities. During the second phase of implementation (the development phase), the initial two-year demonstration projects will be replicated in other parts of the world so that by year 6 there will be worldwide improvements in climate services for the four priority areas. These projects will provide measurable progress in realizing the GFCS's goals by year 6, and a mid-term review of the GFCS during this period will include consideration of such progress. After agreeing on new priority areas there will be an extension of projects beyond the initial four priorities. Significant improvements in national climate service provider capabilities will be realized during this phase because the regional infrastructures will be in place for supporting the development of national capacities.

III. BUDGET FOR 2015

Table 1: Summary of proposed GFCS budget 2015
(in thousands of Swiss francs)

Budget Part \ Source of funding	Regular Budget (RB)	Extrabudgetary Resources (XB)	Total
Budget Part 1: Governance	–	200.0	200.0
Budget Part 2: GCS Office	591.8	1,617.2	2,209.0
Budget Part 3: Projects			
UIP	–	1,700.0	1,700.0
CSIS	–	5,728.0	5,728.0
O&M	–	400.0	400.0
RMR	–	500.0	500.0
CD		6,008.1	6,008.1
Sub-total, Part 3: Projects	–	14,336.1	14,336.1
Total – Budget Parts 1, 2 & 3	591.8	16,153.3	16,745.1

6. The GFCS budget is composed of the following three parts: (i) Part 1: Governance; (ii) Part 2: the GFCS Office in the WMO Secretariat; and (iii) Part 3: GFCS-related Project Activities.

7. Part 1 covers the costs of the governance structure and function of the GFCS, namely, the IBCS, the IBCS Management Committee and the Partner Advisory Committee. Part 2 covers the costs of the GFCS Office established in the WMO Secretariat that: (a) carries out coordination; (b) provides support to Members and Partners in implementing GFCS-related activities through establishing partnerships and advocating for the need of climate services; and (c) supports the work of the IBCS and its substructures including the Management Committee of the IBCS and the Partner Advisory Committee. Part 3 covers the costs of the GFCS-related projects and activities as contained in the Implementation Plan of the GFCS. The costs of the projects and activities are broken down by Pillars.

8. The GFCS budget is financed from two sources of funding, namely: (i) the WMO regular budget; and (ii) extrabudgetary resources financed through voluntary contributions. The WMO regular budget is approved by the Executive Council on a biennial basis within the limit of the maximum expenditures voted by Congress for the financial period concerned.

9. The extrabudgetary part of the GFCS budget should be approved by IBCS. WMO Members and other WMO partners make voluntary contributions specifically for the implementation of GFCS activities for general and special purposes. The GFCS budget is administered within the WMO regulatory framework, in particular, in accordance with the WMO Financial Regulations.

10. The GFCS Office is part of the WMO Secretariat. Executive Management and the Programme Departments of the WMO Secretariat contribute to the implementation of GFCS activities. Extrabudgetary resources for GFCS activities are mobilized by the WMO Secretariat and its partners. Programme support services (language, publication and conference services) and administrative services (budget, finance, human resources, information and communication technologies, and common services) are also provided by the WMO Secretariat.

11. In-kind contributions are not taken into account in the 2015 budget. Details of the in-kind contributions received so far by WMO are provided below in Section V under in-kind contributions.

2015 Budget Part 1: Governance – Support for the functioning of the governance structure of the GFCS: CHF 0.2 million

12. The support for the functioning of the governance structure of the GFCS will depend on the decisions to be taken at the IBCS-2. In 2015, one session of the Management Committee of the IBCS and one session of the Partner Advisory Committee (PAC) will be held. It is envisaged that decisions on PAC modus operandi will be made at the first meeting of the PAC. IBCS will hold its third session in 2018.

13. The GFCS Office with WMO Secretariat support services will service the IBCS and PAC.

14. The Part 1 is funded from extrabudgetary resources made available through voluntary contributions from WMO Members and partners.

2015 Budget Part 2: GFCS Office: CHF 2.2 million

15. The GFCS Office will support the work of the IBCS and its substructures including the Management Committee of the IBCS and the Partner Advisory Committee, and will service the meetings of the Management Committee and PAC in 2015. The GFCS Office will carry out coordination and provide support to Members and Partners in implementing GFCS-related activities through establishing partnerships and advocating for the need of climate services.

16. The Part 2 is primarily funded from the WMO regular budget, supplemented by extrabudgetary resources made available through voluntary contributions from WMO Members and partners.

2015 Budget Part 3: GFCS-related Project Activities: CHF 14.3 million

17. The GFCS Implementation Plan identifies a set of activities to ensure that: (i) the appropriate governance structure for the GFCS at global to national levels are in place; (ii) an effective collaboration mechanism will take stock of the actions of the various actors; (iii) information sharing that will facilitate planning and coordination is in place; and (iv) projects will be initiated to demonstrate the value of climate services, primarily in climate vulnerable developing countries, to mobilize interest and support of policymakers and partners. Although progress in implementing the GFCS is being made, several countries out of the 70 identified by the High-Level Taskforce as not having enough capacities to develop and use climate services still require attention.

18. The priority projects will focus on creating and strengthening partnerships and building trust with users, in particular by developing the User Interface Platform. Such projects must be demonstrably viable and useful. Some of these projects will directly develop and deliver national and regional implementation activities – projects that integrate activities among several partners and countries and that will demonstrate international collaboration which could serve as examples

of regional activities. Identifying demand for climate services, and ensuring that response to this demand is informed by sound scientific research, is fundamental to guaranteeing sustained support for the GFCS. These initial projects will guide the development of activities on the 6– and 10–year horizons and in setting deliverables and targets for those medium- and long-term horizons.

19. The priority projects are structured in the budget in accordance with the five Pillars. Project activities to be implemented in 2015 are described below with an indication of total project resources required and the requirements for 2015. They are funded exclusively from extrabudgetary resources made available through voluntary contributions from WMO Members and partners, and implemented by WMO and its partners.

