

WORLD METEOROLOGICAL ORGANIZATION

**EC Working Group on
Disaster Risk Reduction and Service Delivery**

Second session

(WMO Headquarters, Geneva, Switzerland, 24-26 February 2010)



Final Report

REPORT OF THE SECOND SESSION OF THE EC WORKING GROUP ON DISASTER RISK REDUCTION AND SERVICE DELIVERY

1. OPENING OF THE SESSION (agenda item 1)

1.1 Opening (agenda item 1.1)

1.1.1 The session was opened by its Chair, Dr J. Hayes, USA, who welcomed the participants and laid out his strategy for achieving the expected results of this meeting. The Working Group (WG) had been created by a decision of Cg-XV in 2007, and was expected to advise the Executive Council on issues of Disaster Risk Reduction and Service Delivery, including cooperation with the private sector. Dr Hayes stated that the objective for the second session was to develop a recommendation to Congress for consideration at the next Executive Council that will lead toward the alignment of the related DRR and SD Programmes of the Technical Commissions, Regional Associations and WMO Programmes, and to identify priorities and activities for inclusion in a budget proposal to Congress that focuses on support to Members to fulfil their mandate in DRR and SD.

1.1.2 The Secretary-General of WMO, Mr M. Jarraud, in his opening remarks, pointed out the complexity and wide range of the mandate for this group, reminding them that service delivery required a larger focus, with obvious links to the newly created Global Framework for Climate Services, whose High-Level Task Force (HLT) was due to meet during the following two days also at WMO, and who could benefit from the deliberations of this group.

1.2 Adoption of the agenda (agenda item 1.2)

1.2.1 The agenda for the session was adopted as reproduced in Annex I.

2. REVIEW OF OUTCOMES FROM THE FIRST SESSION OF THE WG AND FOLLOW-UP ACTIONS (agenda item 2)

2.1 DRR Programme

2.1.1 The Executive Council Working Group on Disaster Risk Reduction and Service Delivery (EC-WG DRR & SD) was briefed by the WMO Secretariat on the progress in implementing the DRR Programme, including two types of cooperation projects and reminded of the results of a 2006 survey which revealed that:

1) 70% of countries need amendments or restructuring of their national policies and legislation; 2) 65% National Meteorological and Hydrological Services (NMHSs) need strengthening or full modernization of infrastructure; 80% NMHS need technical and management training; and, 80% of NMHS need strengthening or building multi-sectoral institutional partnerships, coordination and service delivery.

2.1.2 The WG recognized the need to incorporate regional cooperation mechanisms and to strengthen infrastructure in support of DRR. Sharing of best practices and information was considered vital, particularly linked to some standardization of DRR services. The WG highlighted the importance of linking NMHSs with decision-makers and the public. The WG was informed that in different regions, drivers of Disaster Risk Management (DRM) projects are different. For example, in South East Asia, Africa-SADC and Central America and the Caribbean, the multi-hazard early warning system is a high priority for governments as the first step in DRR. Whereas, in South East Europe, the Africa-IGAD Region, and in Central Asia and the Caucasus, DRM projects are driven by a need for better sectoral planning, including resource management. The WG noted that DRM projects and the strengthening of NMHS's DRM capacities should be driven by national / regional priorities and that in addition to strengthening national capacity; the programme should support efforts to develop regional specialized centres or regional centres for distribution of information from global centres.

2.1.3 With regard to funding mechanisms, relationship building with key partners was highlighted and it was noted that post-disaster reconstruction process and humanitarian flash appeals posed an

important opportunity to leverage the funds needed for strengthening and modernizing the NMHS infrastructure for future disaster preparedness. The success of the WMO DRR projects shows the importance of a framework in engaging the international community.

2.1.4 The Chair, in summary, noted that the DRR Programme had begun by identifying a need through the survey and that its six-step process provided a standard that WMO could replicate, similar to the SWFDP process. It is portable and scalable. He noted that most of the effort had focused on developing countries and that developed countries needed to reinforce the process if the WMO was going to be successful at standardization. The Chair also called attention to comments by several WG members that the DRR Programme needed to look beyond weather and water to other societal benefits such as public health and climate.

2.2 Service delivery activities and related strategic issues, including cooperation with the private sector

2.2.1 The WG recalled it had made a number of decisions regarding Service Delivery (ref.: Final Report of the First Session of the WG on DRR and SD). These included the development by the WMO Secretariat of a WMO Policy Framework on Service Delivery with the contribution of those WMO Programmes that have a role in service delivery; the future development of Service Delivery Key Outcomes; and cooperation with the private sector. The WG was briefed by the Secretariat on progress on each of these areas. A draft policy framework was presented to the WG for further deliberation and input under agenda item 3.

2.2.2 The WG recalled that, at its first session, it had discussed the proposed revised Expected Results (ERs) for the 2012-2015 Financial Period and that the proposed ERs relevant to its work are: ER 1 "Enhanced capabilities of Members to deliver and improve access to high-quality weather, climate and water predictions, information and services informed by users' needs and to enable their use in decisions-making by all relevant societal sectors"; and, ER 2 "Enhanced capabilities of Members to reduce risks and potential impacts of hazards caused by weather, climate and water".

2.2.3 The WG agreed to recommend to the EC that the following Key Outcome for Service Delivery be presented to the Sixteenth Session of WMO Congress (Cg-XVI) for consideration. **ER 1: Key Outcome: Weather, water and climate products and services meet user needs, as measured by user satisfaction and objective evaluation measures such as timeliness, accuracy and usefulness.**

2.2.4 The WG noted that the Service Delivery Framework was relevant to the work of the High-Level Taskforce on the Global Framework for Climate Services (HLT) and that the draft WMO Strategy for Service Delivery should be presented to the EC with the recommendation that it be shared with the HLT. This issue is further addressed under agenda item 4.

2.2.5 The WG had agreed at its first session that, irrespective of whether services originated from public or private sector providers, WMO should work to ensure that weather-, climate- and water-related services are scientifically sound and fit for purpose. The WG had supported the outcomes from the work of the WG on Strategic and Operational Planning (SOP), and had agreed to focus on policy and guidelines for an ethical framework for engagement with the donors and corporate sponsors. It had further agreed that such a framework would apply to the WMO Secretariat and that a policy proposal should be developed by the Secretariat for consideration by EC.

2.2.6 On the issue of Public-Private Partnership, the WG welcomed the review of WMO ethical guidance on the cooperation with the private sector based on generic UN guidance as a basis for future PPP projects. The WG decided to recommend to EC to adopt this ethical framework, as contained in Annex III. This action would conclude the work of the WG on this item.

3. INTRODUCE AND REVIEW THE WMO STRATEGY FOR SERVICE DELIVERY (agenda item 3)

3.1 The WG recalled that at its first session, it had requested that the WMO Secretariat work with the Working Group Members and consult with the other WMO Programmes that had a role in service delivery to further develop the draft WMO Policy Framework for Service Delivery.

