

## **WMO Space Programme / WMO Integrated Global Observing System**

### **Workshop on Operational Space-based Weather and Climate Extremes Monitoring (SWCEM)**

**Date:** 15-17 February. Start of the meeting: 9 am (Registration as of 8:45 am)

**Venue:** WMO Headquarters Press Room

**Objective:** The Workshop provides for dialogue amongst satellite operators and WMO Regional Climate Centres (RCCs) with NMHSs to stimulate the utilization of space-based observation data and products for monitoring selected 'Weather and Climate Extremes' on a routine basis ("in operations"), in response to the current and future user requirements.

#### **15 February - Morning Session (Moderator: Mark Dowell)**

##### **Opening: Setting the Scene**

9:00 Opening remarks (Elena Manaenkova, WMO)

9:10 Introduction of participants/Working arrangements

9:15 Objectives of the workshop (Toshiyuki Kurino, WMO)

- (1) *To present use-cases for satellite-derived products focusing on monitoring extreme events with regard to 'accumulated high precipitation' and 'drought'*
- (2) *To understand and document the requirements from RCCs / climate centres for monitoring weather and climate extremes in operations, with a focus on 'accumulated high precipitation' and 'drought'*
- (3) *To identify lessons learned in the formulation of weather and climate extremes-related requirements and satellite-specific responses, and to formulate a preliminary response by RCCs/climate centres to the identified requirements*
- (4) *To assess the feasibility of a demonstration of space-based weather and climate extremes monitoring in operations, for strengthening the capacity of NMHSs.*

9:45 Architecture for Climate Monitoring from Space (Mark Dowell, EC JRC)

##### **Expectation to SWCEM**

10:10 GFCS (Filipe Lucio)

**(10:30 – 10:45: Coffee Break)**

**Expectation to SWCEM (cont.)**

10:45 GCOS (Carolin Richter)

11:05 GEO (Barbara Ryan)

11:25 WCRP (Boram Lee)

11:45 CLW/Agricultural Met (Jose Camacho)

**(12:05 – 13:30 Lunch Break)**

**15 February - Afternoon Session (Moderator: Mark Dowell)**

**Contribution of International Science Groups to SWCEM**

14:00 IPWG (Ralph Ferraro, NOAA/NESDIS)

14:25 GEWEX (Joerg Schulz, EUMETSAT)

14:50 CM-SAF (Rainer Hollmann, DWD)

15:15 SCOPE-CM - remote presentation - (Jeff Privette, NOAA/NCEI)

15:40 WCRP/ETCCDI (Ali Behrangi, NASA JPL)

**(16:05 – 16:20: Coffee Break)**

**Users' Perspectives of WMO RCCs and NMHSs to SWCEM**

16:20 NOAA/CPC (Pingping Xie)

16:45 JMA/Tokyo Climate Center (Kiyotoshi TAKAHASHI)

17:10 AuBoM (Yuriy Kuleshov)

**16 February - Morning Session (Moderator: Mark Dowell)**

**Users' Perspectives of RCC and NMHSs to SWCEM (cont.)**

09:00 CMA/Beijing Climate Center (Fengjing XIAO) - remote presentation -

09:25 BMKG (Riris Adriyanto)

09:50 Tanzania Meteorological Agency (Ladislaus Changa)

**(10:15 – 10:30: Coffee Break)**

**Contribution of Satellite Operators to SWCEM**

10:30 JAXA/EORC (Riko OKI)

10:55 CMA/NSMC (Yang Jun)

11:20 NOAA/NESDIS (Ralph Ferraro)

11:45 EUMETSAT (Joerg Schulz)

**Expectation to the SWCEM (cont.)**

12:10 EC Copernicus Emergency Management Service (Peter Salamon)

12:35 UNITAR/UNOSAT (Einar Bjorgo)

**(12:35 – 13:30 Lunch Break)**

**16 February – Afternoon Session (Moderator: Mark Dowell)**

**Regional Climate Model for Weather and Climate Monitoring**

13:30 Copernicus Climate Change Service (C3S) - remote presentation -  
(Dick Dee, ECMWF)

**Contribution of International Science Groups to SWCEM (cont.)**

13:55 Joint CEOS/CGMS Working Group on Climate (Joerg Schulz,  
EUMETSAT)

**14:30 – 17:30 Break-out Session to address objectives (1) - (4)**

**Session 1 (Chair/Rapporteur: Ralph Ferraro, Pingping Xie)**

- (1) *To present use-cases for satellite-derived products focusing on monitoring extreme events with regard to 'accumulated high precipitation' and 'drought'*
- (2) *To understand and document the requirements from RCCs/climate centres for monitoring weather and climate extremes in operations, with a focus on 'accumulated high precipitation' and 'drought'*

**Session 2 (Chair/Rapporteur: Rainer Hollmann, Joerg Schulz)**

- (3) *To identify lessons learned in the formulation of weather and climate extremes-related requirements and satellite-specific responses, and to formulate a preliminary response by RCCs/climate centres to the identified requirements*
- (4) *To assess the feasibility of a demonstration of space-based weather and climate extremes monitoring in operations, for strengthening the capacity of NMHSs.*

**17 February - Morning Session (Moderator: Donald Hinsman)**

**Reports from Break-out Session**

**Session 1**

09:00 Summary Objective (1) Use-cases

09:30 Summary Objective (2) Requirements of climate centres for satellite-based products

**(10:00 – 10:30: Coffee Break)**

**Session 2**

10:30 Summary Objective (3) Formulation of requirements by intermediate and end users

11:00 Summary Objective (4) A Demonstration SWCEM in Operation: Pilot Projects

11:30 General Discussion

**(12:00 – 13:30 Lunch Break)**

**17 February - Afternoon Session (Moderator: Tillmann Mohr)**

**Conclusions**

13:30 Adoption of Recommendations

15:00 Closure of the workshop (Wenjian Zhang, WMO)