WEATHER CLIMATE WATER
TEMPS CLIMAT EAU

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

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Annexes: 2 (available in English only)

Subject: CREWS/SWFP–West and Central Africa Training Workshop on Severe Weather and Impact Based Forecasting and Warning Services (ONLINE), 25 May – 3 June 2021

Action required: To nominate a maximum of three operational forecasters from your Service to attend the CREWS/SWFP online training workshop and convey the nominations to the WMO Secretariat as soon as possible, but **no later than 20 April 2021**

Dear Sir/Madam,

As you may be aware, the World Meteorological Organization (WMO) Severe Weather Forecasting Programme (SWFP) has been implemented in various subregions of the world including West Africa. SWFP makes efficient use of the 'cascading forecasting process' with contributions from the Global Data Processing and Forecasting System (GDPFS) Centres. Numerical weather prediction (NWP) outputs are made available from the contributing World Meteorological Centres (WMCs) and the daily severe weather forecast guidance product is issued to the National Meteorological and Hydrological Services (NMHSs) by the relevant Regional Centre(s) in each subregion. The Regional Specialized Meteorological Centre (RSMC) in Dakar has been providing severe weather forecast guidance products to the NMHSs within the framework of SWFP–West Africa.

The development of SWFP in Central Africa was also initiated in 2019 with a Technical Planning Workshop on Development of SWFP in Central Africa (N'Djamena, 29 October-1 November 2019). Considering the important role and contributions of RSMC Dakar for SWFP–West Africa, the meeting also considered RSMC Dakar to play its role as a Regional Centre in the 'cascading forecasting process' in Central Africa to provide a severe weather guidance product to the NMHSs for enhancing early warnings systems (EWS) in the subregion. During recent years, the Climate Risk and Early Warning Systems (CREWS) initiative funded projects have also aimed to improve EWS in several countries in West and Central Africa.

In this context, WMO, in collaboration with RSMC Dakar, contributing WMCs and development partners, is organizing a CREWS/SWFP–West and Central Africa Training Workshop on Severe Weather and Impact Based Forecasting and Warning Services from 25 May to 3 June 2021. Due to the COVID-19 pandemic and various national and international travel restrictions this workshop will be delivered, fully online.

To: Permanent Representatives of Members with WMO (Benin, Burkina Faso, Cabo Verde, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of the Congo, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Côte d'Ivoire, Liberia, Mali, Mauritania, Nigeria, Niger, Sao Tome and Principe, Senegal, Sierra Leone and Togo) (limited distribution)

The two-week workshop will include training on interpretation and use of the NWP and ensemble products, satellite information and nowcasting products including those available through the SWFP, and delivery of services with the aim of improving severe weather and impact based forecasting and early warning services. This online workshop will follow a blended learning approach to training, with a mix of synchronous ("live") sessions, supplemented with online self-study modules, to be completed outside of the facilitated sessions. The workshop will be conducted in English and French with simultaneous interpretation. An Information Note including training objectives, topics and a provisional programme is attached as Annex I**.**

You are invited to kindly nominate, from your Service, up to three operational forecasters preferably those currently involved in, or with recent experience in, the delivery of public weather services to attend the training workshop from 25 May to 3 June 2021.

Although the nominated forecasters will attend the training remotely, most parts will need to be completed in real-time. Therefore, the nomination must guarantee participants' availability to attend all live sessions, and also have sufficient time allocated to allow for the completion of all self-study modules. For each participant, the time commitment for daily live sessions is 12 hours per week. In addition, a minimum of 10 hours commitment is expected to complete the online self-study modules. Each participant also needs to have access to an individual computer or laptop, with a reliable internet connection, which allows streaming of videos and sound, as well as a connection to remote servers to complete self-study modules.

A prescribed Nomination Form is attached as Annex II. The electronic copy is available on the WMO Community Platform.

Nomination forms should be completed and returned to the WMO Secretariat at your earliest convenience, but **no later than 20 April 2021**.

I would like to express my appreciation for your continued support to the WMO Programmes and activities including SWFP.

