



Our ref.: 12168/2022/S/CS/MedCOF-OSF

25 May 2022

Annexes: 2 (available in English only)

Subject: Training Workshop on the Production of Objective Seasonal Forecasts for the Mediterranean Region, Part I: 31 May – 1 June 2022, Part II: 13 – 17 June, 20 – 24 June 2022

Action required: Nominate participant by returning duly completed and signed Nomination Form

Dear Sir/Madam,

As you recall, for nearly a decade the State Meteorological Agency of Spain (AEMET) has been coordinating the effort made by the 34 countries of the Greater Mediterranean Region, with support from the WMO Regional Climate Centres (RCCs) in the region and the World Meteorological Organization (WMO), to generate a consensus based operational seasonal climate outlook through the Mediterranean Climate Outlook Forum (MedCOF).

Following the recommendations of the Regional Climate Outlook Forums (RCOF) Global Review 2017 and the WMO Executive Council at its seventy-second session, [Decision 9 \(EC-72\)](#) - Operationalization of Objective Seasonal Forecasts and Tailored Products on Subregional Scales, many RCOFs worldwide, including MedCOF, initiated a process of transitioning towards an objective approach for the production of seasonal outlooks, which requires the development of relevant capacities at National Meteorological and Hydrological Services (NMHSs).

I am pleased to inform you that AEMET, in coordination with WMO, is organizing a virtual Training Workshop on the Production of Objective Seasonal Forecasts for the Mediterranean Region, to develop capacities of NMHSs in different aspects related to objective seasonal forecasting. The target audience are the NMHSs experts involved in MedCOF and associated with SEECOF/PRESANORD/ArabCOF activities, and they have been informed by AEMET about the forthcoming workshop. The training will be conducted in several parts, with involvement of international resource persons, including experts from AEMET, WMO Regional Climate Centres and Global Producing Centres.

The first part of the training will be held on 31 May – 1 June in the form of lectures, to be made available through an online platform. The second part will be conducted later in June and will comprise of hands-on training. More details on the Training Workshop are provided in the Concept Note ([Annex 1](#)).

I kindly invite you to nominate up to two experts to participate in the above-mentioned Training Workshop, by returning the duly filled in and signed Nomination Form ([Annex 2](#)), as soon as possible, but preferably by **27 May 2022**.

To: Permanent Representatives of Albania, Algeria, Armenia, Azerbaijan, Bahrain, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Egypt, Georgia, Greece, Hungary, Israel, Jordan, Kuwait, Lebanon, Libya, Malta, Mauritania, Moldova, Montenegro, Morocco, North Macedonia (the Republic of), Niger, Oman, Palestine, Qatar, Romania, Saudi Arabia, Serbia, Slovenia, Syria, Tunisia, Turkey, Ukraine, and United Arab Emirates, with WMO (limited distribution)

cc: Hydrological Advisers

Further details on the workshop agenda and schedule, as well as relevant links and connection instructions will be provided to the participants prior to the event.

For further information, please, contact Mr Wilfran Moufouma Okia (wmokia@wmo.int), Head of Regional Climate Prediction Services Division, WMO, and Mr Esteban Rodríguez Guisado (erodriguezg@aemet.es), Climate Assessment and Modelling Area, AEMET.

I take this opportunity to thank you for your continued cooperation and support to the WMO activities.

Yours faithfully,



Dr Elena Manaenkova
for the Secretary-General

TRAINING WORKSHOP ON THE PRODUCTION OF OBJECTIVE SEASONAL FORECASTS FOR THE MEDITERRANEAN REGION

Concept Note

Ref.: 12168/2022-1.11 S/CS

The recent completion of the MEDSCOPE project within the framework of the ERA4CS initiative (<https://www.medscope-project.eu>) provides improved knowledge of climate predictability at the seasonal timescale over the Mediterranean Region, a collection of tools for analysing and synthesizing seasonal forecast information, and the development and evaluation of downstream services in three priority sectors (renewable energy, water management and agriculture/forestry). A survey carried out within the Mediterranean Climate Outlook Forum (MedCOF) community stressed the need for a training workshop on climate predictability and tools for synthesizing and analysing seasonal climate forecast information.

Following recommendations collected in the “Guidance for Mediterranean Climate Outlook Forum subregion to enable the operational production of objective seasonal forecasts” and thorough discussions within the MedCOF community at two PreCOF events (29 November and 16 December 2021), we propose a training workshop, aiming at the production of objective seasonal forecasts for the MedCOF subregion.