20. Out of the total costs of GFCS-related Project Activities for 2015 estimated at CHF 14.3 million, two projects worth CHF 6.9 million are already funded from voluntary contributions of Canada and Norway, as indicated below in paragraphs 29, 34 and 35.

Pillar: User Interface Platform (UIP) for 2015: CHF 1.7 million

Project: *Improving communications between the climate and agriculture and food security communities (2015: CHF 1.2 million; Project total for 2015–2018: CHF 5.2 million)*

21. The project aims at supporting the agriculture and climate partners to communicate climate risks to the agricultural sector, raise awareness of the availability and benefits of climate services, attain buy-in from agriculture users, advocate for partnership and support, and build trust amongst communities of practice. Investment in communication is essential to create demand for climate services from within the agriculture sector, and motivate engagement in dialogue. The project activities will try to establish a four-way communication between climate scientists, climate and agricultural researchers, agricultural extension services and the decision-making community, to ensure that applied research is refined and expanded to meet community needs. The Agriculture and Food Security activities will develop information channels that the farming community (including farmer associations, NGOs, village leaders etc.) can easily understand and grow to trust. The implementation of the project will start in 2015 and will be implemented over 6 years.

Project: *Establish frameworks for climate services for health at the national level in developing countries (2015: CHF 0.2 million; Project total for 2015–2016: CHF 0.4 million)*

22. This activity aims to establish national coordination mechanisms whereby the research and operational sections of the climate sector can interact with health actors, and build capacity in a learning-by-doing approach to jointly identify, implement and evaluate the use of climate information services in support of and as direct inputs into improved health protection. It will serve as a model and help establish standard tools and references for the expansion of the model in other countries and regions. The implementation of the project will start in 2015 and will be implemented over 2 years.

Project: *Improved water resources management through the development and testing of a tool which links changes in climate averages and variability to changes in water resources availability (2015: CHF 0.1 million; Project total for 2015–2016: CHF 0.2 million)*

23. The project aims at achieving improved water resources management through the development and testing of a tool which links changes in climate averages and variability to changes in water resources availability which will identify those areas on which the water manager may wish to place greater emphasis when developing Integrated Water Resources Management (IWRM) plans for the future. The implementation of the project will start in 2015 and will be implemented over 18–24 months.

Project: *Improved delivery and application of climate services through the establishment of effective and efficient User Interface Platforms for addressing the climate-water interface in trans-boundary river basins (2015: CHF 0.1 million; Project total for 2015–2016: CHF 0.2 million)*

24. The project aims at achieving improved delivery and application of climate services through the establishment of effective and efficient User Interface Platforms for addressing the climate-water interface in transboundary river basins. Pilot projects will be established in 5 transboundary river basins identified as water scarce regions incorporating a Water User Interface Platform between the hydrological and climatological communities. The pilot projects will provide guidance and assistance in the setting up of a Water UIP at the national and/or regional level and provide technical guidance on practices and procedures that can be adopted. The implementation of the project will start in 2015 and will be implemented over 18–24 months.

Project: *Improved delivery and application of climate services in areas highly dependent on snow or glacier melt for their water resources (2015: CHF 0.1 million; Project total for 2015–2016: CHF 0.2 million)*

25. Improved delivery and application of climate services through the establishment of effective and efficient User Interface Platforms for addressing the climate-water interface in basins highly dependent on snow or glacier melt for their water resources. Pilot Projects will be established in 5 river basins identified as basins highly dependent on snow or glacier melt for their water resources incorporating a User Interface Platform between the hydrological and climatological communities. The implementation of the project will start in 2015 and will be implemented over 18–24 months.

Pillar: Climate Services Information System (CSIS) for 2015: CHF 5.7 million

Project: *Climate Services for Disaster Risk Reduction (DRR) (2015: CHF 2.5 million; Project total for 2015–2016: CHF 5.0 million)*

26. This project will provide an initial vehicle for GFCS engagement by countries and communities, committed to reducing disaster risk, that are seeking climate products and services to assist them. By engaging with key DRR stakeholders, it will generate key outputs – better, timely, comprehensive and user-oriented climate information – in specific areas of DRR, as described in detail in the DRR Exemplar of the GFCS, and apply these outputs to improve the management of climate-related risks in a set of high-risk contexts. The implementation of the project will start in 2015 and will be implemented over 2 years.

Project: *Establish and coordinate operational support for Frameworks for Climate Services at national level in developing countries (2015: CHF 0.3 million; Project total for 2015–2018: CHF 0.9 million)*

27. The main goal of the project will be mainstreaming the use of climate information in decision-making by developing frameworks for climate services at national level. The entities and necessary methods of cooperation will be identified for developing and providing climate information, products and services that meet national needs and priorities. They will then be formalized and coordinated in a consistent and sustainable manner. This activity will be closely aligned with the dialogue activities under the UIP pillar (e.g., Climate-Health Working Groups) and also with associated activities under the Capacity Development pillar. The implementation of initial activities started in 2012 and will be ongoing.

Project: *Strengthening regional systems for providing climate services (2015: CHF 1.5 million; Project total for 2015–2017: CHF 4.5 million)*

28. The project will support developing countries with regional climate services and mechanisms for capacity development, professional networking and Regional Climate Outlook Forums (RCOFs), and will also bring together countries sharing common climate concerns for

collaborative assessments and to develop common understanding. Its major focus will be promoting and strengthening WMO RCCs, expanding RCC coverage to all WMO Regions, and expanding, improving and sustaining RCOFs, giving priority to vulnerable developing countries. Enhancing, strengthening and expanding the RCOF process to national climate outlook fora (NCOF), improving methods, implementing efficiencies and increasing user-focus will augment the sustainability of the RCOFs and NCOFs. This will provide users with more consistent and regular information and products pertinent to their needs, along with improved access to and dialogue with climate providers. The project will also assist RCCs and practitioners of RCOFs in optimizing, making more efficient and standardizing their practices and methods. It will complement activities aimed at developing/strengthening the RCC infrastructure and RCOF mechanisms under the Capacity Development pillar. The implementation of the project will start in 2015 and will be implemented over 3 years.

