



WMO STATEMENT AT SBSTA 45 (COP 22)

Dr E. Manaenkova, Deputy Secretary-General

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World Meteorological Organization global coordination of systematic observations and research - contribution to the implementation of Paris Agreement

Chairperson,

Ladies and Gentlemen,

For more than a century the World Meteorological Organization (WMO), as part of its core mandate, develops, standardises and coordinates global real-time weather, climate, hydrological and atmospheric composition observations, modelling, research and assessments. WMO Members' National Meteorological and Hydrological Services (NMHSs) and other relevant institutions are maintaining the observing systems, exchanging data sets, and undertaking the research which now enable the implementation of the Paris Agreement. WMO coordinates national activities through its programmes, such as the Global Climate Observing System (GCOS), the World Climate Research Programme (WCRP), the Global Atmosphere Watch, as well as the Inter-governmental Panel on Climate Change (IPCC).

Globally standardized high-quality measurements of the atmospheric composition, including greenhouse gases, aerosols and stratospheric ozone, inform the governments and the public on concentrations and upward trends in these drivers of the changing climate. *Such measurements have in the past enhanced our understanding of stratospheric ozone depletion, and the human actions responsible for it, and underpinned the necessary remedial actions, which were effective.*

The latest WMO Greenhouse Gas Bulletin, submitted to the Conference of Parties, documents that in 2015, for the first time, the globally averaged concentration of

carbon dioxide in the atmosphere reached the symbolic and significant milestone of 400 parts per million, surging again to new record levels in 2016 propelled by a very powerful El Niño event. Furthermore, WMO has embarked on the development of an Integrated Global Greenhouse Gas Information System (IG3IS) to enable all countries to assess in real-time the atmospheric concentrations of greenhouse gases resulting from their emissions, linking them back to the natural sinks and sources of these gasses at national and sub-national levels. This would significantly improve planning, monitoring and management of Parties' Nationally Determined Contributions towards mitigation.

Tomorrow WMO releases its new 5-year statement "The Global Climate in 2011-2015" – a detailed analysis, which confirms that this period was the warmest five-year period on record and that the average global temperature in 2015 had already reached the mark of 1 ° Celsius above pre-industrial levels. The report also documents increasingly visible human footprint on extreme weather and climate events with dangerous and costly impacts. To provide even more relevant information for assessing progress on adaptation, WMO has strengthened the content on climate impacts in 2016 annual Statement on the Status of the Global Climate through partnership with other United Nations agencies and other authoritative sources of impact statistics. The 2016 Statement will be released on 14 November.

These authoritative WMO products provide a consensus basis for tracking climate trends by key climate indicators: greenhouse gas concentrations, temperature, precipitation, snow cover, ocean heat content, sea ice extent, and extreme events. As such, they constitute contributions of the best available science to Article 14 of the Paris Agreement and the global stocktake of collective progress towards achieving the Agreement's purpose.

At the same time WMO is also striving to improve forecast models, specific observations and weather and climate services for the energy sector to increase production of renewable energy from climate-sensitive sources, such as solar, wind and hydropower production.

These ambitious global initiatives will all require strengthened systematic observation, modelling and research. Investment in these areas will result in significant benefits for implementation of Paris Agreement.