Yours faithfully,

Dr Elena Manaenkova
for the Secretary-General

CREWS / SWFP – West and Central Africa
Training Workshop on Severe Weather and Impact Based Forecasting and Warning Services (ONLINE), 25 May – 3 June 2021

Information Note

Training Objectives

To address the capacity-building needs of operational forecasters and public weather services (PWS), staff of NMHSs of countries involved in CREWS and WMO Severe Weather Forecasting Programme (SWFP) in West and Central Africa. This will be achieved through enhancing the participants' capability in the:

- Interpretation and use of the severe weather forecasting guidance product as issued by RSMC Dakar through the SWFP web portal;
- Interpretation of Numerical Weather Prediction (NWP), including Ensemble Prediction System (EPS) outputs;
- Interpretation and use of the satellite information and nowcasting products (RDT, CRR etc.);
- Understanding of impact based forecasting and warnings services;
- Communication of severe weather through impact based forecasting and warning services provided to the general public, stakeholders and users, including disaster managers and media;
- The Common Alerting Protocol (CAP), WMO Register of Alerting Authorities and participation in the WMO World Weather Information Service (WWIS).

Qualification of participants

- Operational forecasters with at least 2 years' experience in weather forecasting, preferably having experience with the delivery of public weather services (PWS).
- Participants must be proficient in English and/or French.
- Participants are required to provide the course organizers with feedback on the usefulness and effectiveness of the online training immediately following the workshop. WMO will send an online survey for this purpose.
- Participants are encouraged to actively maintain technical exchanges and communication with the lecturers/experts, organizers and their peers, both during and after the workshop including for completion of an end of training course exercise, i.e. a case study on severe weather to be submitted by each participant in eight weeks' time after the completion of the workshop (more information is found below).

Medium of instruction

English and French with simultaneous interpretation in both languages during the live sessions.

Places offered

Around 60 registered participants (a maximum of three participants per country) from the NMHSs of countries involved in CREWS and SWFPs in West and Central Africa.

Lecturers

Experts from the Met Office UK, ECMWF, Meteo France, NOAA/NCEP, COMET/MetEd, RSMC Dakar and RSMC Barcelona (WMO Dust Regional Centre).

Contents/Topics/Programme

The tentative training programme for both weeks of the CREWS/SWFP–West and Central Africa online remote training workshop is given below. It consists of the daily live sessions and self-study modules (to be provided later to the nominated participants). The programme may be subject to minor changes and adjustments.

Tentative Programme Week-1 (25–28 May 2021)			
Tuesday, 25 May	**Wednesday, 26 May**	**Thursday, 27 May**	**Friday, 28 May**
1000–1300 (UTC time)	1000–1300 (UTC time)	1000–1300 (UTC time)	1000–1300 (UTC time)
• Opening Remarks (WMO) • Introduction (course overview, learning platform, lecturers/facilitators etc.) (Ata HUSSAIN) • WMO SWFP overview (Ata HUSSAIN) • RSMC Dakar SWFP web portal (Sadibou Ba) • NOAA/ NCEP products (Wassila Thiaw)	• NWP interpretation & use in severe weather forecasting (Caroline Bain) • NWP interpretation & use in severe weather forecasting (practical session) (Caroline Bain)	• Met Office African Web Viewer (Catherine Moore) • Global Hazard Map (Joan Robbins) • ECMWF products including Extreme Forecast Index (EFI) (Anna Ghelli) • Forecast verification (TBD/RSMC Dakar)	• Nowcasting products and tools (e.g. RDT, CRR etc.) (MeteoFrance) • The WMO Barcelona Dust Regional Centre (RSMC Barcelona): Activities and Dust products (Sara Basart)
Note: A list of online self-study Modules will be provided to the nominated participants later			

Tentative Programme Week-2 (31 May – 3 June 2021)			
Monday, 31 May	**Tuesday, 1 June**	**Wednesday, 2 June**	**Thursday, 3 June**
1000–1300 (UTC time)	1000–1300 (UTC time)	1000–1300 (UTC time)	1000–1300 (UTC time)
• Introduction (Course overview, Learning platform, lecturers/facilitators etc.) • WMO PWS overview • Introduction to Impact Based Forecasting TBD)	• Exercise: Developing Impacts table and Response matrix – Partnership between Met service and Stakeholders (TBD)	• Improving NMHSs' websites • The Common Alerting Protocol and the WMO Register of Alerting Authorities	• Impact Based Forecasting (practical) • Impact Based Forecasting (practical) • Developing a Workplan (TBD) • Q & A and Conclusion