Project: Programme for implementing GFCS at Regional and National Scales (funded by Canada, 2013–2017) (2015: CHF 1.4 million; Project total for 2015–2017: CHF 4.3 million)

29. The Programme for implementing GFCS at Regional and National Scales aims to enhance resilience in social, economic and environmental systems to climate variability and change. The programme, funded by a grant from Canada, will implement GFCS in the Pacific, the Caribbean, South Asia and the Arctic. This will be achieved by providing improved climate information, predictions, products and services to support climate risk management and adaptation strategies, decision-making and actions at national and regional level. The programme started in 2013.

Pillar: Observations and Monitoring (O&M) for 2015: CHF 0.4 million

Project: Large-scale data recovery and digitization (2015: CHF 0.4 million; Project total for 2015–2018: CHF 1.6 million)

30. The project will provide support to global and regional Data Rescue, Digitization, and Homogenization (DARE&D&H) initiatives and develop new initiatives as required. The target initiatives are those using modern techniques, procedures, and tools to safeguard climate records at the risk of damage or loss and to recover and digitize them. The project will promote the use of these techniques in developing and least developed countries, including through training workshops for NMHSs and other organizations working in climate data collection. Ensuring appropriate Climate Data Management Systems (CDMS) capabilities to integrate rescued data into the national climate record is an integral part of the project. The ultimate goals of the project are to enable access and use of high-quality long-term climate data with daily time resolution, to reconstitute and assess the changing behaviour of climate extremes affecting water, agriculture, and health, and to provide adequate databases on climate hazards to support DRR. The implementation of the project will start in 2015 and will be implemented over 6 years.

Pillar: Research, Modelling and Prediction (RMP) for 2015: CHF 0.5 million

Project: Improving decision-making in climate-related risks: (2015: CHF 0.5 million; Project total for 2015–2016: CHF 1.0 million)

31. The project aims at improving decision-making through more effective use of climate information and climate services. This will be done through multi-disciplinary research and close engagement between climate service developers, providers and users. The project will develop case studies (one for each of the 4 initial priority areas) demonstrating how existing climate information can improve decision-making in the GFCS's priority sectors, and a multi-disciplinary research programme (meteorology, natural science, social science, economics) will be developed to improve the flow and use of climate information to inform decisions. In addition the project will focus on research aspects into how to make uncertain probabilistic information fit into decision support systems, communication of complex science-based information, and assessments of impacts of changes in climate on natural and human systems. The implementation of the project will start in 2015 and will be implemented over 2 years.

Pillar: Capacity development (CD) for 2015: CHF 6.0 million***Project: Support for the establishment of functional national user interface platforms (2015: CHF 0.3 million; Project total for 2015–2018: CHF 1.2 million)***

32. The main goal of the project will be strengthening the engagement of providers and users of climate services. Using the risk assessments in the major projects, the project will identify those countries where there is significant risk of project failure due to a non-functioning UIP. Working with partners the project will first identify which aspects of the risk can be treated through education and training, coaching or mentoring of the personnel responsible for creating and sustaining the UIP. These gaps will be addressed through education/training/coaching/ mentoring activities to address the needs identified in the previous step. By monitoring activity and maturity of the national UIP, the Human Resource Development (HRD) activities will be adjusted accordingly. The implementation of the project will start in 2015 and will be ongoing.

Project: Implementing national legislative and policy framework for climate services (2015: CHF 0.2 million; Project total for 2015–2016: CHF 0.4 million)

33. For responsibility, accountability and longer-term sustainability of the GFCS's activities it is highly desirable that every country implementing GFCS-related projects has national legislation and policy frameworks in place. These instruments, which will vary from country to country, clarify the national requirements and foundation for climate services ranging from the collection, quality control, archive and dissemination of climate observations to products and services. They will also identify the roles and responsibilities of the institution(s) that are designated by the government to provide these services to meet the national needs. This project will ensure that national climate service legislation and policy frameworks are in place to ensure longer term sustainability of GFCS-related projects. The implementation of the project will start in 2015 and will be implemented over 2 years.

Project: Global Framework for Climate Services – Adaptation and Disaster Risk Reduction in Africa (2011–2016, Funded by Norway) (2015: CHF 2.4 million; Project total for 2015–2016: CHF 4.7 million)

34. This project has two main objectives: building capacity for improved weather and climate services and developing weather- and climate-related services for agriculture. It builds on existing initiatives that have proven to be successful at national level and intends to upscale them to larger geographic areas. These include the Severe Weather Forecasting Demonstration Project and the Metagri operational project. It also seeks to strengthen meteorological services through the African Ministerial Conference on Meteorology (AMCOMET). The project started in 2011 and it will end in 2016.

Project: Climate Services Adaptation Programme in Africa (2013–2016, funded by Norway) (2015: CHF 3.1 million; Project total for 2015–2016: CHF 6.4 million)

35. The Climate Services Adaptation Programme in Africa is the first multi-agency initiative to be implemented under the GFCS. This flagship programme will help develop user-driven climate services for food security, health, as well as disaster risk reduction in Malawi and the United Republic of Tanzania. The aim of the programme, funded by the Government of Norway, is to increase the resilience of people most vulnerable to the impacts of weather- and climate-related hazards such as droughts and flooding and associated health risks including malnutrition, cholera and malaria. It aims to strengthen capacity both to develop and use climate services and combines cutting-edge science with traditional knowledge. It represents a unique partnership between climate and social scientists, researchers, development and humanitarian agencies and other key user sectors. It is a joint effort of WMO, the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS); the Centre for International Climate and Environmental Research – Oslo (CICERO); the Chr. Michelsen Institute (CMI); the International Federation of Red Cross and Red Crescent Societies (IFRC) through the Tanzanian and Malawian Red Cross; the

World Food Programme (WFP); and the World Health Organization (WHO). The programme started in 2013.

