The forty-second session of the United Nations Inter-Agency Meeting on Outer Space Activities (UN-Space) (16-19 October 2023, Brindisi, Italy)

WMO Updates

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• WMO Space Programme

• The Nineteenth World Meteorological Congress (Cg-19) outcomes and strategic initiatives
  • Early Warning for All (EW4All)
  • Global Greenhouse Gas Watch (G3W)
  • Cryosphere Services

• Data Policy Implementation and Core Satellite Data Workshop

• WMO Position on the WRC-23 agenda
Space System and Utilization Division a.k.a. WMO Space Programme

- Space System and Utilization Division (SSU) under Infrastructure Department
  - New head of Infrastructure Department is Nir Stav from Israel from 1 Oct 2023

- Staff
  - Natalia Donoho (Division Head)
  - Zoya Andreeva, Jesse Andries and Heikki Pohjola
  - Chang Liu (CMA), JPO

- Expert teams
  - ET-SSU (Space System and Utilization)
  - ET-RFC (Radio Frequency Coordination)
  - ET-SWX (Space Weather)

- Consultants
  - Roger Saunders (OSCAR/Space)
  - Mikael Rattenborg (CGMS SEC, DBNet)
Congress Outcomes
Elections

• Professor A. Celeste SAULO as the Secretary-General
• Dr Abdulla AL MANDOUS (United Arab Emirates) as President
• Mr Daouda KONATE (Côte d’Ivoire) as First Vice-President
• Mr Eoin MORAN (Ireland) as Second Vice-President
• Dr Mrutyunjay MOHAPATRA (India) as Third Vice-President
• Executive Council
Today I announce the United Nations will spearhead new action to ensure every person on Earth is protected by early warning systems within five years.

António Guterres, Secretary-General of the United Nations, 23rd March 2022
Added Value of the Initiative to the Members

- Pillar 2 led by WMO relies on the existing WMO Multi-Hazard Early Warning System.
- It adopts a programmatic approach, encompassing global, regional, and national levels.
- Primary focus is on supporting the 30 less developed countries.
Specific responses needed by the space agencies

SERCOM/SC-DRR/ET-EWS: Expert Team on Early Warning Services

Priority hazards defined:

- Tropical cyclones – multi-hazards: wind, rain, storm surge, high wave...
- Floods
- Drought
- Heatwaves
- Other priority hazards identified by Regions/Nations

INFCOM/TT-EW4All - Task Team on EW4All:

For satellite products/applications, including nowcasting products:

- Gap Analysis of existing products/applications against priority hazards in WMO regions (RA-I/VI, RA-II/V, RA-III/IV)
- Gap filling: Recommendations for additional products/applications
WMO’s Global Greenhouse Gas Watch (G3W)

• Progress toward reducing net anthropogenic GHG emissions under the Paris Agreement continues to be slow

• The assessment of the effectiveness of mitigation action does not take into account its impact on atmospheric greenhouse gas concentrations

WMO Greenhouse Gas Monitoring Symposium, 30.01-01.02 2023
Consensus Statement authored by 170 participants (excerpt):

• There is an urgent need to (...) develop global, internationally coordinated GHG monitoring to help accurately quantify greenhouse gas sources and sinks

• WMO (...) is uniquely positioned to play a significant role in advancing this

• Recognizing the urgency, we therefore call on WMO, {...}, to take ownership via
  • Convening experts and stakeholders across UN, international programs,
  • Leading the development of an initial concept for an integrated framework {...}
WMO Cg-19 outcome of Cryosphere day

Cg-19: new Strategic Objective 1.5:

Accelerate the development of integrated systems and services to address global risks associated with irreversible changes in the cryosphere and downstream impacts on water resources and sea level rise.

Cg-19: Resolution (3.2(3)):

High-level priorities to address global and regional impacts of changes in the cryosphere:

- Including action: Sustain advocacy for critical satellite observations and data over polar and high mountain regions to support risk monitoring and assessments and the development of necessary services.
WMO’s role in coordinating with Space Agencies on cryosphere (polar and high mountains) observations

• 2007/08: International Polar Year – Space Task Group: planning, processing, archiving of EO legacy datasets

• 2011-2020: Polar Space Task Group, EC-PHORS: acquisition and distribution of fundamental satellite datasets and products

• 2022: INFCOM2 – agree to establish Task Group – coordination for advancing access to space-based cryosphere observations

• 2023: CGMS Working Group II recognizes the need for advancing space-based observations for cryosphere, polar and high-mountain areas and recommends WMO to continue the proper mechanism to foster such activities
• New WMO Unified Data Policy (Res. 1) was approved by WMO members in 2021 replacing the old Res 40 (weather), 25(hydrology) and 60 (climate)

• Two main categories of data:
  • Core (shall be exchanged)
  • Recommended (should be exchanged)

• The policy is addressed to national governments of WMO Members and cannot dictate private sector entities

• Exchange of core data is considered mandatory, irrespective of data origin
Satellite data in WMO Unified Data Policy

• The concept of Core satellite data is framed primarily in terms of importance to global NWP and Nowcasting

• No specific satellite datasets are listed as neither core nor recommended in current draft of policy.

• This is referred to the Manual on WIGOS.
Stakeholder consultations framed primarily in terms of importance of the satellite data for global NWP and nowcasting

- To get common view of Core satellite data definition for global NWP.
- To develop an initial list of Earth system data to be exchanged as core data and documented in WIGOS regulatory material

Target audience (by invitation): space agencies, NWP community members in WMO regions

Will seek endorsement from INFCOM 3 in April followed by Executive Council and finally WMO Congress for the decision by WMO members

Status update will be presented in CGMS-52
WMO Position on the WRC-23 agenda

• WMO through Expert Team on Radio Frequency Coordination (ET-RFC) has developed the Position Statement on the World Radiocommunication Conference 2023 (WRC-23) agenda

• Position Statement was adopted by Cg-19 in 2023

• It contains the positions on 21 agenda items of WRC-23 that are of prime interest or concern to WMO members, for example:

  – Continuity of sea surface temperature (SST) measurements
    • Under a significant threat especially due to the planned massive deployment of International Mobile Telecommunications (IMT), in the 6/7 GHz frequency range (WRC-23 Agenda Item 1.2)

  – The recognition of space weather in the context of the ITU Radio Regulations to ensure the protection of space weather sensor operations in the future (WRC-23 Agenda Item 9.1)
Thank you