3.2 The WG noted that the revised draft Framework had been circulated to other WMO Programmes involved with service delivery and that their comments had been included in the draft presented to the WG. In order to avoid confusion with the "Global Framework for Climate Services (GFCS)", the title of the document was changed to "WMO Strategy for Service Delivery". The WG expressed its appreciation to all those who had contributed towards the expansion of the draft Strategy.

3.3 The WG decided that the draft Strategy should be presented to the EC with the recommendation that it be presented to Congress for adoption. The WMO Secretariat was requested to provide a revised draft of the document, which is given as Annex IV.

3.4 The WG recognized four principles in the strategy, that: 1) user feedback is essential; 2) sharing best practices leads to effective services; 3) service delivery is a common element of all WMO programs; and, 4) partnership with other organizations is necessary for success.

3.5 The WG agreed that Members needed to develop approaches to engage users in service delivery. They further agreed that minimum guidelines for provision of services were needed; that they be nationally determined and evaluated and shared amongst Members in order to support the adoption of best practices and capacity-building.

3.6 On the question on how this strategy related to the WMO Quality Management Framework (QMF), the WG agreed that they were inseparable and would have to work together, recognizing a large overlap in the area of user focus, consultation and process orientation, but that the SD strategy would go further than QMF which typically asks "*how*" services are provided whereas service delivery also asks "*what*" services are needed.

3.7 The WG considered whether the Strategy needed to address the difference between approaches taken for "public good" services from those for private customers, and concluded that the strategy needed to be flexible enough to allow individual Members to set their own priorities and approaches for different types of customers / users.

3.8 The WG requested that the WMO Secretariat continue to make improvements to the document. In particular, the WG requested that possible actions be identified that would need consideration by Congress for budgetary resources during the next Financial Period.

4. GLOBAL FRAMEWORK FOR CLIMATE SERVICES (GFCS) (agenda item 4)

4.1 The WG was briefed by the WMO Secretariat on the outcomes from the Third World Climate Conference (WCC-3), and the Intergovernmental Meeting for the High-Level Taskforce on the GFCS, including discussion of the service delivery component of the GFCS and how WMO Programmes may contribute to the GFCS.

4.2 The WG noted the importance of the creation of the Global Framework for Climate Services to the future direction of the WMO. It was clear that the GFCS would go beyond the current mandate of WMO. The High-Level Taskforce, which has two (2) expert members from the meteorological and climatological community, compared to twelve (12) representatives from different societal, regional and sectoral groups, would take a fresh look at the information needs of different communities that are served by a variety of providers for services relating to climate variability and change,.

4.3 The WG discussed the merits of “mapping” perceived requirements of the GFCS (based on an estimation of what the HLT may identify) against current WMO capabilities and structures. The WG was informed that the WMO Secretariat would be conducting a preliminary “gap analysis”. In addition, the WG was informed of plans to reform the World Climate Programme and of progress in the establishment of new Regional Climate Centres.

4.4 The importance of climate services within NMHS’s (e.g., observations, data processing and collection) and the invaluable role of NMHSs as partners with national agencies down to regional and local communities in the provision of climate services was recognized. The WG noted that recognition of the NMHS role was critical to increasing resources to build capacity for all elements of the service delivery chain.

4.5 The WG noted as it had during its consideration of the Strategy for Service Delivery that key elements of climate services will benefit from user feedback, engagement, and buy-in, and that this “interface” should be seen as a “facilitator”, establishing contact and creating a common understanding between users and the different elements of data, product and service delivery.

4.6 The WG concluded that the pool of experience and expertise in service delivery held within the WG should be made available to the HLT in a suitable form. To this end, the WG decided to include such an offer of support to the HLT in the WG report to the forthcoming Executive Council meeting (EC-LXII).

4.7 Finally, the WG expressed its interest in being kept informed of the findings and recommendations of the HLT as an external view of WMO and NMHS capabilities and gaps to be used for continuous improvement.

5. STRATEGIC ISSUES OF DRR AND SD DEVELOPMENT IN THE WMO, INCLUDING IMPACTS OF WMO PROGRAMMES IN DRR AND SD (agenda item 5)

5.1 Overview of the Tropical Cyclone Programme (TCP), its impacts in DRR through improved SD, and future directions (agenda item 5.1)

5.1.1 The WG was given a detailed briefing by the WMO Secretariat on the TCP. It recognized that operational tropical cyclone forecasting, particularly intensity forecasting, was still a serious challenge to the tropical cyclone warning centres in all the basins. Among other things, forecast of rapid change in the cyclone intensity is a critical issue because it often results in a significant damage to property. The WMO Secretariat recommended that R&D needs to be pursued and technology transfer from research to operational forecasting should be promoted.

5.1.2 An important aspect of the TCP continues to be the training of tropical cyclone forecasters, which is essential for a sustained augmentation of the tropical cyclone warning services provided to the public by NMHSs. Forecasters of Small Island Developing States (SIDS) in the tropical cyclone basins were seen as a priority target group. The WG was informed of the collaboration between the TCP and Public Weather Services (PWS) to conduct joint training workshops for forecasters to learn about forecasting as well as service delivery.

5.1.3 The WG was informed that the TCP regional bodies had served as important platforms for implementation of the various projects of DRR, DPFS, MMOP (JCOMM), WWRP and HWR. The SWFDDP in RA V was emphasized in which RSMC Nadi and TCWCs will play key roles in achieving its objectives.

5.1.4 The WG was informed that some countries, especially those below ten (10) degrees latitude are also vulnerable to tropical cyclones and that the TCP needed to pay attention to the effects of the cyclone’s tail. The WG also recognized the importance of better understanding how developing storms at their early stages affect Western Africa even before becoming Hurricanes.

5.1.5 The WG was reminded that the role of the WMO is to support regional and national authorities by showing best practices and to strengthen national and regional capacity to apply best practices.

5.1.6 In summarizing, the Chair recognized the progress that has been made under the TCP and its importance in meeting sub-regional needs. He noted that the WMO Secretariat had informed the WG that there are numerous DRR-related programs that address sub-regional needs. In light of the possibility of continuing under a budget with Zero Nominal Growth (ZNG), it needs to look to the Regional Associations to set priorities for WMO regional programs. The Chair also called attention to the fact that in order to manage the five Tropical Cyclone Centres, almost 90 Members and WMO Secretariat staff will have to travel at least one week every four years. In the United States alone, there are at least two hurricane conferences every year. The WG agreed that the Chair's report to EC should recommend greater integration of the TCP and DRR Programmes in the form of a programmatic framework that incorporates WIS / WIGOS, cross-office leveraging, and budget prioritization.

