WMO input to the 2021 HLPF thematic review of "*Sustainable and resilient recovery from the COVID-19 pandemic that promotes the economic, social and environmental dimensions of sustainable development: building an inclusive and effective path for the achievement of the 2030 Agenda in the context of the decade of action and delivery for sustainable development*"

WMO Contribution to the 2021 HLPF Thematic Review

Background to this submission

For more than a century, the World Meteorological Organization (WMO) has been providing the essential worldwide leadership and coordination in support of nations' responsibilities to provide weather, climate, water and related environmental services that protect lives, property and livelihoods. The WMO vision is strongly aligned to the 2030 Agenda for Sustainable Development, and is stated in the WMO Strategic Plan 2020-2023;

"By 2030, we see a world where all nations, especially the most vulnerable, are more resilient to the socioeconomic consequences of extreme weather, climate, water and other environmental events; and underpin their sustainable development through the best possible services, whether over land, at sea or in the air."

The role of WMO remains to support the activities of its Members in understanding the past, monitoring the present and predicting the future state and interactions of the atmosphere, the hydrosphere and other vital elements of our planet, enabling adequate and effective preparedness, adaptation and response to related natural hazards and disasters. Effective weather and climate science and services are an essential contributing part of a sustainable and resilient recovery from the COVID-19 pandemic, capable of delivering substantial social, economic and environmental benefits, spanning the 17 Sustainable Development Goals (SDGs) at a national, regional and global level.

Three areas of particular urgency are addressed in this submission i) the continued and growing need for weather and climate services, particularly early warning services, ii) the significant and increasing gaps in foundational observation data upon which weather and climate services are built, and iii) the strong need for greater focus on water-related climate action.

WMO Responses to the questions posed

A) Impacts of the COVID-19 pandemic on the implementation of the SDGs under review in the 2021 HLPF from the vantage point of your intergovernmental body, bearing in mind the interlinkages with other SDGs

The COVID-19 pandemic posed significant challenges for the creation and delivery of weather, climate and water-related services – from basic observations and data transmission to forecast creation, and communication to end-users. Such services contribute to supporting the achievement of many of the SDGs, particularly, SDG 1, SDG 2, SDG 3, SDG 8, SDG 10, SDG 13 and SDG 16, of those which are under review in the 2021 HLPF.

Sustainable, reliable observations are an essential pre-requisite for all weather and climate data, predictions and services. Significant impacts were recorded on the global observing system for weather, climate, water and ocean, which in turn affected the quality of forecasts and other services which are vital to protect lives and livelihoods and enhance well-being. The WMO Community of National Meteorological and Hydrological Services, Regional Climate Centres and Regional Specialized Meteorological Centres continued to work together throughout the pandemic to protect lives and livelihoods. Feedback from Members showed that despite the challenging circumstances, solidarity remained strong in the global community of National Meteorological and Hydrological Services and Members provided to support to those in need of assistance where possible.

Detailed information on the impact of the pandemic on observing systems, can be found in the multi-agency high-level compilation report, United in Science 2020[1], which WMO released in September 2020. This report includes information from partner agencies on the impacts of COVID-19 confinement measures on CO_2 emissions and trends, and importantly highlights that despite small reductions in emissions, major greenhouse gas concentrations in the atmosphere continue to rise and are at record levels.

B) Actions, policy guidance, progress, challenges and areas requiring urgent attention in relation to the SDGs and to the theme within the area under the purview of your intergovernmental body

There are three areas that WMO has identified as requiring urgent attention in relation to the SDGs and the sustainable and resilient recovery from the COVID-19 pandemic under the purview of the WMO's mandate.

1. **Supporting the generation and exchange of basic surface-based weather and climate observations critical for improved weather forecasts, climate information and early warnings.**
   There are currently significant and increasing gaps in surface-based weather and climate observations, especially in developing countries. This has led to sub-optimal short, medium and long-term weather and climate predictions both globally, and locally, which have downstream impacts on many of the SDGs – from food security and health, to resilient cities, infrastructure and water and sanitation.

   In 2019 all WMO members agreed to establish the Global Basic Observing Network (GBON) which sets out clearly defined requirements for countries to acquire and internationally exchange surface-based weather and climate observations at a minimum level of spatial resolution and time interval. However, many countries, in particular Small Island Development States (SIDS) and Least Developed Countries (LDCs), do not have the resources to set up, operate and maintain the GBON network.

   That is why WMO is spearheading the creation of the Systematic Observations Financing Facility (SOFF), a commitment of the Alliance for Hydromet Development[2].
   The SOFF will be a dedicated mechanism that will support the generation and sharing of global basic observations as defined by GBON (approved by WMO Congress-18) by identifying and filling the gaps in global surface-based data sharing. It will provide technical and financial assistance in new ways: applying internationally agreed metrics (GBON) to guide investments; introducing long-term financing for sustainability and using data sharing as a measure of success. It will create local benefits while providing a global public good.

