



## **WMO STATEMENT at the SBSTA 57 PLENARY**

### **COP 27**

06 November 2022

### **World Meteorological Organization**

### **Contributions of Science to the Convention and the Paris Agreement**

Mr Chairperson,

Distinguished delegates,

The World Meteorological Organization (WMO) and its co-sponsored bodies – the Intergovernmental Panel on Climate Change (IPCC), the World Climate Research Programme (WCRP), and the Global Climate Observing System (GCOS) and its component Global Ocean Observing System (GOOS) – continue working to increase the relevance of the information provided to the Parties to the UNFCCC.

#### **State of the Climate**

The provisional report on State of the Global Climate in 2022 shows that

Real-time data from specific locations, including Mauna Loa (Hawaii) and Kennacook/Cape Grim (Tasmania), indicate that levels of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O continued to increase in 2022. In 2021 – the latest year for which consolidated global figures are available – atmospheric levels of greenhouse gases reached new highs, with globally averaged surface mole fractions for carbon dioxide (CO<sub>2</sub>) at 415.7 ± 0.2 parts per million (ppm), methane (CH<sub>4</sub>) at 1908 ± 2 parts per billion (ppb) and nitrous oxide (N<sub>2</sub>O) at 334.5 ± 0.1 ppb, respectively, 149%, 262% and 124% of pre-industrial (1750) levels. The annual increase of CH<sub>4</sub> was 18 ppb from 2020 to 2021. This is the largest increase on record and its causes are still being investigated.

The global mean temperature from January to September 2022 has been 1.15 [ 1.02 to 1.28] °C above 1850-1900 levels. On a decadal timescale, according to the IPCC 6AR, the global surface temperature in 2011–2020 was 1.09 [0.95 to 1.20] °C higher than 1850–1900. The current anomaly continues to the end of the year, the six data sets used in the analysis would place 2022 as either the 5<sup>th</sup> or 6<sup>th</sup> warmest year on record (from 1850), and in each case marginally warmer than 2021. The eight years 2015 to 2022 are likely to be the eight warmest years on record in all data sets, and all of them warmer than any year in the record prior to 2015.

2022 and 2021 both show a clear cooling effect from the ongoing La Niña conditions. Nonetheless, both years are warmer than 2011, the previous year affected by a significant La Niña event, and

indeed any year prior to 2015. 2016, which was associated with an exceptionally strong El Niño, remains the warmest year on record globally in most of the data sets surveyed.

### **Early Warning for All Initiative**

Momentum is gathering to achieve a plan to ensure that every person on Earth is protected by an early warning system in the next five years, while addressing climate change adaptation at the same time. WMO is spearheading this initiative and after various consultative meetings where gaps and proposed solutions were developed for each pillar of the MHEWS framework and transformed into an action plan for the next 5 years. WMO with partners will monitor progress twice per year and should report to future COP`s on the progress to date.

### **Earth Observations for Mitigation: Global Greenhouse Gas Monitoring Infrastructure**

WMO in collaboration with other organizations addresses the uncertainties in estimates of greenhouse gas fluxes and the need for transparent internationally coordinated monitoring to help improve our knowledge and understanding of these fluxes, which will be critical for planning mitigation action. This will provide Parties with timely and authoritative information on net greenhouse gas fluxes based on published methodologies and with open access to input and output data.

### **Global Goal on Observation**

Understanding, monitoring and prediction of weather and climate ultimately relies on observations. Systematic observation is therefore the foundation of a climate services value chain that connects observations to decision making to both understand climate change and support decisions on climate change action and sustainable development. Building on the encouragement of SBSTA-52-55 to strengthen support for sustained systematic observations of the climate system for monitoring changes in the atmosphere, ocean and cryosphere, and on land, including by improving the density of observations in areas of poor coverage, WMO and its partners are advocating for the adoption by Parties of a Global Goal on Observation as a means to implement the Paris Agreement objective to strengthen systematic observation of the climate system. This goal should foster the acquisition and free and unrestricted exchange of critical observations from all parts of the globe to support both adaptation and mitigation efforts and should include the establishment of clear targets toward its implementation.

### **Climate and Water Coalition**

WMO together with 9 UN entities and the Global Water Partnership have launched the Water and Climate Coalition as an inclusive mechanism to catalyze multistakeholder actions to accelerate implementation of the Paris Agreement. Water and climate change are inextricably linked, and we must tackle them as one. Water is as essential for low-emissions and capturing carbon, as it is for

climate change adaptation for water security to reduce the water-related disasters and to support sustainable development. WMO together with its partners are working together to significantly strengthen global water information services that provide status, assessment, and outlook for climate-smart water-related decisions. In this regard, the first Annual Global State of the Water report for 2021 will be launched this year to support decision- and policymakers at all levels of government with the latest data and information available.