5.2 Overview of the Severe Weather Forecasting Demonstration Project (SWFDP), lessons learnt and opportunities for the future (agenda item 5.2)

5.2.1 The WG was briefed on progress of the SWFDP that currently is being implemented in two regions: (a.) sixteen countries of the southern Africa region, known as "SWFDP – Southern Africa"; and (b.) four countries of the South Pacific Islands, known as the Severe Weather Forecasting DRR Demonstration Project, "SWFDDP – South Pacific Islands" in a pilot phase. The WG noted that other possible projects were being considered, specifically one in Southeast Asia involving four countries: Cambodia, People's Democratic Republic of Lao, Thailand and Viet Nam. Future direction and expansion of the SWFDP would be a main subject for the CBS Steering Group on SWFDP.

5.2.2 While noting that cooperation among technical programmes of GDPFS, PWS, MMO and TCP were ongoing in support of current SWFDP regional projects, addressing heavy rain, strong winds, and damaging waves, the WG recommended that the SWFDP should be extended to address all weather-related hazards, and encouraged relevant programmes and Technical Commissions to collaborate synergistically and cost-effectively to create and implement multi-hazard early-warning systems, depending on the specific needs of each regional project.

5.2.3 The WG noted that while the SWFDP is heavily focused on better access to, and more effective use of, NWP and EPS outputs in operational severe weather forecasting in developing countries. SWFDP is an end-to-end production-to-service delivery project that also incorporates other products, such as satellite products, and radar products when available, especially to address forecasting and the delivery of warning services for imminent severe weather in the first few hours of the forecast period. The SWFDP will engage WIS and WIGOS, and already works jointly with Research (WWRP/TIGGE) to ensure efficient transfer of relevant and promising research and development outputs into operational trails.

5.2.4 The WG noted that in the SWFDP – Southern Africa Project, a wide range of global products are made available for participating countries by NWP Centres outside of Africa. A long-term vision for numerical weather prediction capability in Africa could include establishing a community NWP centre that specifically supports quality assured, user-driven weather prediction services delivered by NMHSs of the region.

5.2.5 The WG noted important strengths of the SWFDP, including user engagement, addressing regional needs, building of cross-programmatic integration, and creating sustainable legacies for regional handover, and therefore recommended that the SWFDP be maintained and supported as an important model for enhancing Members' disaster risk reduction and service delivery programmes.

5.3 Overview of the Marine Meteorology and Oceanography Programme (MMOP) (agenda item 5.3)

5.3.1 The WG noted that the coordination, facilitation and standardization of marine and ocean product preparation and service delivery (including services for maritime safety and Disaster Risk Reduction (DRR)) are a major part of the work of the Programme and Commission. Major focus areas within the Services Programme Area are: forecast systems and services, disaster risk reduction, and service delivery.

5.3.2 The WG recognized that the delivery of MetOcean services to support maritime safety has been a priority for the National Meteorological Services and WMO since their origins in the late nineteenth century. These are now delivered within the context of the Global Maritime Distress and Safety System (GMDSS) of the International Maritime Organization (IMO) with JCOMM having primary responsibility for international coordination and regulation. The IMO has recently encouraged WMO to formalize this work through a Worldwide MetOcean Information and Warning Service, to complement the existing IMO/IHO (International Hydrographic Organization) Worldwide Navigational Warning Service.

5.3.3 The WG noted the activities undertaken in the framework of the Spanish West Africa Cooperation Programme and the initiation of a pilot project on Marine Meteorology Project (Monitoring and Services) for the Northwest African Basin, namely Senegal, Mauritania, Cape Verde, and the Gambia. The WG was informed that the next stage of this Project would be to initiate development of a full concept for an operational system in Marine Meteorological Services in the region. This would commence at the upcoming Conference and Workshop on Marine Forecasting: Operations, Research and Applications (Dakar, April 2010), which is supported by the United States of America. The WG was also informed that France, the AfDB, UNECA, the International Federation of the Red Cross and Red Crescent (IFRC) and the Agence Française de Développement (AFD) are launching on 24 on 25 March 2010, in Addis Ababa, the project ViGiRisC (Vigilance Systemes and integrated Climate Risk Management in Africa) which is implemented by ACMAD. This Project aims to support the development of products and pilot services of vigilance related to climate risk in different areas, and in a number of countries where vulnerability is high.

5.3.4 While recognizing the efforts being undertaken and noting the importance of the Spanish West Africa Cooperation Programme for the region and also the potential replication to other maritime regions in Africa, such as the Gulf of Guinea, the WG recommended that the detailed concept be developed as soon as possible and additional support and donors targeted to finance its implementation project to enhance the early start of the project.

5.3.5 The WG agreed to recommend to EC that a programmatic framework be designed that harnesses these projects into a larger umbrella and that WMO programs be implemented in a coordinated fashion. Such a framework would provide way of working and guidance to Members and the WMO Secretariat.

5.4 Overview of the role and impacts of other WMO Programmes, Technical Commissions and Regional Associations in DRR and SD (agenda item 5.4)

5.4.1 The WMO Secretariat briefed the WG on how Regional Associations were differentiated in their structures and approaches to DRR and SD. The WG noted that many Regional Association Members were active participants in DRR events at regional and sub-regional levels and in mobilising emergency response following disasters. The WG also recognised that a number of DRR and service delivery activities were occurring in the regions. In this regard, the WG noted that linking Regional Association DRR mechanisms to the regional DRR platforms and grouping could facilitate a more informed prioritisation of needs and challenges for the region. The WG encouraged further coordination with other organizations involved in DRR at the regional level noting these organizations do not always realise the potential of the NMHS in this area.

5.4.2 The WG considered that it was impossible to generalise on how Regional Associations were taking up the DRR challenge, as each Association appeared to be choosing a different range of working mechanisms. However, the WG noted that, to-date, each Association had found a way to give high priority to DRR activities, even with limited resources for programme implementation.

5.4.3 The WG also considered that the Regional Associations had been, in general, slower in giving a formal focus to service delivery, while acknowledging in discussion that understanding the user requirements had been a key aspect of their regional activities. The WG recognized that, with the implementation of the GFCS, service delivery activities would likely have a strong regional focus, and therefore the Regional Associations would address this matter in their work programmes.

5.4.4 It was noted that the WMO Secretariat could only provide some secretariat and administrative support to the RA's, and did not have the capacity to support the implementation of large field projects. Ground work in implementing relies on NMHSs, their partner organizations and funding agencies.

5.4.5 On the question on whether a register of such partners in the different countries existed, it was found that while a fairly complete register of DRR agencies was available, with established relationship between NMHS, funding agencies and government authorities, in other areas such as public health currently only some countries had developed firm relationships between NMHS and health ministries. It was expected that the WMO Country Profile Database, which is under development within the Secretariat, would improve the knowledge base in this respect.

5.4.6 The WG was informed of sub-regional structures being usefully employed by lead NMHS, such as ACMAD in western Africa, which helped to deploy warning services to a wider community.