   Further details on the SOFF can be found at the following site:
   https://public.wmo.int/en/our-mandate/how-we-do-it/development-partnerships/Innovating-finance

2. **Essential Early-Warning Systems to support LDCs and SIDS**
   In October 2020, WMO released its second State of Climate Services Report[3] which highlighted the significant gaps that remain in risk information and early warnings systems to support disaster risk reduction measures, particularly in LDCs.

[1] https://library.wmo.int/index.php?lvl=notice_display&id=21761#.YD7J4pNKjVo
[2] https://public.wmo.int/en/our-mandate/how-we-do-it/partnerships/wmo-office-of-development-partnerships
[3] https://library.wmo.int/index.php?lvl=notice_display&id=21777#.YEJPjJNKhhG

As climate change continues to threaten human lives, ecosystems and economies, risk information and early warning systems are increasingly seen as key for reducing the impact of weather, water and climate-related disasters. The majority of countries, including 88% of least developed countries and small island states, that submitted their Nationally Determined Contributions (NDCs) to UNFCCC have identified EWS as a "top priority".

This is why WMO supports a range of capacity building activities, including the Climate Risk and Early Warning Systems (CREWS) Initiative, a multi-partner mechanism that funds and works directly with Least Developed Countries (LDC) and Small Island Developing States (SIDS) to improve the availability of, and access to, risk-informed early warning services. WMO is one of three implementing partners of CREWS projects and administratively hosts the CREWS Secretariat. CREWS is aligned with the international principals for risk-based, people-centred, multi-hazard early warning systems, and measures it success through the reduction of lives and livelihoods lost to extreme climate events, contributing to the implementation of the SDGs, the Sendai Framework for Disaster Risk Reduction and the action agenda of the Paris Climate Agreement. Furthermore, CREWS specifically recognizes the importance of SDG 5, that women's empowerment is fundamental for building resilience and that men and women access, process, interpret and respond to information and warnings in different ways, and therefore CREWS is committed to gender-sensitive programming in its work.

More details on the CREWS Initiative can be found at the following site: https://www.crews-initiative.org/en

3. **Implementation and acceleration of Sustainable Development Goal 6**

Climate related water action is a key priority for the global community to deliver on Sustainable Development Goal 6, to ensure access to water and sanitation for all and to sustain a healthy environment. This is why the WMO is leading the creation of the Water and Climate Coalition for SDG 6, which seeks to target investment in water data infrastructure and services to reduce impacts from water related disasters and will support WMO Members in developing their hydrological strategies and in capacity building for monitoring networks and providing services.

The Water and Climate Coalition for SDG 6 is aimed at strengthening operational capacities at national, regional and global level to address water related sustainable development and climate change adaptation challenges. It supports the implementation of the UN Water Action Decade through the UN-Water Global Accelerator Framework for SDG 6 with a concrete action mechanism.

The Coalition focuses on achieving progress in in 2 areas:

- Catalyzing tangible action and activities for water and climate
- Providing guidance for High Level Policy Development on water and climate

Further details of the coalition can be found at the following site: https://www.water-climate-coalition.org/

Acknowledging that such gaps do exist, and the growing scale of humanitarian crisis around the globe, WMO is stepping up its support to the humanitarian community by improving the availability of authoritative weather, climate and water-related data, information and advice. This includes supporting the improved integration of weather, climate and water-related information into the UN and humanitarian community's range of horizon scanning processes and preparedness activities, such as the now monthly updates to the IASC Early Warning Early Action and Readiness Reports.

C) An assessment of the situation regarding the principal of "ensuring that no one Is left behind" at the global regional and national levels, against a background of the COVID-19 pandemic in achieving the 2030 Agenda and the SDGs, within the respective area addresses by your intergovernmental body

As described above, WMO recognizes the significant gaps that remain in weather, climate and water basic observations, and early warning systems, which are fundamental to countries abilities to build resilience to climate related disasters. These gaps tell us that many are still being left behind due to a lack of capacity to sufficiently predict and respond to climate disasters.

The WMO State of Climate Services Report[4] highlighted these gaps, showing that just 40% of WMO Members reportedly have early warning systems in place, and one third of every 100 000 people in 73 countries that provided information is not covered by early warnings. In countries that do operate early warning systems, warning dissemination and communication is consistently weak, and challenges remain in respect to the capacity to ensure warnings catalyse the required response and mitigation actions. Furthermore, all weather, hydrological and climate services rely on data from systematic observations, however observing networks are often inadequate, particularly in LDCs and across Africa. As described above, observing networks were hit further in 2020, by the COVID-19 pandemic. This is why WMO is taking action as described in the answers to Section B to highlight the urgent requirement to fill these gaps.

This WMO State of Climate Services Report also identifies where and how governments can invest in effective EWS to strengthen countries' resilience to multiple weather, water and climate-related hazards. Being prepared and able to react at the right time, in the right place, can save many lives and protect the livelihoods of communities everywhere, ensuring that no one is left behind.

[4] https://library.wmo.int/index.php?lvl=notice_display&id=21777#.YEJPjJNKhhG