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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Ref.: 10023/2024-L11 MS/ETR

Our ref.: 10023/2024/MS/ETR/CRS-1624 10 June 2024

Annexes: 3 (available in English only)

Subject: Invitation to Caribbean Numerical Weather Prediction Workshop for EW4ALL Initiative

Action required: Confirmation of participation by **8 July 2024** with indication whether financial assistance is required

Dear Sir/Madam,

In line with our dedication to capacity development, especially in connection with the Early Warning for All Initiative (EW4ALL), I am delighted to announce the forthcoming "Caribbean Numerical Weather Prediction Workshop for EW4ALL Initiative" organized by the WMO Education and Training Office with the support of the Caribbean Meteorological Organization (CMO). This workshop aims to bolster the capacity development essential for operational Numerical Weather Prediction (NWP) among National Meteorological and Hydrometeorological Services in the Caribbean region.

The workshop is scheduled to take place from 5 to 9 August 2024, in Port of Spain, Trinidad and Tobago, and will feature hands-on practical sessions employing the Plug-N-Run NWP Tool (PN-Tool), developed by the WMO Education and Training Office. Participants will acquire invaluable insights and practical skills in implementing operational NWP systems. Moreover, they will have the opportunity to collaborate with peers from across the region.

Enclosed herewith are comprehensive documents detailing the workshop's objectives, curriculum, and application form. I kindly request your assistance in disseminating this information among relevant stakeholders within your organization and encouraging eligible candidates to apply. Interested candidates from the selected countries are encouraged to submit their applications to CMO and forward a duly completed application form (Annex III) with the relevant attachments to Mr Kenneth Kerr at kkerr@cmo.org.tt with a copy to tra@wmo.int. Please be advised that only individuals endorsed by the Permanent Representative of their respective countries are eligible to apply. Applications received after **8 July 2024** will not be considered.

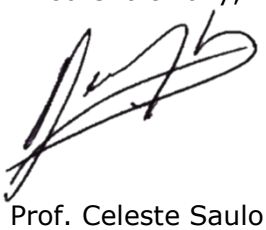
Selection for participation will be conducted through a competitive process, with priority given to applicants actively engaged in operational numerical weather prediction activities. Please note that while Members are encouraged to cover the expenses of their participants to attend the course, WMO is prepared to support one participant each from selected Members. Selected candidates will be notified by CMO and will be contacted by WMO for the preparation of the travel logistics.

To: Permanent Representatives of Antigua and Barbuda, Bahamas, Barbados, Belize, British Caribbean Territories, Curaçao and Sint Maarten, Dominica, Guyana, Jamaica, Saint Lucia, Trinidad and Tobago with WMO (limited distribution)

cc: Hydrological Advisers of the supported countries (limited distribution)
WMO Regional Office for the Americas

I take this opportunity to assure you of my unwavering commitment to capacity development-related activities supporting competency development and EW4ALL and thank you for your continued cooperation in this endeavour.

Yours faithfully,



Prof. Celeste Saulo
Secretary-General

Caribbean Numerical Weather Prediction Workshop for EW4ALL Initiative
Caribbean Meteorological Organization (CMO)
Port of Spain, Trinidad and Tobago

Host institution(s)	Caribbean Meteorological Organization
Website	http://www.cmo.org.tt/
Location(city) of Institution(s)	Port of Spain, Trinidad and Tobago
Address of Institution	27 O'Connor Street, Woodbrook Port of Spain, Trinidad and Tobago
Course type	In person
Main course content	• Introduction to the PN-Tool • Overview of WRF architecture • Fundamental concepts of data assimilation • Hands-on practice of WRF system in real-time • Implementation of operational system
Duration of study	5 days
Course dates	5 to 9 August 2024
Target Region and Members	CMO member states, CIMH (Caribbean Institute for Meteorology and Hydrology), and Costa Rica
Basic Requirements	• Understanding of meteorological principles and terminology. • Basic knowledge of NWP concepts. • Proficiency in Linux commands and programming languages.
Language	English
Number of awards	Up to 21 participants
Application form	Mandatory
Admission from institution	Mandatory
Applications closing date	**8 July 2024**
Contact info	Mr Kenneth Kerr (CMO): kkerr@cmo.org.tt +18684624790 copy to tra@wmo.int

Caribbean Meteorological Organization (CMO)
Port of Spain, Trinidad and Tobago

Caribbean Numerical Weather Prediction Workshop for EW4ALL Initiative

Workshop description

This workshop aims to enhance the capacity of Caribbean states in high-resolution modelling for the Early Warning for All Initiative. The in-person workshop will focus on hands-on training for NWP implementation and operation. To achieve this, we will utilize the Plug-N-Run NWP Tool (PN-Tool) developed by the WMO Education and Training Office. Using the PN-Tool, participants will directly design and develop operational high-resolution NWP systems for their countries. The participants acquire the necessary knowledges and skills to implement and operate limited area model in real-time. Upon completion of the workshop, participants will take the PN-Tool back to their countries and utilize it to implement and operate the necessary NWP systems tailored to their specific needs.