Tentative Programme Week-2 (31 May – 3 June 2021)			
Monday, 31 May	**Tuesday, 1 June**	**Wednesday, 2 June**	**Thursday, 3 June**
1000–1300 (UTC time)	1000–1300 (UTC time)	1000–1300 (UTC time)	1000–1300 (UTC time)
• Impact Based Forecast and Warning Process (COMET)	• Exercise: Vulnerability and Exposure Assessment: Simulation of a fictitious situation to demonstrate how to assess vulnerability (TBD) • Building IBF Partnerships through Communication Module	• Participation in the WMO World Weather Information Service (WWIS)	
Note: A list of online self-study Modules will be provided to the nominated participants later			

Participants have to attend all live sessions and should also complete the self-study modules. A time commitment of approximately 12 hours per week for the live sessions and 10 hours for the completion of self-study modules is expected. Daily live sessions are important for giving participants the chance to contextualize and apply theoretical knowledge from the self-study modules, and also work together and learn from the experience of their peers. Therefore, it is mandatory that participants attend all these sessions. The live sessions will take place daily from **1000 UTC to 1300 UTC** during 25–28 May and 31 May–3 June 2021. Participants should take note of the local timings for the live sessions accordingly.

Certification of the workshop will be subject to completion of the self-study modules, attendance to all live sessions and submission of a severe weather case study by each participant by Friday, 30 July 2021. The aim of the case study is to show the application of the knowledge gained in the subject training course to a severe weather event in the participant's home country.

Training delivery

The training will be delivered in a blended learning format, making use of both self-study modules hosted on online learning platforms, and synchronous sessions delivered in real-time using video conferencing software (e.g. ZOOM). For this to be effective each delegate will need to have access to an individual computer with a reliable internet connection which allows streaming of videos and audio, as well as access to remote servers to complete the online self-study modules. More information including instructions on how to make use of the various platforms to access the various self-study modules will be provided to the participants via email at a later date, possibly by May 2021. Therefore, please ensure to include the direct email addresses for the nominated delegates on the Nomination Form in Annex II.

Deadline for application

The completed prescribed Nomination Form (duly signed by the PRs and/or Directors of NMHSs) in Annex II should be returned to the WMO Secretariat **no later than 20 April 2021.**

Enquiries

For any queries or clarification, please contact the following:

- Mr Ata HUSSAIN, Scientific Officer (SWFP), DRR and Public Services Branch (DPS), WMO Headquarters, Geneva, Switzerland (ahussain@wmo.int);
- Mr Samuel MUCHEMI, Scientific Officer (PWS), DPS, WMO Headquarters (smuchemi@wmo.int);
- Mr Bernard Edward Gomez, WMO Representative for North, Central & West Africa, WMO Regional Office, Abuja, Nigeria (begomez@wmo.int).

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CREWS/SWFP–West and Central Africa
Training Workshop on Severe Weather and Impact Based Forecasting
and Warning Services (ONLINE), 25 May – 3 June 2021

PARTICIPANT NOMINATION FORM

(maximum three participants per country)

The following operational forecasters are nominated from (country):
to attend the above captioned CREWS/SWFP Online Training Workshop from 25 May to 3 June 2021:

	Nominee details	Contact details
1.	Name: Date of birth: Gender: Title/Designation: Responsibilities: Place of work: Qualification: Experience as forecaster (no. of years): years	Email*: Tel.: Mobile:
2.	Name: Date of birth: Gender: Title/Designation: Responsibilities: Place of work: Qualification: Experience as forecaster (no. of years): years	Email*: Tel.: Mobile:
3.	Name: Date of birth: Gender: Title/Designation: Responsibilities: Place of work: Qualification: Experience as forecaster (no. of years): years	Email*: Tel.: Mobile:

**Please ensure the email address is a direct email for the participant you are nominating.*

It is confirmed that each of the above nominee(s) will have access to his/her individual computer or laptop with a good internet connection to ensure smooth streaming of videos and sound, as well as a connection to remote servers to enable him/her to take part in the self-study modules and practical sessions during the online training workshop. It also confirms that they will be given time to attend all the live sessions, and adequate time to complete the self-study modules, a time commitment of 12 hours per week for the live sessions and approximately 10 hours for the completion of the self-study modules is expected.

Date: Nominating NMHS:

Signature of Permanent Representative (or Director of NMHS): _____

Note: Please complete and submit this Nomination Form by email to Mr Ata HUSSAIN (AHussain@wmo.int) with cc: to Mr Samuel MUCHEMI (SMuchemi@wmo.int) and Mr Bernard Edward GOMEZ (begomez@wmo.int) at the WMO Secretariat as soon as possible, but **no later than 20 April 2021.**

To enable us to provide you with the best service please complete all the fields by computer and send us an electronic copy.