# WMO OMM



World Meteorological Organization Organisation météorologique mondiale Organización Meteorológica Mundial Всемирная метеорологическая организация المنظمة العالمية للأرصاد الجوية 世界气象组织

Secrétariat 7 bis, avenue de la Paix – Case postale 2300 CH 1211 Genève 2 – Suisse Tél.: +41 (0) 22 730 81 11 Fax: +41 (0) 22 730 81 81 wmo@wmo.int – public.wmo.int

Our ref.: 20272/2020/S/ACS/EUMETSAT/WMO/FAO-Training

Annexes: 2 (available in English only)

5 November 2020

Subject: Participation of two experts in WMO/FAO/EUMETSAT Virtual Training Course on the Use of Satellite Products on Drought Monitoring and Applications in Agrometeorology (23 November-11 December 2020)

Action required: Notification to WMO Secretariat on the nomination of experts, no later than **13 November 2020** 

### Dear Sir/Madam,

There have been several successful training courses on the use of satellite data and products for agricultural meteorology organized by EUMETSAT and the World Meteorological Organization (WMO) over the past few years. WMO is supporting efforts on drought monitoring and drought management in coordination with United Nations organizations, other international organizations and National Meteorological and Hydrometeorological Services (NMHSs) to support the development of meteorological and climate services for agriculture and food production. Based on these efforts, and to further promote drought monitoring practices and improved agricultural meteorology products and service delivery for countries in South Eastern Europe and the Caucasus, we are planning to hold a Virtual Regional EUMETSAT/WMO/FAO Satellite Products Training Course, on these topics from 23 November to 11 December 2020.

This course will be jointly organized by WMO, the United Nations Food and Agriculture Organization (FAO) and EUMETSAT, with the cooperation of the EU-Joint Research Centre (JRC), the Instituto Português do Mar e da Atmosfera (IPMA), the Technical University of Vienna (T.U. Wien) and the Drought Management Centre for South Eastern Europe (DMCSEE). The course will be hosted virtually by the Romania Meteorological Service (Meteo Romania). This course is intended to improve the abilities of agricultural meteorology experts from NMHSs and Ministries of Agriculture in drought monitoring, vegetation and crop status assessment, and other necessary skills needed to improve agricultural services delivery. The course will also include potential improvements of each country's drought and agrometeorological bulletins.

The course will be conducted in English and will be offered to participants from Albania, Armenia, Azerbaijan, Belarus, Bosnia-Herzegovina, Bulgaria, Croatia, Georgia, Greece, Hungary, Moldova, Montenegro, North Macedonia, Romania, Serbia, Slovenia, Turkey and Ukraine. Participants will be engaged during working hours for a few hours a day from 23 November to 11 December 2020. Offline sessions devoted to consulting documents and written exchanges with trainers and online sessions with simultaneous virtual attendance from all participants will also be held during these three weeks. Please find attached the Project Description (Annex I) for more information. I would like to request your consideration of the possibility of nominating two experts from your Service to participate in this virtual training course, having in mind the required levels on Agrometeorology and English language skills.

For administrative purposes, I would appreciate if you could kindly notify the WMO Secretariat (contact person: Mr Jose Camacho email: jcamacho@wmo.int), as soon as possible but not later than **13 November 2020**, of your nominations by returning the attached Nomination Form (Annex II) completed for each nominee. Please note that the selected participants will be enrolled in the virtual course and provided directly with further information, including the course programme and other administrative details.

Thank you for your continued support to the WMO activities.

Yours faithfully,

Dr Elena Manaenkova for the Secretary-General





### **Project Description**

# WMO/FAO/EUMETSAT Virtual Training Course on the Use of Satellite Products on Drought Monitoring and Applications in Agrometeorology

# (23 November-11 December 2020)

# 1. Concept

Climate variability influences all sectors of countries' economies, especially agriculture, with crop production being one of the most vulnerable sub-sectors. Crop productivity fluctuates from year to year, being influenced by weather and climate variability, and especially by extreme events such as drought.

Drought is a major natural hazard that is manifested through significant deficits in soil moisture and precipitation, with effects on potential and real evapotranspiration. Plants, trees, and grass cover for livestock evolve according the distribution of rains and solar heating modulated by the season but also by inter annual climate variations.

Satellite data and products play a key role in the development of agrometeorological information and the provision of effective services for drought monitoring, food security and enhanced food production. Mid latitude regions can benefit from rainfall estimations, vegetation development and seasonal evolution, soil moisture monitoring, and changes in solar radiation due to cloudiness, among other satellite products from geostationary and low earth orbit satellites.