IV. OPERATIONAL PLAN 2016–2018

36. The GFCS Operational Plan for 2016–2018 captures the general overview of the intended projects to be carried out during 2016–2018. It is structured following the same outline of the 2015 budget structure composed of the three parts, namely: (i) governance; (ii) GFCS Office; and (iii) GFCS-related project activities, which will allow comparability between the 2015 budget and the 2016–2018 Operational Plan. The operational plan for 2016–2018 seeks to maintain programmatic consistency and to ensure continuity of GFCS-related project activities in accordance with the GFCS Implementation Plan.

37. The Operational Plan for 2016–2018 requiring CHF 120.4 million will be funded from both the WMO regular budget and extrabudgetary resources for all the three budget parts. Extrabudgetary resources will be made available through voluntary contributions of WMO Members and partners. Detailed financial requirements are presented in the 2016–2018 Resource Plan in Section V.

38. The GFCS Operational Plan for 2016–2018 incorporates the overall goals of the GFCS which stipulates a focus on improved provision of climate information and services and mainstreaming them into decision-making in the initial priority sectors of the GFCS and improving the overall linkages between service providers and users through appropriate interface mechanisms.

39. The overall objective of the Operational Plan is to build towards the vision of the GFCS to enable society to manage better the risks and opportunities arising from climate variability and change, especially for those who are most vulnerable to climate-related hazards.

2016–2018 Operational Plan Part 1: Governance – Support for the functioning of the governance structure of the GFCS: CHF 1.3 million

40. The GFCS Management Committee will meet every year in 2016–2018 (three meetings) and IBCS will hold its third session in 2018, subject to the decisions of the November 2014 meeting of the IBCS.

41. The GFCS Office with WMO Secretariat support services will service the IBCS and its subsidiary bodies, such as the Management Committee and PAC. The Part 1 of the Operational Plan will be funded from extrabudgetary resources.

2016–2018 Operational Plan Part 2: GFCS Office: CHF 9.4 million

42. The GFCS Office will continuously carry out coordination and provide support to Members and Partners in implementing GFCS-related activities through establishing partnerships and advocating for the need of climate services. This includes costs related to: development of work plans for the activities proposed in the Implementation Plan of GFCS, missions, production of audio-visual materials, workshops to support the pillars and priority areas, support the establishment of frameworks for climate services at national level, and office costs (administrative support, secretariat costs, ICT and printing, consultants and office equipment).

43. In continuity with the functions to be carried out in 2015, the GFCS Office will also performs the following functions:

- (a) Establishment of frameworks for climate services at national level as the coordination mechanisms needed to facilitate effective dialogues involving all relevant stakeholders to ensure that the entire value chain for the production and application of climate services are addressed in a systematic manner;

- (b) Establishment of the mechanism to ensure effective coordination at global level in order to be able to collect user needs from national and regional consultations and feed them into partners' programming and resource mobilization efforts;
- (c) Enhancing the number of partnerships that would allow integration of the various activities for effectively implement the GFCS; and
- (d) Continuing advocacy for the needs of climate services to demonstrate the benefits of climate services.

44. The Part 2 of the Operational Plan will be funded from both the WMO regular budget and extrabudgetary resources.

2016–2018 Operational Plan Part 3: GFCS-related Project Activities: CHF 109.8 million

45. The Part 3 of the operational plan is presented by pillars in accordance with the 2015 budget. The strategic level requirements are described, ensuring the consistency and continuity with the 2015 budget. The Part 3 will be exclusively funded from extrabudgetary resources.

46. Out of the total costs of GFCS-related Project Activities for 2016–2018 estimated at CHF 109.8 million, two projects worth CHF 8.4 million are already funded from voluntary contributions of Canada and Norway.

User Interface Platform (UIP)

47. Through the implementation of User Interface Platforms, there is scope for developing the capacity of users and professionals further and for better monitoring and evaluation of the use and effectiveness of climate services in decision-making. The user-driven focus of the GFCS requires a much higher level of involvement of users in all aspects of climate service production, delivery and use. This area is generally under-developed in the climate services field but there are good examples from other disciplines that can provide useful lessons.

48. Specific projects include:

- (a) Improve agricultural performance through the World AgroMeteorological Information Service (WAMIS-DSS) by working to make agrometeorological products available to the global agricultural community;
- (b) Climate services to enhance food security and resilience: Strengthening regional and national early warning systems for food security;
- (c) Climate services to enhance food security and resilience: Operationalizing climate services through the R4 Rural Resilience Initiative;
- (d) Climate services to enhance food security and resilience: Strengthening context analysis on food security, nutrition and climate change.

Climate Services Information System (CSIS)

49. Effective delivery of climate information products and services will require appropriate operational institutional mechanisms to generate exchange and disseminate information nationally, regionally and globally. This will be achieved through the implementation of a strategy hinging on a three-tiered structure of collaborating institutions (CSIS 'entities'³) that will ensure climate information and products are generated, exchanged and disseminated: (i) globally through a range of advanced centres, designated Global Producing Centres; (ii) regionally through a network of entities with regional responsibilities known as Regional Climate Centres; and (iii) nationally and

³ A CSIS entity is any institution carrying out one or more CSIS functions

locally by NMHSs and, through national institutional arrangements, with partners. Priority actions will include institutional, implementation, and research support along with training, capacity development, and governance aspects. Particular focus will be given to the effective implementation of Regional Climate Centres; regular review and update of user requirements for climate data, products and information, as well as of the use of climate information in real-world contexts; and the implementation of formal technical reference manual articulating certain globally agreed standards and specifications for the generation of products and services across all geographical levels.

