The 43rd Session of the Intergovernmental Panel on Climate Change (IPCC), which took place from 11 to 14 April, agreed on a strategy and timeline for the next series of IPCC reports: the Sixth Assessment Report (AR6) and special reports. The Panel responded positively to the invitation from the United Nations Framework Convention on Climate Change (UNFCCC) to provide a special report in 2018 on the impacts of global warming of 1.5 °C above pre-industrial levels and related global greenhouse gas emission pathways.

Two other special reports – one on climate change and oceans and the cryosphere, the other on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems – will also be produced as early as possible in the AR6 cycle.

“These issues are not only highly relevant to policymakers and our broader audiences, they are also areas where the IPCC can bring clarity to the growing volume of scientific research through its assessments,” said IPCC Chair Hoesung Lee after the 43rd Session of the Panel in Nairobi, Kenya. “We now have a clear roadmap for the production and delivery of AR6.”

Preparations for the main AR6 report, which is planned for release in three working group contributions in 2020/2021 followed by a Synthesis Report in 2022, will start later this year. AR6 will focus on the impacts of climate change on cities and their unique adaptation and mitigation challenges and opportunities. Work on drawing up the outlines of the special report on 1.5 °C has begun. A call for experts to scope the report was issued after the IPCC session.

Mr Abdalah Mokssit was also announced as the new Secretary of the IPCC. Mr Mokssit is currently Director of the National Meteorological Service of Morocco and Third Vice-President of the WMO. He is a former Vice-Chair of IPCC Working Group I, which deals with the physical science basis of climate change.

Competency Frameworks

In 2011, the World Meteorological Congress requested that Technical Commissions place a high priority on preparing competency standards for core-job tasks in their area of specialization. Following the example of the Commission for Aeronautical Meteorology (CAeM) whose qualification requirements were approved that year by Congress, other Technical Commissions have made progress and competency frameworks are now available for marine weather forecasters, public weather service forecasters and advisors, training providers and personnel involved in operating and exploiting the WMO Information System (WIS).

The competency frameworks will be introduced into the WMO Technical Regulations, which define standards and recommended practices for services and for taking observations and creating, sharing and accessing meteorological, climatologic and hydrological data. Institutions supplying education and training opportunities to the personnel of National Meteorological and Hydrological Services are also encouraged to adjust their training courses and programmes to better support the competency frameworks. Academic and training institutions should check their courses against The Basic Instruction Package for Meteorologists (BIP-M) and Basic Instruction Package for Meteorological Technicians (BIP-MT), which provide the global standards for their students to be recognized as WMO Meteorologists or Meteorological Technicians.

A review of the BIPs is planned to start in 2018, but is not expected to lead to major changes.
Bhutan gains access to new Himawari-8 satellite data

The Bhutan Department of Hydro Met Services can now process satellite images from the new Himawari-8 satellite thanks to a Japan International Cooperation Agency (JICA) project. The Capacity Development for Glacier Lake Outburst Flood and Rainstorm Flood Forecasting and Early Warning in the Kingdom of Bhutan Project has also been able to link the Hydro Met Services to WMO Global Telecommunication System (GTS). The Project installed a satellite receiving station and built the capacity of local forecasters to use the system for daily monitoring in order to enhance weather forecasting, especially for severe events in Bhutan.

Monitoring weather through surface stations is a challenge for mountainous countries like Bhutan. With the Himawari-8 satellite images, local forecasters can monitor in real time and improve weather predictions. The 16-band/channel capability of Himawari-8 is also expected to improve the performance of the Hydro Met Services in climate monitoring, disaster risk reduction and transportation safety. Capacity development training on the analysis and use of the Himawari-8 satellite images was provided by the Japan Meteorological Association (JMA).

Sustainable Capacity Building in the CIS


The Working Group, which met 23 to 24 May in St. Petersburg, the Russian Federation, looked at the current status and potential requirements in their national services, and analysed reports on the state of university education in the field of hydrometeorology. After reviewing their findings, they explored capacity development support and opportunities offered by the WMO Global Campus, which addresses the training and educations needs of Members through further improved coordination and collaboration between Members.