Course Format

This will be an in-person workshop, and participants are required to bring their own laptops for practical exercises. The workshop will primarily focus on hands-on training using the PN-Tool, an external USB storage device, which contains the Linux OS and a pre-configured WRF system. Participants will have the opportunity to directly build operational NWP systems with data assimilation for their countries during the workshop using PN-Tool.

Expected Learning outcomes

By the end of the workshop, the participants will have successfully achieved the following outcomes:

1. Understanding the fundamentals of numerical weather prediction.
2. Proficiency in utilizing WRF for weather forecasting.
3. Familiarity with the structure and components of WRF systems.
4. Skills in configuring WRF parameters and name lists for different applications.
5. Knowledge of data assimilation techniques and their importance in NWP.
6. Proficiency in utilizing the PN-Tool for designing and developing operational NWP systems.

Competencies attained and certificates issued

Participants who pass the assessment will receive a certificate of "Successfully Completed," while those who do not pass the assessment will receive a certificate of "Participation."

Target Audience

Staff members in the National Meteorological and Hydrological Services in Caribbean, Caribbean Institute for Meteorology and Hydrology and Costa Rica.

Instructors

Trainer responsible for NWP-related education and training at the WMO, with experience in high-resolution NWP development, data assimilation development, and relevant educational training.

Working language

The course will be conducted in English.

Entry requirements

- Involvement in Numerical Weather prediction and related fields
- Good skills in English reading, written and spoken (language comprehension);
- All this needs to be verified by Proof of CV and qualifications.

Work experience: Relevant work experience in operational Numerical Weather Prediction system is preferred.

Useful resources in preparing for the course

- Online NWP Training series course
  https://www.meted.ucar.edu/education_training/course/21

- WRF User Guide
  https://www2.mmm.ucar.edu/wrf/users/docs/user_guide_v4/contents.html

- PN-Tool User Guide
  https://docs.google.com/document/d/1Agpabjw5fSUD0EH1Fbmt-xdLXp3s0EOJY_SW0CSyxXs/edit?usp=drive_link

Procedure for application

The Applications thus must include a CV, relevant certified qualifications, and nomination letter from relevant PR

All applications will be handed according to protection of private information requirements.

Application for consideration should be forwarded to:

Caribbean Meteorological Organization

Mr Kenneth Kerr at kkerr@cmo.org.tt

Copy to: Education and Training Office tra@wmo.int

Clearly marked as subject of the email: CMO – CRS-1624 – Caribbean NWP Workshop for EW4ALL Initiative.

Deadline for application: **8 July 2024**

Only successful applications will be notified by email by CMO and WMO.

APPLICATION FORM

Caribbean Numerical Weather Prediction Workshop for EW4ALL Initiative

Port of Spain, Trinidad and Tobago

From 5 to 9 August 2024

Note: Please read the Notes and Instructions on the last page before completing this application form

A. PERSONAL	
1. First name	
2. Family name	
3. Country	
4. Date of birth *(DD/MM/YYYY)*	
5. Gender	M / F
6. Passport number	
7. Passport validity	
8. Do you have a disability	Yes / No
If yes, please specify	
9. Permanent home address	
(number, street, postal code, town)	
10. Telephone *(mobile)*	
11. Email	
12. Professional contact	
Name	
Telephone *(office)*	
Professional links	
13. Would you request financial assistance to participate at the course? Yes / No	

B. GENERAL

1. Give details of working experience in meteorology

Name of organization	Starting and end date	Brief description of role and responsibilities	Reason for leaving

2. Write a brief statement setting out clearly why you have chosen this course and how you intend to use it after graduation

I declare that to the best of my knowledge all the information on this form is true and correct.

Signature _____ Date _____

C. PERMANENT REPRESENTATIVE ENDORSEMENT

Signature _____ Date _____

Notes and Instructions:

Please read these notes and instructions carefully before completing this application form. Be sure to read every section and that the information you provide is accurate.

1. **Applications received after the date of <u>8 July 2024</u> will not be considered.**
2. **Applications received without the endorsement of the Permanent Representative will not be considered.**
3. Incomplete application forms will not be considered.
4. Closing dates for the application dates are published and will be strictly adhered to.
5. A copy of the passport document must be included in the application.
6. Successful candidates will be contacted by email. Make sure that your contact details are correct and clearly written.