5.4.7 The question was raised of how well the current organizational set-up of WMO with its complex structure of constituent bodies, programmes and frameworks was suited to ensure an effective implementation of DRR and SD across a wide range of sectors and regions. The Chair reminded the group that such a fundamental evaluation would exceed the mandate of the WG, but concurred that it would be wise to suggest to EC to undertake a review of the effectiveness of the existing structures in the light of shrinking resources. The WG recommended that the Executive Council expand its current review of the role and structure of the technical commissions to include the regional associations. The WG further recommended that consideration of the growing need for user driven service delivery, especially in developing countries be given in the development of the WMO budget for the next financial period.

5.4.8 Donors and developed Members look to WMO as a facilitator and capacity-building partner in the developing world, and needed to be convinced that the organization was in a position to perform this function in a cost-effective and successful way.

5.4.9 The WG agreed and recalled that several Members were in the process of reviewing the role, structure and functioning of their NMHS's with a similar aim. The WMO Secretariat saw that identifying common elements across sectors and regions as a useful first step to rationalizing efforts, supported by systematic assessment of current projects. Entering into partnership to leverage resources was seen as another common element, and so was the need to convey to governments the crucial role of NMHS in disaster risk reduction and civil protection, as currently seen in the case of Haiti.

6. OVERVIEW OF THE DRAFT DRR AND SD BUDGET PROPOSAL 2012-2015 (agenda item 6)

6.1 The WG noted the information and presentation of the draft budget proposal for information, but felt that this WG was not in a position to debate the WMO DRR&SD budget, as this was the remit of other constituent bodies.

6.2 The WG, however, remarked that it was difficult to accept that the GFCS was considered a top priority of the organization, but according to the proposal could only be addressed if additional funds

were made available. The WMO Secretariat's point that the current funding was too stretched to allow WMO to engage in a whole new range of activities was understood, but the WG maintained that a ZNG situation was a common feature in many NMHS's, and that hard choices and priorities would be needed to ensure that this high-level activity could be undertaken.

6.3 The WG noted the information relating to the WDS Department draft budget submission which would form part of the Secretary-General's considerations when formulating his budget proposal for Congress to consider in 2011 and made the following observations to assist the Secretariat as it moved forward with this work:

- a) GFCS activities are a high priority and would be expected to be cross-cutting across many, if not all WMO Programmes, and thus had to be incorporated in the work programme and budget under any budget scenario.
- b) If extra resources are to be requested, these should be linked as a priority to Members (in particular in Developing Countries and LDCs) ability to expand and strengthen DRR – related (climate) services.
- c) The WG encouraged the Secretariat, as it took this work forward, to explain clearly how extra resources would translate into improved Members capabilities in providing weather, water and climate services that meet users needs.

6.4 The WG sought an explanation, to be provided out-of-session, as to why in the ZRG + scenario of the WDS draft proposal, would the additional funds be used to pay for another staff member, while the regular-budget funded activities budget would remain equal or even smaller than in the ZRG option.

7. REVIEW OF WMO PARTICIPATION IN GEOSS (agenda item 7)

7.1 The WG was presented with a brief report on the status of the Review requested by the Executive Council, at its sixty-first session, regarding WMO's participation in the Global Earth Observation System of Systems (GEOSS). The WG noted that based on the results of the Review, experiences within their respective organizations, and the importance of developing broad-based support for a Global Framework for Climate Services (GFCS), the guidance issued at the fifteenth session of The World Meteorological Congress is still valid today. The WG discussed the opportunity for GEOSS to add value, or extend the work already being done by WMO and its Members in the areas of weather, water, climate and related disasters. It further noted that ensuring clarity in WMO and GEO responsibilities would reduce avoidable duplication, reduce costs to Members of both organizations, and ultimately enhance the benefit to WMO and GEO Members. The following recommendation therefore was made:

RECOMMENDATION: The EC-WG on DRR & SD-2, in line with the guidance provided by Cg-XV, requests that the WMO Secretary-General take action to strengthen the WMO partnership and working relationship with the GEO Secretariat such that national investments being made in weather, water, climate and related disasters can be extended to other Societal Benefit Areas (SBAs), and that data, information and observations from other SBAs can be used to strengthen GFCS.

8. WORKPLAN OF THE WG THROUGH EC-LXII (agenda item 8)

8.1 The WG agreed to provide comments and input to the Chair by mid-March 2010 for finalization of the report for consideration by EC-LXII. A power point presentation would be provided by the Chair to complement his report. The Chair would circulate his presentation to the WG members by mid-May 2010.

8.2 The WG suggested that material for this presentation should be provided by the WMO Secretariat based on a matrix of activities and projects related to DRR and service delivery across the WMO Programme structure.

8.3 The WG decided to hold a side meeting as early as possible during EC-LXII to finalize the planned presentation.

8.4 Deliverables resulting from the work of the WG to be presented to EC-LXII are:

- i) The Strategy for Service Delivery;
- ii) Key Outcome for Service Delivery related to Expected Result 1; and,
- iii) WMO Strategy and Ethical Framework for Cooperation with the private sector.

9. WORKPLAN OF THE WG THROUGH Cg-XVI (agenda item 9)

The WG agreed to report to Cg-XVI on the work in the following areas:

- i) alignment of WMO Programmes responsible for service delivery and DRR;
- ii) alignment of Technical Commission activities of DRR and service delivery;
- iii) definition of the leading roles for Regional Associations in DRR and service delivery, including prioritization of needs and implementation plans; and,
- iv) input to budget proposals to Congress on DRR and service delivery.

10. ANY OTHER BUSINESS (agenda item 10)

There was no other business.

11. CLOSURE OF THE SESSION (agenda item 11)

The session was closed by the Chair, Dr J. Hayes, on 26 February 2010, at 16:30 hours.

AGENDA

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 - 1.1 Opening
 - 1.2 Adoption of the agenda
 - 2. REVIEW OF OUTCOMES FROM THE FIRST SESSION OF THE WG AND FOLLOW-UP ACTIONS**
 - 3. INTRODUCE AND REVIEW THE *WMO STRATEGY FOR SERVICE DELIVERY***
 - 4. GLOBAL FRAMEWORK FOR CLIMATE SERVICES (GFCS)**
 - 4.1 Review of outcomes from the WCC-3, the Intergovernmental Meeting for the High-level Taskforce on the GFCS, including discussion of the service delivery component of the GFCS and follow-up actions
 - 4.2 Overview of how WMO programmes may contribute to the GFCS, including proposed WDS activities in support of the service delivery component of the GFCS
 - 5. STRATEGIC ISSUES OF DRR AND SD DEVELOPMENT IN THE WMO, INCLUDING IMPACTS OF WMO PROGRAMMES IN DRR AND SD**
 - 5.1 Overview of the Tropical Cyclone Programme (TCP), its impact in DRR through improved SD, and future directions
 - 5.2 Overview of the Severe Weather Forecasting Demonstration Project (SWFDP), lessons learnt and opportunities for the future
 - 5.3 Overview of the Marine Meteorology and Oceanography Programme (MMOP)
 - 5.4 Overview of the role and impacts of other WMO programmes, technical commissions and regional associations in DRR and SD
 - 6. OVERVIEW OF THE DRAFT DRR AND SD BUDGET PROPOSAL 2012-2015**
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GUIDELINES ON COOPERATION BETWEEN WMO AND THE PRIVATE SECTOR

UNITED NATIONS

1. On 20 November 2009, the Secretary-General of the United Nations issued the 'Revised Guidelines on Cooperation between the United Nations and the Business Sector'. The Secretary-General encouraged Heads of Departments, Agencies, Funds and Programmes to use these 'Guidelines' (hereinafter referred to as 'UN Guidelines') when developing or revising their own and in their ongoing partnerships with the business sector¹.