The Working Group also identified ways to implement the development of a joint competence-oriented educational and training programme in hydrometeorology, which will be coordinated by national universities and hydrometeorological services in the CIS-space. The work plan for 2016-2017 took into account the synergetic opportunities to be offered in the WMO Global Campus.

Summer outlook for the CIS

The North EurAsia Climate Outlook Forum (NEACOF) conducted a virtual session in May in order to develop a consensus seasonal outlook for summer. Under the coordination of the North EurAsian Climate Centre (NEACC), the WMO Regional Climate Centre that hosts the forum, forecasters and climate specialists from the National Meteorological and Hydrological Services of the Commonwealth of Independent States (CIS) exchanged climate information and summer seasonal forecasts through e-mail in order to come to a consensus outlook.

A preliminary version of the outlook was distributed among the National Meteorological and Hydrological Services for comments and feedback, before being published on the NEACC website: www.neacc.meteoinfo.ru/neacc/north-eurasian-climate-outlook-forum/202-neacof10.

The summer season is expected to range from normal to warmer-than-normal over most of Northern Eurasia. The probability of negative air temperature anomalies is low throughout Northern Eurasia, except in some areas in the south of Ural and Western Siberia and in the north of Yakutia.

There are some contradictions and uncertainties in the precipitation forecasts. Predictions are statistically significant only in the south of Ural and Western Siberia and north-east Chukotka. Negative precipitation anomalies are expected in the north-west of European Russia with some degree of confidence.

Monitoring Polar Regions From Space: 20-Year Compendium of Radar Images

The WMO Polar Space Task Group has released a compilation of 20 years worth of imaging activities that feature unprecedented views and insights related to Polar regions in both Hemispheres. This Compendium of radar images focuses on four thematic areas: ice sheets, floating ice, permafrost and snow.

The scientific community has grown increasingly concerned about the significant warming that is occurring at the poles and has recognized the urgent need to gain a better understanding of current and potential impacts. In fact, it has been observed that the Earth’s poles are experiencing a warming effect at twice the rate of the rest of the
world. Such a global issue can only be addressed through scientific leadership, research and collaboration.

In 2011, WMO established the Polar Space Task Group and its subsidiary Synthetic Aperture Radar Coordination Working Group to better coordinate the collection of satellite radar data in Polar regions and the cryosphere. Through the efforts of representatives from space agencies, international organizations and the scientific community, several thousand images were acquired over a period of more than two decades. This coherent and extensive compilation is one of the richest and most diverse datasets ever generated and contributes to our understanding of the impact of climate change on the Polar regions.

The images are made available to encourage observation, analysis and help provide answers to important science questions. The Data Compendium is available in the WMO Library: www.library.wmo.int

The Workshop addressed ENSO teleconnections and regional impacts, the influence of the current El Niño on the climate of different regions, communications and country preparedness for El Niño impacts, and hands-on operational seasonal forecasting. In a training session, participants working in regional teams combined their station data and ran several prediction experiments, including the downscaling of the National Multi-model Ensemble (NMME) and learned how to interpret the results. The teams also discussed El Niño preparedness in their respective countries.

The Workshop also provided an opportunity to showcase climate services in different parts of the world to enable participants to learn from one another. Selected country presentations provided insights into how meteorological services work with their communities to enable decision-making in agriculture, water resource management and health. The challenges and opportunities were discussed.

Meteorologists, climate scientists and managers from 45 countries – all continents – attended the Workshop, which was hosted by the Turkish State Meteorological Service (TSMS) and led by the Climate Prediction Center of the National Oceanic and Atmospheric Administration (NOAA). Lecturers were drawn from the experts in various government and international agencies. The U.S. Agency for International Development (USAID) funded the Workshop through the U.S. National Weather Service, and the University Corporation for Atmospheric Research (UCAR). Additional funding came from WMO.

**HIWeather Kicks-Off**

The Met Office headquarters in Exeter, United Kingdom (UK), hosted the HIWeather Project’s kick-off workshop from 25 to 27 April. The event attracted 84 scientists from 21 countries around the world. Professor Virginia Murray of Public Health England and the United Nations International Strategy for Disaster Risk Reduction (UNISDR) launched the meeting with an inspirational presentation on the Sendai Framework for Disaster Reduction and the critical role that HIWeather will play in developing the science required for improved early warning systems that will reduce the toll in lives, livelihoods, health and wealth. She illustrated her talk with examples of research and warnings developed by Public Health England with the Met Office.

