### WMO OMM



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#### Secrétariat

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Annex: 1

Subject:

COP 22 and CMP-12 of the UNFCCC, Marrakech, Morocco, 7-18 November 2016

Action required: Representatives from NMHSs are requested to advise on their participation in COP 22 and identify how WMO can further support NMHS engagement in **UNFCCC** processes

#### Dear Sir/Madam,

As you are aware, the twenty-second session of the Conference of the Parties to the Climate Change Convention (COP 22) will be held, in conjunction with the twelfth session of the Parties to the Kyoto Protocol (CMP-12), in Marrakech, Morocco, from 7 to 18 November 2016. These events include the forty-fifth sessions of the Subsidiary Body for Scientific and Technological Advice (SBSTA 45) and the Subsidiary Body for Implementation (SBI 45). The High-Level Segment of COP 22 and CMP-12 will be held from 16 to 18 November 2016.

WMO will actively participate in this conference, including in United Nations system and other side events, and lead the event on "Science-based climate information". WMO will also join the One UN Exhibition to showcase the role of WMO and its Members' NMHSs contribution to the United Nations Framework Convention on Climate Change (UNFCCC). The dates and programme of events relevant to WMO, as well as related documentation and materials, will feature on the WMO website in due course.

Last year, COP 21 culminated in the adoption of the Paris Agreement. For detailed information on the outcome of COP 21, you may refer to my previous circular letter on this subject, CLPA/CCA/UNFCCC-COP 21 of 14 January 2016. The sixty-eighth session of the Executive Council recognized that it will be essential to work at national level to fully engage National Meteorological and Hydrological Services (NMHSs) as key actors in the Paris Agreement implementation, including adaptation programmes, mitigation, and cataloguing extreme events. NMHSs are strongly encouraged to contribute to Nationally Determined Contributions, National Adaptation Plans, greenhouse gas monitoring systems and other observing systems, and in other areas falling within their respective competencies. Noting that COP 22 will discuss implementation of the Paris Agreement, I expect that Directors of NMHSs and delegates from these Services will play an active role in their national delegations. "WMO Key Messages to Delegates from NMHSs at COP 22" are attached for ease of reference.

Permanent Representatives (or Directors of Meteorological or Hydrometeorological To: Services) of Members of WMO (PR-6923)

Around 40 Directors of Hydrometeorological Services and Permanent Representatives with WMO attended COP 21, among whom were the President of WMO, the Second and Third Vice-Presidents of WMO as well as the presidents of the Regional Associations for Asia (RA II), South-West Pacific (RA V) and Europe (RA VI). Overall, 154 delegates from 82 NMHSs attended as part of their national delegations. I encourage you to consider participating in COP 22 as a member of your national delegation to strengthen the role of NMHSs as contributors to the UNFCCC process.

Although WMO will not be in a position to provide financial support to your participation at COP 22, I would appreciate any suggestions you may have as to how WMO can assist your Service in supporting your government in implementing the UNFCCC and the Paris Agreement. In case you or your staff members are planning to attend COP 22, please send the information concerning your attendance not later than **21 October 2016** to Ms Nadia Oppliger (noppliger@wmo.int) and for any questions you may have, do not hesitate to contact Mr Amir Delju (adelju@wmo.int).

Yours faithfully,

(P. Taalas) Secretary-General

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### WMO KEY MESSAGES AT COP 22

The World Meteorological Organization (WMO) commends governments for adopting the Paris Agreement and salutes the WMO community for its continuing contributions in providing the evidence and scientific basis for maintaining and accelerating the momentum for implementation. The following key messages are intended to underscore the importance of continued and strengthened support from national governments and development partners to strengthening National Meteorological and Hydrological Services (NMHSs) to ensure they can continue to play a key role by providing effective weather and climate services to their governments and communities.

### 1. Why is science important?

Message 1: Science contributes to improving the understanding of the climate system for the benefit of societies coping with climate variability and change. On that basis it underpins the negotiations by providing climate projections and operational structures for adaptation and mitigation.