### 2. Partnership

WMO, FAO and EUMETSAT are joining efforts to assist countries to develop capacity to apply satellite products for drought monitoring and other applications. These partners further welcome the support of the National Meteorological Administration of Romania (Meteo-Romania), and other organizations contributing with trainers, including the EU-Joint Research Centre (JRC), the Drought Management Centre for South Eastern Europe (DMCSEE), Instituto Português do Mar e Atmosfera and the Technical University of Wien. These organizations will organize a virtual training course on the use of satellite products for drought monitoring and agrometeorological applications in seven daily remote sessions between 23 November and 11 December 2020, coordinated from Bucharest, Romania.

### WMO

The World Meteorological Organization (WMO) is the United Nations system's authoritative voice on the state and behaviour of the Earth's atmosphere, its interaction with the oceans, the climate it produces and the resulting distribution of water resources. Established in 1950, WMO became the specialized agency of the United Nations in 1951 for meteorology (weather and climate), operational hydrology and related geophysical sciences. WMO has 193 Member States and Territories. Since its establishment, WMO has played a unique and powerful role in contributing to the safety and welfare of humanity. It has fostered collaboration between the

National Meteorological and Hydrological Services of its Members and furthered the application of meteorology in many areas.

# EUMETSAT

Created in 1986, EUMETSAT is the European Organization for the Exploitation of Meteorological Satellites. Its primary objective is to establish, maintain and exploit European systems of operational meteorological satellites. EUMETSAT is responsible for the launch and operation of the satellites and for delivering satellite data to end-users as well as contributing to the operational monitoring of climate and the detection of global climate changes.

# FAO

The Food and Agriculture Organization of the United Nations, with headquarters in Rome, Italy, is present in over 130 countries. To meet the demands posed by major global trends in agricultural development and challenges faced by member nations, FAO has identified several key priorities: help eliminate hunger and malnutrition; make agriculture, forestry and fisheries more productive and sustainable; reduce rural poverty; enable inclusive and efficient agricultural and food systems; and increase the resilience of livelihoods to threats and crises.

### Meteo Romania

National Meteorological Administration Romania is the national authority in the meteorological field in Romania, with a continuous service since 1884. Romania is a founding member of the International Meteorological Organization and, starting in 1947, became a member of the Convention establishing the World Meteorological Organization. Romania has a vast experience in extreme events monitoring and control at national level, with a history of 120 years of observations, forecasts and case studies performed by the National Meteorological Administration. The NMA experts are actively involved in prevention and mitigation of all the natural risks affecting the environment and agriculture, as well as disseminating specialized forecasts and advisories to decision-making factors and other end-users (farmer, citizens).

### 3. Main objectives

The goal of this activity is enhanced provision of accessible weather and climate information for the benefit of food producers and agriculture managers in Central and Eastern Europe, with further support from WMO, FAO and DMCSEE ongoing projects. The training is focused on capacity development for National Meteorological Services and Ministries of Agriculture to improve data and product quality and service delivery in drought monitoring and management in a wide range of agricultural sectors. That information must be coupled with other tools such as seasonal forecasts, crop models and geographical information systems.

The virtual training will be supported by the WMO Moodle Platform, where contents, tests and supporting documents will be found. The course will be structured around six modules: EUMETSAT data and products, Land-SAF, FAO crop models and products, EU-JRC products and tools, Hydrology-SAF (H-SAF), and operational products for drought monitoring and agrometeorological applications in Central-Eastern Europe.

### 4. Specific objectives

- Expanded use of Land-SAF and Hydrology-SAF products and other related products among European agrometeorologists and water managers to enhance the benefits derived and to collect and exchange experience from that use;
- Development of capacity in the NMHSs and Ministries of Agriculture in Central and Eastern Europe in the areas of vegetation status monitoring, soil moisture, rainfall estimations, forest fire risk estimations, radiative balance and land use;

- Institutional cooperation reinforcement between EUMETSAT, WMO, FAO and the National Institutions of the region in terms of satellite product utilization and reception station optimization for drought management and agriculture production;
- Development of cooperation between the DMCSEE and other WMO and FAO partners at the Region;
- Increased understanding of regional gaps, needs and priorities for future cooperation between relevant institutions and partners;
- Increased capacity within the agriculture sector to adapt to climate change through enhanced drought resilience using recent climate tools and data sets.