2. The UN Guidelines serve as a common framework for United Nations business collaboration. These Guidelines will help to enhance the coherence, efficiency, accountability and transparency of the United Nations partnerships with the private sector and thus contribute to the ongoing United Nations reform efforts.

3. The Secretary-General of WMO has decided to use the UN Guidelines as a basis for WMO partnerships with the private sector. Based on his decision the following shall apply to WMO partnerships with the private sector.

I. GUIDELINES ON COOPERATION BETWEEN WMO AND THE PRIVATE SECTOR

1. A partnership is a contracted relationship with international agencies, other organizations, academia, the media and the private sector compliant with and supportive of the WMO convention, and in particular its purposes (Article 2 of the WMO Convention). *The complexity of the Earth system and the interconnections of weather, water, climate and related environmental processes are increasingly challenging the scientific and financial capacity of WMO to improve the quality and accuracy of information and products. No single government or agency has the necessary resources to address all the challenges on its own. Consequently, the Organization's success depends on its ability to partner effectively with internal stakeholders and external organizations to meet its objectives.*

2. The WMO Congress (Cg) and the Executive Council (EC) have recognized the importance of involving the private sector in order to achieve WMO goals in the delivery of meteorological and related services, recognizing that the sector can bring resources such as knowledge and expertise to the fore.

3. Strategic engagement with the private sector may be an effective method for advancing the WMO goals. Collaboration has evolved based on an understanding that several of WMO objectives might be congruent with private organizations / companies' interests. It is relevant to note the roles the private sector play in the delivery of meteorological and related services such as:

1. Producing and selling instruments and software that is specific to the collection and processing of meteorological and related data;
2. Providing contractor or outsourced services to National Meteorological and Hydrological Services (NMHSs) in support of their missions;
3. Delivering, through the media, forecasts and warnings of NMHSs to their various publics; and,

¹ A copy of the 'Revised Guidelines on Cooperation between the United Nations and the Business Sector' is attached to this document for reference purposes.

4. Using data and products provided by NMHSs in the preparation of commercial meteorological and related services in compliance with Resolutions 40 (Cg-XII) and 25 (Cg-XIII).

Partnership strategic initiatives are designed to:

- I. Heighten understanding of WMO's environmental information and service capabilities by the United Nations system, Member countries, international and national organizations. The expectation is that all partners and constituents will have a better understanding of WMO capabilities and can leverage them for the public good;
- II. Enhance WMO's ability to utilize appropriately the capabilities and information of other organizations in developing and improving WMO information and services. The expectation is that the scope of services and the responsiveness of Members' agencies to emerging requirements will increase by leveraging capabilities of partners to develop and sustain service improvements;
- III. Broaden partnerships between developed, developing and Least Developed Countries (LDCs) involving relevant national agencies. The expectation is that the capabilities of countries to acquire and exploit information for the public good will be enhanced and that all countries will benefit from closer cooperation; and,
- IV. Maintain a proactive role in ensuring a coherent, science-based approach within the United Nations system and among other stakeholders to implement environmental conventions.

II. PURPOSE AND SCOPE

4. The purpose of these guidelines is to facilitate the formulation and implementation of partnerships between WMO and the private sector in a manner that ensures the integrity and independence of WMO. A partnership may be defined as a voluntary and collaborative agreement or arrangement between WMO and the private sector, in which all parties agree to achieve a common purpose or undertake a specific task and to share risks, responsibilities, resources, and benefits. Nothing in such a partnership shall be deemed to establish either party as the agent of the other party or create a 'legal' partnership or joint venture between the parties. Neither party has power to bind the other party or to contract in the name of the other party or create a liability against the other in any manner whatsoever.

5. These guidelines define the private sector as:
 - a) For-profit, and commercial enterprises or businesses; and,
 - b) Business associations and coalitions, including but not limited to corporate philanthropic foundations.

III. CHOOSING A PARTNER

6. The United Nations Global Compact provides an overall value framework for co-operation with the private sector. The principles of the Global Compact (see annex) on human rights, labour, the environment and anti-corruption are based on intergovernmental agreements and are specifically relevant for business. UN encourages its entities (including specialized agencies) to use them as a point of reference when developing their own guidelines, including guidelines for choosing a private sector partner.

- a) WMO seeks to engage in mutually beneficial collaborative relationships and partnerships with the private sector.

- b) In considering such collaborations and partnerships, WMO will seek to engage with private sector entities that:
 - i) demonstrate responsible citizenship by supporting the core values of WMO as reflected in its Convention; and,
 - ii) demonstrate a commitment to meeting or exceeding the principles of the UN Global Compact by translating them into operational corporate practices within their sphere of influence including and not limited to policies, codes of conduct, management, monitoring and reporting systems.
- c) WMO will not engage with private sector entities that are complicit in human rights abuses, tolerate forced or compulsory labour or the use of child labour, are involved in the sale or manufacture of anti-personnel landmines or cluster bombs, or that otherwise do not meet relevant obligations or responsibilities required by the United Nations.
- d) WMO will not engage with private sector entities violating sanctions established by the UN Security Council.
- e) WMO should not partner with private sector entities that systematically fail to demonstrate commitment to meeting the principles of the UN Global Compact. However, WMO may consider collaboration specifically intended to address this failure of commitment.

7. WMO may establish additional eligibility and exclusionary criteria for screening companies appropriate to its specific mission and advocacy role.

8. Partner selection will be subject to due diligence processes established by WMO. WMO reserves the right to choose its partners on a case by case basis and to undertake research in support of such decisions.

IV. GENERAL PRINCIPLES

9. Irrespective of the situation-specific nature of cooperative arrangements, they should be guided by the following general principles:

- a) Advance WMO goals: The objective needs to be articulated clearly and must advance WMO goals as laid out in its Convention and in particular Part II, Article II.
- b) Shared values and principles: WMO is interested in working with private sector entities that share its values, including "Global Compact".
- c) Clear delineation of responsibilities and roles: When, in accordance with the WMO financial regulations and rules, a partnership arrangement with the private sector will have financial implications for WMO, such arrangement should be implemented only pursuant to a formal written agreement between the private entity and WMO, in accordance with the applicable WMO regulations and rules, delineating the respective responsibilities and roles of each party. The arrangement must be based on a clear understanding of respective roles and expectations, with accountability and a clear division of responsibilities and, as mutually agreed, shared risks and responsibilities, resources and benefits. This understanding will be set out in a partnership agreement along with defined timelines, measurable outputs, and reporting and follow-up procedures.
- d) Maintain integrity and independence: Arrangements should not diminish WMO's integrity, independence and impartiality.