50. Specific projects include:

- (a) Implementation of Climate Watch System;
- (b) Expand and sustain National Climate Outlook Forum (NCOF) or National Climate Forum (NCF) operations;
- (c) Define, build and make available a Climate Services Toolkit to all countries;
- (d) Establish modern Climate System Monitoring based on improved operational monitoring products;
- (e) Standardize the operational CSIS products and promote CSIS-wide use of WMO Information System (WIS);
- (f) Facilitate the effective use of Global Production Centres (GPC) and other global climate products by regional and national providers (e.g. Regional Climate Centres (RCCs) and National operational provision of Global Seasonal Climate Update Meteorological and Hydrological Services (NMHSs)).

Observations and Monitoring (O&M)

51. Focus under the Observations and Monitoring Pillar will be on addressing identified needs and gaps in climate observing systems, including their associated data management and data exchange infrastructures, and developing mechanisms for accessing and exchanging socioeconomic, biological, and environmental data in developing and delivering effective climate services. Furthermore, attention will be placed on the inter-connection between the Observation and Monitoring Pillar with other pillars, in particular the User Interface Platform and the Research, Modelling and Prediction pillars. Particular emphasis will be placed on Developing and Least Developed Countries (LDCs) and Small Island Developing States (SIDS).

52. Specific projects include:

- (a) Establish a coordination mechanism for collection, management, and exchange of climate and related food security data;
- (b) Monitor coastal regions in support of adaptation and understanding of vulnerabilities;
- (c) Establish best practices for air quality observations and monitoring in urban environments so as to address a major health concern;
- (d) Provide information for sustainable water resources development and management in key shared international river basins;
- (e) Establish a formal mechanism for consultation with users, and use it for an assessment of the role of observations in adaptation to climate variability and change. Development of guidelines to improve discovery of climate observational data and products;
- (f) The design of baseline networks to underpin climate services, and rehabilitation of silent stations and key stations in data poor areas to enhance the baseline networks;

- (g) Support for the operation of baseline networks in LDCs and SIDS;
- (h) Improve ground-based and space-based networks for measurement of precipitation;
- (i) Establish a coordination mechanism for architecture for climate monitoring from space.

Research, Modelling and Prediction (RMP)

53. Focus will be on effective implementation of the activities contained in the Research, Modelling and Prediction Pillar, as opposed to the initial focus which was on enabling the network of experts and institutions to define steps for practical implementation the activities contained in the Research, Modelling and Prediction Pillar.

54. Specific projects include:

- (a) Develop GFCS climate, food security and agriculture research strategy and set targets and priorities to support research at regional and national levels;
- (b) Develop mechanisms to coordinate research on attribution and prediction of climate extremes and transfer of its outcomes to climate services for DRR sector, adaptation measures and development of corresponding Early Warning Systems (EWSs);
- (c) Develop GFCS climate and health research and communication strategy and set targets and priorities to support health and climate research at regional and national levels;
- (d) Develop GFCS climate, water management and hydrological cycle research strategy and set targets and priorities to support research at regional and national levels;
- (e) Research on climate predictability and improving prognostic skill: subseasonal to seasonal time scales;
- (f) Research on climate predictability and improving prognostic skill: decadal to centennial time scales;
- (g) Research-based climate observations and dataset development;
- (h) Strengthening coordination of research activities of main organizations, agencies, and programmes of direct relevance to GFCS; developing partnership of communities producing experimental and regular climate information, including predictions, and making research products more broadly available to climate service users for assessment.

Capacity Development (CD)

55. Capacity development activities will focus on support to establishing climate services in those countries and territories in which basic climate services are lacking and the education and training needs of NMHSs in countries with shortcomings such as developing countries, Least Developed Countries and Small Island Developing States with a view to addressing specific issues such as forecaster's qualification for GFCS. Capacity development activities will include institutional, infrastructural, procedural and human capacity development.

56. Specific projects include:

- (a) Support for development of national Climate Service Information Systems;
- (b) Training for users of Climate Services.

V. RESOURCE PLAN FOR 2016–2018

Overall resource requirement for 2016–2018

57. The GFCS Resource Plan (2016–2018) reflects the resource requirements of the operating plan estimated at CHF 120.4 million, including both: (i) the expected regular budget resources for

the seventeenth financial period (2016–2019) to be approved by Seventeenth Congress in 2015 and the Executive Council during that financial period; and (ii) extrabudgetary resources to be mobilized through voluntary contributions.

Table 2: Resource requirements by source of funding for 2015–2018
(in thousands of Swiss francs)

Year	2015	2016	2017	2018
WMO Regular budget resources	591.8	1,254.6	1,254.6	1,254.6
Extrabudgetary resources	16,153.3	51,513.1	38,874.9	26,281.9
Total requirements	16,745.1	52,767.6	40,129.5	27,536.5

58. Table 2 above indicates the overall requirements of the Operating Plan for 2015 and 2016–2018, broken down by source of funding and by year. The regular budget figures are provided for information purposes only. In 2015, the Seventeenth World Meteorological Congress will vote the regular budget maximum expenditure of WMO for 2016–2019 and the WMO Executive Council will approve the biennial regular budgets for 2016–2017 and 2018–2019 in 2015 and 2017 respectively. It is not possible to anticipate the decisions of Congress and the Executive Council on the budget matter. The volume of the extrabudgetary resources required for 2016, 2017 and 2018 is considerable.