The Paris Agreement is based on the most up-to-date and best available science. WMO promotes and coordinates many of the observing systems and research networks, universal data exchange, research and modelling that make this science possible.

Science will continue to support the Paris Agreement and the enhanced implementation of the UNFCCC. Continued and improved observations and modelling will make it possible to monitor progress in reducing atmospheric concentrations of heat-trapping greenhouse gases (GHGs). Continued and improved research will lead to a better understanding of climate change and associated risks at the local, national and regional levels, and will inform solutions for adaptation and mitigation.

Scientific progress is vital to ensure reliable and effective operational climate services and underpinning the reliable utilization of operational climate services in supporting decision-makers responsible for advancing their countries' climate resilience, adaptation and mitigation efforts. The Paris Agreement recognizes this by calling on Governments to enhance action on adaptation, including by "strengthening scientific knowledge on climate, including research, systematic observation of the climate system and early warning systems, in a manner that informs climate services and supports decision-making."

#### 2. What is the role of WMO and NMHSs in supporting the Paris Agreement?

Message 2: WMO coordinates and enables the NMHSs of its Members to perform the analysis and prediction of weather and climate for use in an increasing range of practical applications of direct relevance, benefit and value to society. This is made possible by developing and maintaining essential climate observing systems, research and climate information services which are fully capable of meeting the climate information needs at global, regional and national levels.

Addressing climate change requires Parties to take actions both on mitigation and on adaptation and building resilience. WMO is a leading United Nations agency that supports countries in both areas, through sound scientific advice and services.

The WMO community makes essential contributions to both adaptation and mitigation through the Global Framework for Climate Services (GFCS). Climate services are essential for achieving improved climate-related outcomes in climate-sensitive sectors, such as agriculture and food security, water resource management, health, energy, and disaster risk reduction. Climate services are also essential for mitigation, through agriculture, forestry and land use, the promotion of climate-sensitive renewable energy sources and energy efficiency. Climate services depend on climate observations and information derived from them. WMO is a

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co-sponsor of the Global Climate Observing System (GCOS) which ensures the sustained provision of the essential physical, chemical and biological observations needed for climate services, policy development and climate science. WMO is also a co-sponsor of IPCC, which provides scientific assessments of climate change to the UNFCCC process.

WMO's basic infrastructure has been extended to strengthen the NMHSs capabilities in operationally generating and delivering up-to-date climate information and prediction products for climate services, especially in support of climate adaptation and risk management. Accordingly, WMO designated Global Producing Centres of Long-Range Forecasts (GPCLRFs) have been established to provide a range of global long-range forecasting products. Furthermore, WMO designated Regional Climate Centres (RCCs) to generate and deliver more regionally-focused high-resolution data and products as well as training and capacity-building. The GPCLRFs and the RCCs constitute integral components of WMO's Global Data-processing and Forecasting System (GDPFS) underpinning the generation of climate information products by the NMHSs.

WMO is also leading and advocating for reliable, long-term, high-quality observations of atmospheric composition changes through the WMO Global Atmosphere Watch (GAW). GAW is currently developing ambitious plans for tracking greenhouse gas fluxes through the Integrated Global Greenhouse Gas Information System (IG3IS). The IG3IS will support post-COP 21 actions by nations, sub-national governments, including cities, and the private sector by providing data that can be used for planning purposes and for possible improvements of national greenhouse gas emissions inventory reporting. IG3IS complements the national emission inventories reporting guided by the IPCC process, and adds value as a scientific observations-based tool in support of policy, improvement of future climate scenarios and in fostering carbon cycle science.

WMO is one of the leaders and sponsors of the World Climate Research Programme (WCRP), mobilizing the world research community to produce better climate predictions.