- e) No unfair advantage: Every member of the private sector community should have the opportunity to propose cooperative arrangements, within the parameters of these Guidelines. WMO can collaborate with the private sector for the purposes of development and provision of goods and services that explicitly support and accelerate achievement of WMO's goals. However, cooperation should not provide exclusivity in its collaboration or imply endorsement or preference of a particular private sector entity or its products or services.
- f) Transparency: Cooperation with the private sector must be transparent. Information on the nature and scope of major cooperative arrangements should be available within WMO and to the public at large. WMO should make relevant information available on its website and post relevant information on the UN / Business website: www.business.un.org.

V. USE OF THE WMO NAME AND LOGO

10. The use of the WMO name, including its acronym, and logo is limited to official purposes and is protected under Article 6 of the Paris Convention for the Protection of Industrial Property. The Secretary-General shall maintain the flag code and regulations concerning the dimensions, proportions and use of the flag.

11. Recognizing WMO's evolving relationship with the private sector, the following sets out general principles for the use of the WMO Name and logo by the private sector in the context of a partnership.

- a) It has been a long-standing policy of the Secretary-General not to authorize the use of the WMO logo by the private sector entity in an unmodified form, or to use the WMO logo in a modified form. However, an appropriate written communication could be provided to the private sector entity, acknowledging or recognizing its contribution to or collaboration with WMO;
- b) Subject to the foregoing provisions in this paragraph 12 and the appropriate terms and conditions, a private sector entity may, on a case by case basis be exceptionally authorized to use the name and logo of WMO on a non-exclusive basis²;
- c) The use of the WMO name and logo must be expressly approved in advance in writing and upon such terms and conditions as may be specified;
- d) The use of the WMO name and logo by a private sector entity may exceptionally be authorized, even if it involves the making of profit, so long as the principal purpose of such use is to show support for the purposes and activities of WMO, including the raising of funds for the WMO, and the generation of profit by the private sector entity is only incidental³;
- e) The use of the WMO name and logo may be authorized for the following purposes:
 - (i) To support the purposes, policies and activities of WMO;
 - (ii) To assist in the raising of funds for WMO; and,

² The principle of non-exclusive use refers to the activities of a Business Sector entity on its own behalf, and not in situations in which a Business Sector entity is engaged by the UN to act on the UN's behalf, e.g., the UN Gift Shop.

³ A "commercial use" of the Name and Emblem should be distinguished from "use by a commercial entity". The former term implies use in connection with or for furtherance of a profit-making enterprise. The latter term would allow the use of the Name and Emblem by a Business Sector entity even involving the making of some profit, as long as the principal purpose of such use is to show support for the purposes and activities of the UN entity concerned, including the raising of funds for the UN entity, and the generation of profit by the commercial entity is only incidental.

- (iii) To assist in the raising of funds for entities that are not part of WMO, but which are established to achieve the purposes and policies of WMO⁴;
- f) When authorized, the use of the WMO name and / or logo shall be in accordance with the written specifications provided by WMO; and,
- g) With appropriate written approval, and subject to appropriate conditions on the time, manner and scope of such use, the use of a special WMO logo (e.g., the 60th anniversary of WMO) may be exclusively authorized to a limited number of private sector entities in connection with the promotion of a special event or initiative, including fund-raising for such event or initiative.

VI. MODALITIES

12. Formal partnership agreements, which have financial implications for WMO, shall be subject to approval by Chief Financial Officer of WMO. The relevant operational office or department must ensure compliance with the requirements set forth in WMO financial regulations and rules. Modalities for entering into partnerships with the private sector which are distinct from procurement activities require flexibility in order to reflect the particular purposes and objectives of the partnerships. In its participation in partnership arrangements, WMO will apply its regulations, rules and procedures including, where applicable, those relating to staff conduct and financial regulations and rules.

13. From an institutional perspective, there are a number of partnership modalities:
- a) Contribution by the private sector partner: The modality for contribution for specific purposes would be made under a trust fund or special account agreement with the partner subject to applicable Financial Regulations and Rules.
 - b) Partnership in technical assistance projects: This modality would involve either two direct bilateral agreements with the private sector partner and with the government of the country in which the assistance would be carried out, or a tripartite agreement among those parties.
 - c) Partnership projects: This modality would involve other partnership arrangements requiring an agreement between WMO and the private sector.

The relevant operational office or department must take into consideration all the aspects and implications involved in the selection of any of the relevant modalities set forth in paragraphs 14(a) through 14(c) above, and full compliance with the requirements and criteria in the applicable WMO regulations and rules.

14. From an operational standpoint, there are three broad categories of partnerships among others:
- a) **Core business operations and value chains:** This category involves mobilizing the innovative technologies, processes, financing mechanisms, products, services and skills of the private sector to create wealth and employment and develop and deliver affordable goods and services. WMO and a private sector partner may jointly support the development of integrated value chains in market sectors that offer the prospects of sustainable growth and transition to better remunerated forms of employment. Another type may include collaboration that aims to increase access to important goods and services that contribute to reducing poverty (i.e. 'bottom of the pyramid' investment opportunities).

⁴ For example, these entities include the United Nations Associations, National Committees for UNICEF, for UNDP, and the national committees for other UN Funds and Programmes.

- b) **Social investments and philanthropy:** This category involves different types of resource-mobilization support and utilizes a range of resources from the private sector including cash as well as core competencies. This may include financial support as well as pro-bono goods and services, corporate volunteers as well technical expertise and support.
- c) **Advocacy and policy dialogue:** This modality relates to initiatives that promote and advance a specific cause in support of WMO goals or promoting multi-stakeholder dialogue on issues related to the purposes and activities of WMO. These partnerships may include promoting a concept of corporate responsibility; working with companies to bring about change in their internal business practices to align with WMO goals; and developing norms or guidelines to engage stakeholders in support WMO goals.

VII. INSTITUTIONAL CAPACITIES

15. When engaging the private sector as partners in its work, WMO should allocate adequate resources and develop the policy frameworks and institutional capacities needed for engagement in a mutually beneficial way.

- a) **Building institutional competencies:** WMO will nominate a network of focal points that will act as liaisons between WMO and existing and potential private sector partners and will be responsible for developing mutually beneficial partnerships with the private sector community in line with regulations, rules, and administrative issuances applicable to WMO. The network of focal points will also promote transparency, learning and knowledge exchanges within WMO, in an effort to contribute to a better understanding of the role and objectives of business and to ascertain whether they are compatible with the goals of WMO.
- b) Reference should be made to the Information Sharing platform in view of the required Future Reviews.

VIII. FUTURE REVIEWS

16. To remain valid, these guidelines should be critically reviewed and regularly updated taking into account recommendations coming from the UN System Business Sector Focal Point Meetings (See VII., 15b above).