Extrabudgetary Resource Plan for 2016–2018

59. The major part of the resource requirements of the GFCS operational plan should be covered by extrabudgetary resources to be made available through voluntary contributions from WMO Members and partners. Out of the total resources of CHF 120.4 million for the 2016–2018 Operational Plan, the required extrabudgetary resources are estimated at CHF 116.7 million for 2016–2018. The remaining requirements would be funded from the regular budget, depending on the decisions of the Seventeenth World Meteorological Congress to be held in 2015 and the Executive Council in 2015 and 2017 on budget matters. GFCS-related project activities should be fully funded from extrabudgetary resources.

Table 3: Extrabudgetary Resource Plan by source of funding for 2016–2018
(in thousands of Swiss francs)

Year	2015	2016	2017	2018
Income and Expenditure				
A. Estimated opening balance	6,500.0	7,346.7	5,833.6	3,358.7
B. Expected income	17,000.0	50,000.0	36,400.0	26,000.0
C. Estimated expenditure	16,153.3	50,513.1	38,874.9	26,281.9
D. Estimated closing balance (A+B–C)	7,346.7	5,833.6	3,358.7	3,076.8

60. Table 3 above captures the expected annual income and the estimated annual expenditure, both of which are required to finance the extrabudgetary activities of the GFCS. It takes into account the estimated opening balance of the WMO GFCS trust funds for 2015. The estimated closing balances representing approximately 15% of the following years' requirements indicate an amount of resources required to ensure smooth and uninterrupted delivery of the projects. It is also assumed that the level of requirements for 2019 would be similar to those of 2018.

61. The resource plan indicates that: (i) from 2016 considerable annual amounts of extrabudgetary resources should be raised, in particular in 2016 (CHF 50 million); and (ii) corresponding project delivery is expected. Raising such an amount of extrabudgetary

resources would require: (i) a considerable increase in the GFCS infrastructure within the WMO Secretariat, including additional human resources; and (ii) convergence of major efforts from all the GFCS partners in order to meet this challenge. In this connection, it should be noted that WMO, as a whole, is expected to raise approximately CHF 25 million per annum for 2016–2019.

Financial and operational issues

In-kind contributions

62. China and the Republic of Korea have made available one seconded expert respectively at P-4 level from October 2014. These seconded experts are expected to work at the GFCS Office until September 2016. In case seconded experts are provided, it will reduce the requirements included in the extrabudgetary resource plan.

Need for general purpose voluntary contributions

63. A majority of the voluntary contributions received so far by WMO are special purpose contributions that finance project activities specified by the donors. However, general purpose contributions are expected to be increasingly required. Primarily, requirements for the governance and the GFCS Office could be funded from general purpose contributions. The GFCS Office and WMO Secretariat support services will be able to reinforce its functions that are not directly related to projects, since they should provide programmatic and administrative support services, including the substantive servicing of GFCS governing body meetings, coordination with GFCS partners, provision of technical support to WMO Members, project management, resource mobilization, language, publication and conference services, budget, finance, human resources management, information and communication technologies and common services.

Resource mobilization

64. Since 2011, a great number of WMO Members have made voluntary cash contributions and pledges as per IPSAS, including Australia; Bangladesh; Canada; China; Finland; France; Hong Kong, China; India; Indonesia; Islamic Republic of Iran; Ireland; Mexico; Norway, the Republic of Korea; South Africa; Switzerland and the United Kingdom. The total amount of cash resources mobilized for GFCS exceeds CHF 28 million so far, which indicates successful resource mobilization by the WMO Secretariat. Indonesia and South Africa made commitments for contribution. Furthermore, as mentioned above, China and the Republic of Korea have made in-kind contribution by making two seconded experts available to the GFCS Office. The WMO Secretariat will continuously assist the GFCS Office with resource mobilization. However, mobilization of extrabudgetary resources amounting to CHF 49.4 million for GFCS projects for 2016 will require additional resources, in particular staff resources, that could be funded from general purpose contributions.

Need for reinforced operational capabilities of the WMO Secretariat including the GFCS Office

65. For 2016 and the years that follow, a considerable amount of extrabudgetary resources will be required in order to sufficiently finance the increase in GFCS-related project activities. In order to ensure the effective delivery of such a high number of project activities, the WMO Secretariat, along with the GFCS Office, will require additional operational supports, including a number of supplementary programme and administrative services. These operational supports will need to include an increase in both staff and non-staff resources directly and indirectly linked to GFCS project activities. In terms of project staff, the cost for this will be funded by the corresponding extrabudgetary projects.

66. Internal rules and procedures of the WMO Secretariat, not only in the administration but also in project management, are being adapted to the requirement for the timely implementation of operational projects to cope with the future requirements.

Impact of reduced extrabudgetary contributions

67. In the case where sufficient funds are not made available, a minimum amount of approximately CHF 2.5 million would be required per annum, in order to maintain the infrastructure (i.e. the governance and the GFCS Office) with a very limited number of projects to be implemented. The limited funding will not allow expansion of the GFCS activities as foreseen in the Implementation Plan. The ability to implement GFCS activities will heavily rely on voluntary resources to be raised by WMO and its partners.

ANNEX V

Annex to [paragraph 9.7](#) of the general summary

MEMBERSHIP OF THE MANAGEMENT COMMITTEE OF THE INTERGOVERNMENTAL BOARD ON CLIMATE SERVICES

Chairperson: Mr Jens Sunde

Co-Vice-Chairpersons: Ms Linda Makuleni and Mr Laxman Singh Rathore

Other members: RA I (Democratic Republic of Congo, Senegal, Sudan, The Gambia, Tunisia)

RA II (China, Iran (Islamic Republic of), Japan, Republic of Korea)

RA III (Argentina, Brazil, Peru)

RA IV (British Caribbean Territories, Canada, Costa Rica, United States of America)

RA V (Australia, Fiji, Indonesia, Philippines)

RA VI (Germany, Italy, Russian Federation, Switzerland, Turkey)