The Workshop is co-organized by AEMET and WMO. Participants include representatives of NMHSs from the countries of the broader Mediterranean Region (Albania, Algeria, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Egypt, Georgia, Greece, Hungary, Israel, Jordan, Lebanon, Libya, Malta, Mauritania, Moldova, Montenegro, Morocco, North Macedonia (the Republic of), Niger, Romania, Serbia, Slovenia, Syria, Tunisia, Turkey, Ukraine) and countries of the ArabCOF domain (Bahrain, Kuwait, Oman, Palestine, Qatar, Saudi Arabia and the United Arab Emirates). Trainers of the Workshop are experts from Italy, Spain, UK, as well as from RA VI RCC Network, including France, Germany, Russian Federation.

The open-source learning management system, Moodle, together with the MedCOF web page will be used to host and share material for the online event and for later reference. The basic documentation of the workshop will consist of presentations, training videos, tutorials, software and relevant papers.

Part of the material was already delivered in previous MedCOF pre-COF events, either in the form of outreach presentations and pre-recorded videos, summarizing the main MEDSCOPE project outcomes. This pre-existing material will be the core for the proposed training workshop and together with the newly developed material will constitute a solid basis of knowledge for the implementation of objective season forecasts in the MedCOF Region. Furthermore, parts of this material - singularly Blocks 2 and 3 - could be easily adapted and used for training purposes in other RCOFs.

Hand-on sessions will include the code (preferably html notebooks) for the examples to be run during the sessions, allowing every attendee either to execute it step-by-step at the same time as the instructor, or to experiment, modifying any of the steps and saving its own version. Examples of code will remain available after the training.

Training sessions will be scheduled either together in the same week or expanded along several weeks. The modality of the training workshop will eventually depend on trainers' availability. Nevertheless, this last expanded modality has the added advantage of allowing enough time for the participants to practice on their own outside of the team training sessions.

Provisional agenda

Part 1

31 May 2022

0900 – 1000 Introduction (Wilfran Moufouma and Ernesto Rodríguez)

Block 1: Sources of seasonal predictability in the Mediterranean region

1000 - 1100 Predictability from ENSO/PDO (Bianca Menzina)

1100 – 1200 Predictability from Siberian snow cover (Paolo Ruggieri)

1200 – 1300 Lunch break

1300 – 1400 Additional sources of predictability (Javier García-Serrano)

1 June 2022

Block 2: Available seasonal climate information:

0900 – 1000 Seasonal forecast information at C3S (Anca Brookshaw)

1000 – 1100 Other sources of information and empirical forecasts (Esteban Rodríguez)

Block 3: Downstream and sectoral application climate services

1100 – 1200 Climate services prototypes for renewable energy sector (Albert Soret)

1200 – 1300 Lunch break

1300 – 1400 Climate services prototypes for water sector (Ernesto Rodríguez/
Esteban Rodríguez)

1400 – 1500 Climate services prototype for agriculture and forestry sectors
(José-Costa Saura)

Part 2*

Ref.: 12168/2022-1.11 S/CS

Block 4: Hands on training on developed Tools for accessing, analysing and synthesizing seasonal forecasts in the MedCOF region:

13 - 17 June 2022

Day 1 Introduction to R language (1h)
Hands-on session on R language (1h)

Day 2 Introduction to CStools toolbox (1h)
Hands-on session on "Retrieval and transformation functions CST_Load" (1h)

20 - 24 June 2022

Day 1 Hands-on session on "Classification functions with CStools":
CST_WeatherRegimes (2h)

Day 2 Hands-on session on "Correcting seasonal forecasts with CStools":
CST_Calibration (2h)

Day 3 Installation of software (1h)
Downloading data (1h)

* Final dates and time of Part 2 might be adjusted depending on the availability of trainers

Training Workshop on the Production of Objective Seasonal Forecasts for the Mediterranean Region

Virtual event

(dates provided in the Concept Note)

NOMINATION FORM

Please send the filled in and signed Nomination Form by email to, erodriguezg@aemet.es, with copies to wmoklia@wmo.int and ahovsepyan@wmo.int preferably by 27 May 2022

1. **Country:**
2. **Last name:** (in block letters) Mr / Ms

First name:
3. **Date of birth:**
4. **Nationality:**
5. **Service / Institute / Organization:**
6. **Position:**
7. **Current professional responsibilities** (Select all that apply)
 Long Range Forecasting ☐ Climate Monitoring ☐ Climate Data ☐
 Other (specify)
8. **Involvement in**
 MedCOF ☐
 SEECOF ☐
 PRESANORD ☐
 ArabCOF ☐

9. Professional address

10. Contact information:

Email address:

Telephone: Office:

Mobile (optional):

Date:

Signature of the Permanent Representative

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