DRAFT**WMO Strategy for Service Delivery****1. Purpose**

The purpose of this document is to propose a Strategy for service delivery that will guide National Meteorological and Hydrological Services (NMHSs) in the provision of weather-, climate- and water-related services that incorporate user needs and performance metrics. While there is no prescriptive way to provide services, the strategy aims to improve service delivery by sharing best practises between NMHSs and to increase focus of WMO programmes on service delivery in accordance with the WMO Strategic Plan.

2. Introduction

Effective service delivery is a fundamental requirement for NMHSs if they are to meet national needs. However, there are many different interpretations of the concept of service delivery as it relates to the provision of weather-, climate- and water-related services. Several of these are defined and discussed in this paper with the intent of forging an international WMO Strategy for Service Delivery.

3. Principles guiding effective Service Delivery

- i) User engagement and feedback is essential in designing and delivering effective services.
- ii) Sharing best practises leads to effective and efficient service design and implementation.
- iii) Service concept applies to all WMO activities and culture change is essential to ensure the success of service delivery.
- iv) Partnership with other international and regional organizations that are also engaged in delivering services is essential in maximizing the use of weather, climate and water information for decision making.

4. Attributes of effective services

Effective services should be:

- Available: at time and space scales that the user needs;
- Dependable: delivered regularly and on time;
- Usable: presented in user specific formats so that the client can fully understand;
- Useful: to respond appropriately to user needs;
- Credible: for the user to confidently apply to decision-making;
- Authentic: entitled to be accepted by stakeholders in the given decision contexts;
- Responsive and flexible: to the evolving user needs,
- Sustainable: affordable and consistent over time, and,

- Expandable: to be applicable to different kinds of services.

5. The role of WMO in the Strategy for Service Delivery

5.1 WMO provides international coordination and sets standards for weather-, climate- and water-related products and supporting services. This includes observations, data quality, and telecommunications. The data underpinning meteorological and related products require international coordination and validation to guarantee that they meet the needs of the product generating centres. The communication systems that move data and products globally are coordinated through WMO. The assessment, and objective verification of products that are generated by one country and used by others may also be coordinated by WMO and the results shared and used in the process of improving the quality of products for all.

5.2 WMO also provides guidance for service delivery which is used to good effect by all Members. However, a Strategy for Service Delivery is required to provide a more uniform and structured approach for WMO and its NMHSs on service development and delivery applicable to all weather, climate and water information.

5.3 NMHSs deliver a wide range of weather-, climate- and water-related services to meet a broad range of needs. In the majority of these cases, needs are defined nationally, the major exceptions being services for international aviation and shipping, which conform to international standards and defined user requirements. Providing an international strategy through WMO will enable NMHSs to improve national service delivery by sharing better practises and supporting mutually agreed guidelines, and by increasing the user targeting of the services.

5.4 The Strategy on Service Delivery will also help enable capacity building within NMHSs in order to make best possible use of resources. This will be achieved by focusing the assignment of resources to countries with the greatest need for assistance in service improvements, or to relevant Secretariat activities required to underpin and coordinate this capacity building.

6. What drives the Priority of Service Delivery in NMHSs?

6.1 The public and political assessments of the effectiveness of NMHSs occur continuously. These depend largely on how effectively the NMHSs meet the service delivery standards of the nations they serve. Confidence in NMHSs derives from demonstrated capability to deliver services in a way that meets national and public needs. It is not enough that staff within the NMS or NHS consider the services they provide to be world-class, highly accurate or even perfectly usable and relevant to their community's needs, what is required is that the community receives services that meet their needs. This requires concerted effort for direct communication and engagement with the users.

6.2 The ability of an NMS or NHS to meet national service delivery needs is put to its most critical test when an extreme hydro-meteorological event occurs and then even the best forecast, issued on time, is no defence in the event of a national disaster if no one used that forecast. Providing effective warning, forecast and assessment products and services depends on a system that engages users, the problems, the risks and the values throughout the process. Most of the utility of weather, climate and water information, added or lost in the value-chain of decisions and actions between the physical phenomena and their subsequent impact, occurs in communicating the information to users and in the behaviour of users in response to that information, and ultimately in the effect of their decisions in societal and economic outcomes. If the user cannot make changes or there is no effect on the outcome, the information is of little direct value. Value can be increased by improving the forecast, by improving communication, and by improving the decision-making process. If the currently available information is underutilized, value will likely accrue if the communication or decision-making process is improved. Service delivery is about providing the service that the users actually use because it meets their needs.

6.3 Countries make choices about which services their NMHSs will deliver. Generally, NMHSs must meet the key public needs in such a way as to have the greatest beneficial impact on their

community. In one sense, this makes prioritisation straightforward for NMHSs because it is clear that the activities that contribute most to the safety of life and property have the highest priority. However, the risks are not always obvious to national governments and are rarely objectively or continuously assessed.

7. Elements of service delivery for WMO

7.1 The WMO Strategic Plan emphasizes enhancing the capabilities of Members to provide and use weather, climate and water and environmental applications.

7.2 WMO Programmes, as part of the Strategy on Service Delivery should adopt improving service delivery as part of their responsibility to assist NMHSs, including by encouraging them to:

1. Evaluate user needs and decisions, including drivers to:
 - Increase understanding and acting upon societal and economic requirements for impact-related weather-, climate-, water- and air-quality services;
 - Increase training and provision of guidance material to enhance NMHSs and partner organizations' ability to deliver useful services;
 - Expand the use of weather, climate and hydrological services; and,
 - Improve the decision making capability of Members by providing appropriate inputs to Members, including through integrated early warning of sector specific impacts, and information related to climate risk management and adaptation to climate change.
2. Develop and improve Service Delivery mechanisms to:
 - Improve relevant, timely, cost-effective and useful products and services that can be used beneficially by WMO Members; and,
 - Increase collaboration and cooperation between NMHSs, sectors and government agencies whose day-to-day activities are affected by weather and climate and which can benefit from improved weather, climate and water services.
3. Define service outcome effectiveness to:
 - Effectively use performance management approaches, tools and methods;
 - Ensure more people take effective action in response to information received; and,
 - Increase participation of NMHSs in Members' meteorological and hydrological risk management activities.
4. Establish governance practices by:
 - Ensuring that information is received and acted upon;
 - Learning from successful outcomes; and,
 - Sharing responsibility with all the partners engaged in Service Delivery.

8. Evolving User Needs

8.1 Service delivery must focus on collaborative problem solving which requires full engagement between providers and users. Service delivery is a complex issue and there are gaps in how services are delivered. These gaps need to be addressed and reduced accordingly. A service for a particular sector involves a broad partnership of producer and user organizations, meteorologists and related scientists, and practitioners from user sector and supporting organizations. It provides an opportunity to interlink global, regional and national information systems; to provide comprehensive modelling and analytical capability to address problems at regional and local scales, and to provide for a distributed decision-relevant research and development capability. It is the latter, which sets this service apart from the traditional, exclusively science-based forecasting service. Each service must be adapted to the sector it serves.