APPENDIX

LIST OF PARTICIPANTS

1. Representatives of WMO Members

Algeria Djamel BOUCHERF	Principal delegate
Antigua and Barbuda Destin DALE	Principal delegate
Argentina Monica Beatriz MARINO (Ms)	Principal delegate
Armenia Levon VARDANYAN	Principal delegate
Australia David WALLAND	Principal delegate
Austria Vera FUCHS (Ms)	Principal delegate
Azerbaijan Gulshad MAMMADOVA (Ms)	Principal delegate
Bahrain Adel Tarrar M. DAHAM Tariq M. KHALFAN	Principal delegate Delegate
Belgium Christian TRICOT	Principal delegate
Belize Dennis GONGUEZ	Principal delegate
Brazil Antonio Divino MOURA Jose Arimatea DE SOUSA BRITO Lucas Vinicius SVERSUT	Principal delegate Delegate Delegate
British Caribbean Territories David FARRELL	Principal delegate
Burkina Faso Mahamadou OUEDRAOGO Adama Alhassane DIALLO	Principal delegate Delegate
Cameroon Philippe RICHARD	Principal delegate
Canada David GRIMES Diane CAMPBELL (Ms)	Principal delegate Delegate
Chile Guillermo NAVARRO	Principal delegate
China Meiyan JIAO (Ms) Mingmei LI (Ms) Qingchen CHAO (Ms)	Principal delegate Alternate Delegate

Colombia Carlos CARRETERO	Delegate
Congo Camille LOUMOUAMOU Paul DINGA	Principal delegate Delegate
Costa Rica Juan Carlos FALLAS SOJO	Principal delegate
Côte d'Ivoire Daouda KONATE Bernard KOAKOU	Principal delegate Delegate
Croatia Ivan CACIC Kreso PANDZIC	Principal delegate Delegate
Cuba Ramon PEREZ SUAREZ	Principal delegate
Curaçao and Sint Maarten Albert MARTIS	Principal delegate
Czech Republic Radim TOLASZ	Principal delegate
Egypt Hassan Mohamed HASSAN Kamal FAHMY Mohamed Ibrahim NASR	Principal delegate Delegate Delegate
Ethiopia Fetene TESHOME Kinfe HAILEMARIAM	Principal delegate Delegate
Fiji Malakai TADULALA Mikaeli FUNAKI	Principal delegate Delegate
Finland Petteri TAALAS Hilppa GREGOW (Ms) Maria Charlotta HURTOLA (Ms) Joanna Maaria SAARINEM (Ms)	Principal delegate Delegate Delegate Delegate
France Patrick JOSSE Jean-Noël DEGRACE	Principal delegate Delegate
Gambia Lamin TOURAY	Principal delegate
Germany Gerhard ADRIAN Dirk ENGELBART Thomas FITSCHEN Detlev FROMMING Annegret GRATZKI (Ms) Bjorn ORIWOHL Joachim SAALMULLER	Principal delegate Delegate Delegate Delegate Delegate Delegate Delegate
Guinea Mamadou Lamine BAH	Principal delegate
Guinea-Bissau Joao Lona TCHEDNA	Principal delegate

Honduras	
Jose E. SALGADO	Principal delegate
Gilliam Noemi GÓMEZ GUIFARRO	Delegate
Hong Kong, China	
Sai-ming LEE	Principal delegate
Iceland	
Arni SNORASSON	Principal delegate
India	
Shailesh NAYAK	Principal delegate
Madhavan Nair RAJEEVAN	Delegate
L.S. RATHORE	Delegate
B.N. REDDY	Delegate
Vishnu REDDY	Delegate
Iran, Islamic Republic of	
Iman BABAEIAN	Principal delegate
Ireland	
Ray Mc GRAH	Principal delegate
Italy	
Luigi DE LEONIBUS	Principal delegate
Vincenzo ARTALE	Delegate
Maurizio BIASINI	Delegate
Ezio BUSSOLETTI	Delegate
Carlo CACCIAMANI	Delegate
Franco DESIATO	Delegate
Filippo MAIMONE	Delegate
Maria Leone MICHAUD	Delegate
Giancarlo Maria PEDRINI	Delegate
Japan	
Teruko MANABE (Ms)	Principal delegate
Masaza KONISHI	Delegate
Akihiko SHIMPO	Delegate
Kenya	
James KONGOTI	Principal delegate
Peter George AMBENJE	Delegate
Peter Silla MASIKA	Delegate
Kuwait	
Mohamed K. ALI	Principal delegate
K. Amirah F. ALAZEMI (Ms)	Delegate
Abdul Hamide A. DASHTI	Delegate
Latvia	
Peteris PODVINSKIS	Principal delegate
Liberia	
Arthur GAR-GLAHN	Principal delegate
Macao, China	
Meiyan JIAO (Ms)	Principal delegate
Madagascar	
Soarijaona S. RAHARIVELOARIMIZA (Ms)	Delegate
Maldives	
Abdullahi MAJEED	Principal delegate
Mali	
Mamadou Adama DIALLO	Delegate
Sidi Mohamed Youba SIDIBE	Delegate