Professor Brian Golding of the Met Office, one of the project co-chairs, introduced HIWeather, focusing on the science gaps that it will address and on the knowledge and predictive tools it will develop to enable the detailing of weather conditions to the neighbourhood level, provide early warnings a month ahead, and forecast weather-related impacts such as flooding and energy consumption. These are the main expected outcomes of the next ten years of research in weather science. A better understanding of small-scale processes and their inherent predictability should go together with a better comprehension of how weather-related information influences decision-making and better strategies for communicating this information.

**Climate Variability and Predictions Workshop**

The 8th International Training Workshop on Climate Variability and Predictions, held in Ankara, Turkey, from the 25 to 29 April, focused on the 2015/16 El Niño event and addressed a wide range of related topics. The Workshop updated the 70 participants on the El Niño Southern Oscillation (ENSO) and other modes of climate variability in order to reinforce the concepts and tools for seasonal to interannual climate forecasting and to analyze how to communicate this information to the public.


News from the Group on Earth Observations (GEO), leading the Global Earth Observation System of Systems (GEOSS)

Earth observations for the Africa We Want

The inaugural AfriGEOSS Symposium “Earth Observations for the Africa We Want” coordinated access to and use of Earth observations – from satellites, airborne and ground- and marine-based systems – across
the African continent. At the Symposium hosted by Zimbabwe in April, AfriGEOSS members addressed issues relating to food security, forest management, land cover mapping, urban planning and water resources management, as well as their contributions towards the 2030 Sustainable Development Agenda in Africa.

AfriGEOSS activities respond to broad African agendas and objectives, including the African Union Agenda 2063 and the Africa Space Policy and Strategy, adopted by African Heads of State at the 26th African Union Summit held in January. The symposium outcomes included a commitment to establish national GEO mechanisms for its 27 African Member nations to leverage existing Earth observation investments as well as improve the use of Earth observations for evidence-based policy formulation and decision-making.

Some 110 participants from 23 countries and regional organizations attended the event. They represented government departments, the private sector, academic and research institutions, non-governmental organizations and space agencies in the domains of agriculture, environment, water, climate, disasters, mapping and data providers.

Results of GEO Engagement G7 Process

The Environment Ministers and Science and Technology Ministers of the Group of Seven (G7), an informal bloc of industrialized democracies, included several statements relating to GEO, GEOSS and the importance of Earth observations in addressing global challenges in their respective Communiqués, issued at the conclusion of their meetings in Japan in May.

“We recognize the necessity of robust earth observations to enhance our ability to measure and monitor greenhouse gas emissions,” notes the Communiqué. It later states, “Fundamental to the progress of open science is the continued investment by governments and others, such as the Group on Earth Observations’ Global Earth Observation System of Systems (GEOSS), in suitable infrastructures and services for data collection, analysis, preservation and dissemination.”

The references demonstrate GEO’s advocacy potential to ensure that the value of Earth observation data and information is incorporated into the deliberations and decision-making at the highest levels of government.

For more information on the G7 Summit, visit: www.japan.go.jp/g7/

125th Anniversary of the Russian Meteorological Bulletin

WMO congratulates the Russian Meteorological Bulletin for its 125th anniversary. The Russian Meteorological Society published the first issue of Meteorological Bulletin in 1891, on the initiative of Heinrich von Wild, then President of the International Meteorological Organization.

Obituary

An obituary for our colleague, Dr Viktor Boldyrev, Director of World Climate Programme from 1982-1989, is available in the online version of MeteoWorld.

Upcoming Events

21-22 November: The Technical Conference of the Commission for Basic Systems (CBS TECO), Guangzhou, China
23-29 November: 16th session of the Commission for Basic Systems (CBS-16), Guangzhou, China
5-6 December: The Women Leadership Workshop, Rome, Italy
7-13 December: 15th Session of the Commission for Hydrology (CHy-15), Rome, Italy

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We welcome your comments about MeteoWorld and look forward to hearing from you: editor@wmo.int

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