8.2 With evolving needs of users, in order to stay relevant, NMHSs need to adapt themselves to user requirements. Implicitly, although service delivery is part of the role of NMHSs and collaborating organizations on technical matters, it should ideally be a partnership between environmental and social organizations. As such, one approach is to create a “mechanism”, which may be in the form of a real or virtual co-location of providers and users of weather, climate and water information who work together, iteratively, to deliver timely, effective and user specific services. It brings together the operational capacity of providers and users of weather, climate and water information and services. The mechanism which may be called a “platform”, an “approach” or a “framework”, integrates environmental and user specific data to determine impacts on the public and social and economic sectors such as energy grid management, construction sites, flood control and urban inundation agencies, emergency responders including the police and fire services, hospitals, transportation, accident management and control, airports, harbours, etc. The benefit to users would be an operational network that evolves to meet specific user needs, forecasts systems targeted to user decisions and an integrated system that aligns weather, climate and water information with social, economic and other user-specific information. A public service “platform”, “approach” or “framework” would provide the opportunity to focus on strengthening ground-based observation systems, strengthening surveillance, creating integrated early warning and assessment systems for weather, climate and hydrological forecasting systems, and providing fast, efficient and unified service delivery. The “platform”, “approach” or “framework” (representing all the operational providers and users) is instrumental in setting requirements for research and development.

8.3 The net effect should include strengthening partnerships with key user sectors and government ministries. The aim would be to realize tangible and quantifiable benefits to communities by exploiting new operating partnerships between user and provider to share responsibility for effective delivery of services. This would include the development of new tools and methods to strengthen dialog and collaboration between provider and user, especially the implementation of more interactive early warning and forecasting systems for weather, climate and water, which are integrated into every level of governance from the community level to the national infrastructure.

8.4 By distinguishing between service delivery and production, emphasis is placed on information sharing, joint information dissemination, joint research and training, and joint product development between the service provider and the user. In addition to the information generated by the NMS, the platform would also seek to integrate data from outside partners, both national and international, so that users have access to all relevant information through a single source with which they can work directly.

9. Responsibilities of WMO Members

WMO Members will:

1. Rely on technological advancement to optimize forward looking service delivery, and this will be particularly important in building capacity in service delivery in developing countries;

2. Agree on minimum guidelines and approaches for the development and provision of weather, climate or hydrological services. The approaches may be nationally determined, monitored and evaluated and results should be exchanged among WMO Members. The evaluation should include user assessment of the services intended for their use;
3. Transfer knowledge through advanced capacity-building approaches (e.g., by engaging in regional partnerships and documentation of best practices);
4. Engage in regional focus on user needs through information platforms (e.g., METEOALARM in Europe), regional workshops and forums for different user sectors;
5. Develop acceptable metrics to determine the effectiveness of NMHSs' service delivery and agreed programmes that monitor and assess service quality and effectiveness;
6. Exchange information between NMHSs on their effectiveness in engaging users and measuring outcomes as a means of capacity building;
7. Understand better the relevance of their services judged in the context of user needs. The information will be used to improve the efficiency and effectiveness of all WMO programmes, and, as a consequence, of all Members. Quality management is an important element of this strategy; and,
8. Establish a time-frame for reviewing the strategy.

10. Implementation of the strategy

Taking into consideration the strong coordination aspect of service delivery, the following activities, among others, need to be undertaken to implement this strategy:

1. Establish an approach within the NMHS to respond to needs of selected user communities;
 2. Conduct a survey of NMHS service delivery priorities, and develop an inventory of existing good practices;
 3. Apply the new approach to at least one priority service; and,
 4. Evaluate the results of service quality taking into account the guidelines and approaches (see item 9.2 above) and user satisfaction
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DRAFT ANNEX TO INTRODUCE AND REVIEW THE WMO STRATEGY FOR SERVICE DELIVERY

11. Definitions related to provision of weather, climate and water

11.1 NMHSs (always used in the plural) – National Meteorological Services (NMSs) and National Hydrological Services (NHSs); NMS – A National Meteorological or Hydrometeorological Service; NHS – A National Hydrological Service.

11.2 Users – Users are individuals or organizations with responsibilities for decisions and policies in sectors that are sensitive to weather, climate and water and for whom products and services are provided by NMHSs or collaborating organizations. If the user has paid directly for the service, he/she is generally called a customer.

11.3 Providers – Individuals or entities that produce or acquire weather, climate or water information or products *that are then supplied in support of users' needs in this regard*. *NB: Providers may include NMHSs, Collaborating Organizations, other meteorologically-relevant agencies and the private sector, but this present strategy focuses only on WMO NMHSs*

11.4 Collaborating Organization – An organization or entity (e.g., a University, a specialized non-government centre, a relevant government agency) of a WMO Member that provides complementary/additional weather, climate or water information to NMHSs or directly to users, under terms and conditions that have been mutually agreed.

11.5 Product – A product is basic information such as observations, datasets, or information that is created by an analysis or forecast process. For example, products include a warning of a tropical cyclone, a forecast of heating degree days for the next five days, a seasonal forecast, a time series, a climatological normal, a hydrological risk map, a satellite image, etc.

11.6 Service – A service is a product delivered or activity that is carried out (advice, interpretation, etc) that meets the needs of a user or that can be applied by a user. A true service is therefore based on an understanding of the user's requirements, provides information, products and advice that is tailored for the user, e.g., in terms of timing, format, or content, and maintains a dialogue with the user. Providing a user access to a tropical cyclone warning in a convenient and timely manner is a non-user-specific service. Providing a customer access, for a commercial fee, to the five-day forecast of degree heat days, for example, is also a non-user-specific service. Both government and non-government entities supply weather-, climate- and water-related services (see also items 3.3 and 3.4 above).

11.7 Service Development – A service should be co-developed by the user and the provider of the weather, climate and water products, a process which reflects the increasing importance of user-defined products and services, which integrate weather, climate and water information into user decision support systems.

11.8 Service Contract - Services may be provided as a public good; on a contractual basis to certain users or on a commercial basis to a fee paying customer. In all cases there is an implicit or explicit contract between the provider and user of the services to strive to meet the needs of the user.

11.9 Fit for Purpose – Within the implicit or explicit contract between the provider and user, and resulting from an extensive dialogue between the provider and user, 'Fit for Purpose' implies a clear understanding and agreement in terms of:

- What is the information need?
- How will the information be provided?

- How will the information be used?
- The risks inherent in the decisions to be made using the information; and,
- The strengths and weaknesses of the information being provided (including verification and inherent uncertainties).

11.10 Service Delivery Process – The service delivery process describes the end-to-end activity of:

- preparing and delivering the service;
 - ensuring that the service is fit for purpose;
 - establishing a feedback system that monitors the user/customer needs and their feedback on the quality of the service provided; and,
 - managing the service performance continuously for service improvement over time, with respect to current and evolving user requirements.
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