Mauritania	
Mohamed El Ghali KHTOUR	Principal delegate
Mamadou LAM	Alternate
Mauritius	
Mohamudally BEEBEEJAUN	Principal delegate
Mexico	
Raul VARGAS	Delegate
José Francisco VILLALPANDO IBARRA	Delegate
Morocco	
Said AHOUGA	Delegate
Hassane BOUKILL	Delegate
Fayçal SOUISSI	Delegate
Mozambique	
Atanasio Joao MANHIQUE	Principal delegate
Luisa CONCEICAO (Ms)	Delegate
Namibia	
Abraham NEHEMIA	Principal delegate
Simon Andre DIRKSE	Delegate
Kauta KAAKUNGA	Delegate
Emmanuel KAMBUEZA	Delegate
Sophia Nangula KASHEETA (Ms)	Delegate
Nepal	
Durga Prakash MANANDHAR	Principal delegate
Netherlands	
Arnout FEIJT	Principal delegate
New Zealand	
Andrew TAIT	Principal delegate
Norm HENRY	Delegate
Niger	
Moussa LABO	Delegate
Nigeria	
Anthony C. ANUFOROM	Principal delegate
Ernest A. AFIESIMAMA	Delegate
Ifeanyi D. NNODU	Delegate
Norway	
Steffen KONGSTAD	Principal delegate
Marit Viktoria PETTERSEN (Ms)	Delegate
Jens SUNDE	Delegate
Eugenia TAPIA (Ms)	Delegate
Oman	
Said H. M. AL SARMI	Principal delegate
Panama	
Edilberto ESQUIVEL MARCONI	Principal delegate
Pilar LOPEZ (Ms)	Delegate
Papua New Guinea	
Kasis INAPE	Principal delegate
Peru	
Esequiel VILLEGUAS PAREDES	Principal delegate

Philippines

Vicente B. MALANO	Principal delegate
Flaviana D. HILARIO (Ms)	Delegate
Arnel TALISAYON	Delegate

Qatar

Ahmed Abdulla MOHAMED	Principal delegate
Krishna K. KANIKICHARLA	Delegate

Republic of Korea

Tae-young PARK	Principal delegate
Yun-seon CHOI (Ms)	Delegate
Miok KI (Ms)	Delegate
Seungkyun PARK	Delegate

Russian Federation

Alexandre MAKOSKO	Principal delegate
Vladimir KATSOV	Delegate
Tatiana MOSKALEVA (Ms)	Delegate
Eduard SARUKHANYAN	Delegate
Sergei SEMENOV	Delegate
Alexander ZAYTSEV	Delegate

Samoa

Sunny SEUSEU	Principal delegate
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Sao Tome and Principe

Joao Vicente VAZ LIMA	Principal delegate
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Saudi Arabia

Ayman Salem GHULAM	Principal delegate
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Senegal

Aida DIONGUE NIANG (Ms)	Principal delegate
Alioune Badara LY	Delegate
Oumar SANE	Delegate

Sierra Leone

Alpha BOCKARI	Principal delegate
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Slovakia

Martin BENKO	Principal delegate
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Solomon Islands

Lloyd TAHANI	Principal delegate
Jules DAMUTALAU	Delegate
Lu MONG-MING	Delegate
Barrett SALATO	Delegate

South Africa

Linda MAKULENI (Ms)	Principal delegate
Lawrence DUBE	Delegate
Mark MAJODINA	Delegate

Spain

Julio GONZALEZ BRENA	Delegate
Maria del Carmen RUS JIMENEZ (Ms)	Delegate

Sudan

Ahmed Mohamed Abdelkarim ABDELRAHMAN	Principal delegate
Ghanim Ahmed ABDELKARIM	Delegate

Sweden

Ilmar KARRO	Alternate
Lena LINDSTRÖM (Ms)	Delegate

Switzerland

Peter BINDER	Principal delegate
Dominique BEROD	Delegate
Mischa CROCI-MASPOLI	Delegate
Fabio FONTANA	Delegate
Andre OBREGON	Delegate
Alex RUBLI	Delegate
Gabriela SEIZ (Ms)	Delegate
Stefan SIGRIST	Delegate
Michelle STALDER (Ms)	Delegate

Thailand

Songkran AGSORN	Principal delegate
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The former Yugoslav Republic of Macedonia

Oliver ROMEVSKI	Principal delegate
Vlado SPIRIDONOV	Delegate

Togo

Awadi Abi EGBARE	Principal delegate
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Tunisia

Abdelwaheb NMIRI	Principal delegate
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Turkey

Hayreddin BACANLI	Principal delegate
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United Kingdom of Great Britain and Northern Ireland

Rob VARLEY	Principal delegate
Chris HEWITT	Alternate
Gavin John ILEY	Delegate
Carolyn Louise JOHNSON (Ms)	Delegate
Jane WARDLE (Ms)	Delegate

United Republic of Tanzania

Agnes L. KIJAZI (Ms)	Principal delegate
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United States of America

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Caroline N. BROUN (Ms)	Delegate
Edwin P. BROWN	Delegate
Caroline E. CORVINGTON (Ms)	Delegate
Amanda T. MCCARTY (Ms)	Delegate
M Ferdie MUTH (Ms)	Delegate
David R. REIDMILLER	Delegate

Uruguay

Agustina Lorena CAMILLI (Ms)	Delegate
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Uzbekistan

Sergey MYAGKOV	Principal delegate
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Vanuatu

Philippe MALSALE	Principal delegate
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Zambia

Jacob NKOMOKI	Principal delegate
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Zimbabwe

Amos MAKARAU	Principal delegate
Chameso MUCHEKA	Delegate

2. Representatives of international organizations

African Development Bank

Al-Hamndou DORSOUMA Observer
Tom OWIYGO Observer

Economic Commission for Africa

Wilfran MOUFOUMA OKIA Observer

European Commission

Andrea TILCHE Observer

European Organization for the Exploitation of Meteorological Satellites (EUMETSAT)

Joerg SCHULZ Observer

Group on Earth Observations (GEO)

Espen VOLDEN Observer

Intergovernmental Authority on Development (IGAD)/IGAD Climate Prediction and Application Centre (ICPAC)

Laban OGALLO Observer

International Council for Science

Gordon McBEAN Observer

International Federation of Red Cross and Red Crescent Societies

Joy MULLER (Ms) Observer
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International Research Institute for Climate and Society (IRI)

Catherine VAUGHAN (Ms) Observer
Stephen ZEBIAK Observer

International Union of Geodesy and Geophysics (IUGG)

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United Nations Institute for Training and Research (UNITAR)

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World Federation of Engineering Organizations (WFEO)

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