### 5. Target stakeholders

- Participants from NMHSs with drought monitoring and agricultural meteorological responsibilities, identified by WMO (2 per country);
- Participants from Ministries of Agriculture identified by FAO (2 per country);
- Participating countries: Albania, Armenia, Azerbaijan, Belarus, Bosnia-Herzegovina, Bulgaria, Croatia, Georgia, Greece, Hungary, Moldova, Montenegro, North Macedonia, Romania, Serbia, Slovenia, Turkey and Ukraine.

### 6. Expected results

- Wider use and application of satellite products for vegetation indexes monitoring, soil moisture evaluation, forest fire risk indexes, radiative balance and rainfall estimation;
- Central-Eastern Europe Agrometeorological monitoring products and tools are provided by the National Meteorological Services and national institutions in the region;
- Identification of areas with high vulnerability to climate variability and changes in soil water availability, drought and water scarcity, to inform rainwater conservation for crops cultivated in the Central-Eastern Europe;
- Comprehension/understanding of the current status of drought warning systems and how the drought risk assessment and the impact in real time is evaluated by National Meteorological Services.

#### 7. Contacts

Mr M. José Prieto Training Officer EUMETSAT Eumetsat Allee 1 64295 Darmstadt, Germany Phone: +49 6151 807 5440 Fax: +49 6151 807 3040 Email: jose.prieto@eumetsat.int Dr Jose Camacho Scientific Officer Climate and Water Department World Meteorological Organization 7bis, Avenue de la Paix 1211 Geneva 2, Switzerland Phone: +41 22 730 8357 Email: jcamacho@wmo.int

Dr Daniel Alexandru Head of Agrometeorology Department National Meteorological Administration Bucuresti-Ploiesti nr 97 Road, 1st District, 013686 Bucharest, Romania Email: daniel.alexandru@meteoromania.ro Tel: +40 21 318 32 40 / 173

#### VIRTUAL TRAINING COURSE ON THE USE OF SATELLITE PRODUCTS ON DROUGHT MONITORING AND APPLICATIONS IN AGRO METEOROLOGY

23 November-11 December 2020

	NOMINATION FORM FOR PARTICIPANT Please return the Nomination forms to WMO by email to jcamacho@wmo.int NOT LATER THAN 13 November 2020 with an up-to-date curriculum vitae.							
L <b>.</b>	Country:							
2.	Title (Mr / Mrs / Ms):							
8.	LAST NAME (FAMILY NAME) (in block letters):							
ŀ.	First name (Given Name):							
5.	Service / Institute / Organization:							
<b>5</b> .	Professional address:							
	City: Zip Cod	e:						
<b>7</b> .	Telephone: Fax:							
8.	Date of birth:							
).	Nationality:							
.0.	Academic qualification:							
1.	Current professional responsibilities: Meteorology/Climatology Hydrology Other (describe):	Agriculture						
L <b>2.</b>	Please check your available Internet and computer re	esources:						
	Internet connection sufficient enough to							
	support 2 to 3 hours of non-stop sessions:	YES NO						
	Computer with standard graphics display performance:	□ YES □ NO						

13.	English Language skill:	Excellent	🗌 Good	🗌 Fair						
14.	IMPORTANT: Login Det	ails (all applica	ints are reque	ested to create an						
account* in the etrp.wmo.int, the Moodle Platform of the Education and Training Programme of WMO, where the virtual course will be conducted; and provide below										
the username and the email address associated to the account. Please contact the course organizers at tra@wmo.int if you have difficulties).										
*Username:										
*Email: (associated with the WMO Moodle Platform account):										
NOTE: The selected participants will be enrolled in the virtual course and contacted directly.										
15. The candidate is expected to have experience (or has had training) on at least two										
of indi	cated criteria:									

•	Use of remote sensing derived vegetation indexes	Yes	No	
•	Use of satellite products on forecasting or nowcasting	Yes	No	
•	Crop data analysis, crop models and crop statistics	Yes	No	
•	Drought monitoring indexes	Yes	No	
•	Climate Risk Management	Yes	No	
•	Drought impact assessment	Yes	No	
•	Participation at Agrometeorological Bulletin elaboration	Yes	No	
•	Other relevant experience:			

Signature of the candidate: \_\_\_\_\_ Date: \_\_\_\_\_

Signature of the Permanent Representative with Office Seal:

Date: -----