# 3. Why should NMHSs participate in preparing and implementing adaptation activities?

Message 3: National Adaptation Plans (NAPs) and Intended Nationally Determined Contributions (INDCs) are key instruments for enabling climate action. Participation of NMHSs in implementation of adaptation components of these initiatives will technically enrich the planning and implementation of adaptation and mitigation activities and fill the scientific gap in support needs.

It is essential for adaptation and mitigation activities that they benefit from scientific information on climate variability, trends and risks of extremes and contain provisions that promote the climate services needed to support their implementation. NHMSs should have the capability of producing, accessing and using this information that is essential for national planning and implementation.

The INDCs show the increasing interest of Parties in enhanced cooperation to achieve climate change goals collectively through a multilateral response, and to raise ambition in the future. In particular, Parties stressed the need for strengthening finance, technology transfer and capacity-building support for climate action as a means of creating an enabling environment and scaling up action. NMHSs must be strengthened and empowered to be able to support the implementation of INDCs in their countries.

All adaptation components of the INDCs include information on key impacts and vulnerabilities. Parties reported on observed changes or projections of future changes, the most vulnerable sectors or geographical zones, high-risk impacts and incurred costs associated with extreme events. In terms of climate hazards, the main sources of concern identified by most Parties are flooding, droughts, higher temperatures, sea level rise and storms.

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The information provided clearly demonstrates that Parties are moving to full-scale planning and implementation of adaptation and strengthening and scaling up existing efforts. Most Parties referred to developing nationwide adaptation plans and strategies. Several Parties indicated that they are formulating and implementing NAPs and most of those foresee having developed their NAP by 2020.

Overall, the adaptation components of the INDCs constitute a representative overview of how Parties, building on progress made so far, intend to address adaptation, losses and damage, and costs due to climate impacts at the national level in the coming decades. The wide range of initiatives communicated to enhance adaptation reflects the relevance of adaptation to all socioeconomic areas and the strong interest of Parties in continuing to strengthen adaptation together with their mitigation efforts.

In total, 66 countries out of 189 have used climate services terminology in their INDCs. Sub-Saharan Africa invoked climate services the most followed by Latin America and the Caribbean. This indicates the degree to which developing countries are concerned with the use of climate services.

Priority areas and sectors for adaptation actions identified in the adaptation component of the communicated INDCs include water, agriculture, health, ecosystems, infrastructure, forestry, energy, disaster risk reduction, food security, coastal protection, and fisheries. Many of these areas align with the GFCS priority areas and implementation plan.

The Paris Agreement establishes a process called the Global Stocktake for countries to regularly assess implementation and take stock of climate action every five years. Assessment will start in 2023, but countries have agreed to return in 2018 to review implementation of mitigation measures to inform their 2020 mitigation contributions. The Global Stocktake will provide opportunities to progressively strengthen climate services and monitoring of GHG fluxes going forward.

# 4. What are future horizons for NMHSs on finance, technology transfer and capacity development?

Message 4: NMHSs are encouraged to contact the Green Climate Fund (GCF) Nationally Designated Authorities and National Accredited Entities in their countries to explore the use of the GCF for financing climate services and monitoring of GHG fluxes.

WMO has become the first United Nations agency to formalize its relationship with the Green Climate Fund (GCF). Having signed its Accreditation Master Agreement with GCF, WMO has started to prepare and submit proposals on weather and climate services in line with GCF investment priorities to be considered for funding by the GCF Board. This development represents an important milestone for both GCF and the United Nations system, signaling the role of the Fund in supporting international organizations to advance low-emission, climate-resilient development and adaptation. There is an urgent need to build the scientific and operational capability of institutions around the world to underpin the information and service needs of policymakers and vulnerable communities. Priority projects will be implemented among SIDS, LDCs and African countries.

WMO capacity development activities help to ensure that NMHSs have the required technical infrastructure, legal and institutional frameworks and staff competencies to fulfil these roles. The Paris Agreement has enhanced institutional requirement for capacity-building under the Convention. WMO is committed to playing a key role in enhancing technical capacity and human resources of NMHSs to enable them to provide vigorous and sustained support.