Secretariat Update on ETRP implementation and Publications

ETR Office

11th Meeting of Capacity Development Panel
(EC-CDP-11)
23 to 25 September 2025

WORLD METEOROLOGICAL ORGANIZATION

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Coordination on training

- Technical Departments (Competency based trainings)
- ETR Office (Train-the-Trainer, Leadership & Management, MEIG, SYMET, etc.)
- Initiatives (CREWS, SOFF, GCF, etc.)
- Special Projects
- WMO Regional Training Centres (RTC)
- WMO Specialized Centres (RIC, RCC, WIGOS, GAW, VLab CoE, etc.)
- International Organizations (EUMETSAT, ECMWF, etc.)
- Education and Training Partners (Institutions, Universities, Centres, etc.)

Resource sharing

- **Regular Budgets**
  - Technical Departments' Regular Budgets
  - ETR Regular Budget
- **Trust Funds**
  - Technical Departments' Trust Funds
  - KMA Trust Fund to support RTCs KMA Trust Fund to support Climate Services
- **Initiatives and Projects (CREWS, SOFF, GCF, etc.)**
- **Co-sponsored and/or hosted by:**
  - WMO RTCs, WMO Specialized Centres (RIC, RCC, WIGOS, GAW, VLab CoE, etc.),
  - International Organizations (EUMETSAT, ECMWF, etc.)
  - Other Education and Training Partner Universities and Institutions

Online learning resource development

Weather, Water and Climate Services for Energy

Instructions Collapse all

Read me first - How to enroll and how to get the badge?

Take the course and obtain your completion badge

Please click on the links below to launch the course. *You can leave the training modules at any time and resume later.*
Once you have completed the quizzes(The passing grade is 80%) and stepped through all the modules, you will be able to download the badge.

Course Modules

Module 1
Overview of energy-climate linkages and the role of W&CS.
Start Module 1

Module 2
Explore data sources, models, and tools used in energy sector.
Start Module 2

Module 3
Learn how W&CS support energy and electricity operations.
Start Module 3

Module 4
Explores maximizing the use of W&CS within the energy sector.
Start Module 4

Module 5
Real-world examples of W&CS applied in the energy sector.
Start Module 5

Communicating agrometeorological information

Course | Settings | Participants | Grades | Reports | More

Instructions Collapse all

Read me first - How to enroll and how to get the badge? - Instructions

Welcome! This course is designed to show you how you can enhance agrometeorological communications. Effective communication is key to ensuring that agrometeorological information is used appropriately in the agricultural sector. Communication is not an add-on or negligible element of agrometeorological services, but rather it stands as an indispensable core. The deficiency of a robust communication strategy can lead to late information receipt, misunderstanding of received information, misinformation, inadequate information and ultimately limited use of available information.

This course comes with a certification badge!

Once you have completed all 6 modules and passed the Final Assessment, you will be able to download the badge. You will receive an e-mail notifying you of your success with instructions on how to access the badge.

If you have any trouble opening the course modules or hearing the narration, please use the contact form at the bottom of this page.

Course Overview

- Objective
- Audience
- Course Structure
- Certification
  - A final assessment test is included at at the end of the course. A 70% score in the final assessment is needed to pass the course.
  - A **Badge** is available upon completion and passing of the final assessment. Kindly wait 5 minutes for synchronization after you have completed the final assessment for the badge to be available.

Lesson 1: Introduction to Climate Services for the Agriculture Sector

Common Alerting Protocol e-Course

Course | Settings | Participants | Grades | Reports | More

Introduction Collapse all

Course Syllabus | **How to take this course**

Approximate time to complete: 4 hours. This comprehensive CAP course offers three self-paced modules for effective alert system administration. Participants gain in-depth knowledge of CAP principles, implementation, and issuance. Online resources and activities support learning, culminating in a WMO-certified badge. WMO encourages enrollment to enhance global resilience against weather hazards.

Please note, in order to receive a certificate of completion for this course, you must be enrolled and logged in to your account on this site. Please read the instructions in "**How to take this course**" before you get started. You may also consult this course as a guest, but in this case, no certificate of completion is provided.

Module 1: Fundamentals of CAP

Start Module 1 — Done

In this module, you will learn to the diverse and complex ecosystem of alerting systems and the challenges associated with public alert dissemination. It covers the variety of media used for public alerts. By understanding CAP, learners will gain insight into the necessity for a standardized alerting protocol like CAP to streamline and unify the dissemination of warnings.

Click to open Module 1. When you are finished with the module, return here to take the quiz.

Module 1 Quiz — Done

A score of 70% is required to pass this quiz. You may make as many attempts as you wish. Only your highest score will be counted. Passing all of the quizzes is required to obtain credit for course completion.

Note that you must be enroled and logged into this site to access the quizzes. Instructions on how to enrol are to be found under "course workbook" at the top of this page.

Module 2: Issuing CAP Messages

Start Module 2 — To do

This module delves into the structure and characteristics of a CAP (Common Alerting Protocol) message. Students will learn how CAP messages are encoded in XML, making them machinereadable and easily transmittable over various communication systems. The lesson covers the essential elements of a CAP message, such as the predefined XML tags and their corresponding values, which are used to standardize alert messages. Additionally, the lesson will explore how these elements facilitate filtering, routing, and automated translation to human languages, ensuring that alerts are timely and relevant to the recipients. Practical examples of CAP messages will be examined to illustrate these concepts.

Click to open Module 2. When you are finished with the module, return here to take the quiz.

The WMO Satellite Basic Skills Course

Course | Settings | Participants | Grades | Reports | More

Welcome to Our Guests
Thank you for those who contributed as reviewers.

How to Review the Course

Welcome to the **WMO Structured Basic Satellite Skills Training Course**, a specialized course designed to enhance the competency of people working in the field of meteorology.

The **Pre-Course** is provided for you to gain a brief idea of why the course is being held and what and how the programs and activities will be conducted. This section will prepare participants to get familiar with the learning environments, also the satellite communities.

Pre Course

How to Review the Course
Available but not shown on course page

xxx

Unit 1. Physics of Satellite and Remote Sensing

Unit 1 of the course focuses on laying a solid foundation in the technical aspects of satellite meteorology. It explores key concepts such as geostationary and polar orbits, the role of passive and active sensing, and the interaction of electromagnetic radiation with the atmosphere.

Additionally, it introduces the basic physical principles behind satellite sensors and instrumentation, laying the groundwork for a deeper understanding of how satellites capture, process, and transmit data.

A module is available to facilitate participant's learning: **From the Geostationary and Polar Orbit Principles to Electromagnetic Radiation** - where learners can study about the orbits and some basic principles in satellite meteorology

Learning Outcomes

You can check the Learning Outcomes here

Duration:
This unit is expected to be completed approximately in 3 hours

Activities: 3

Unit 2. Satellite Instrumentation and Data Collection

In Unit 2, you will learn about the satellite system in general, then delve deeper into satellite sensors, their functions and how they generate the data in general. This unit covers how sensors collect, store, and transmit data, ensuring accurate and timely information for weather forecasting and environmental monitoring. You will explore different types of satellite providers and their capabilities. Understanding these concepts is essential for interpreting satellite imagery and effectively applying satellite-derived information in operational and research settings.

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WMO RTCs Course Offerings Dashboard

(Based on the annual reports of the RTCs, a PowerBI Dashboard has been developed and made available in the WMO Community Website)

2025 WMO Regional Training Centres Course Offering Plans (To be confirmed)

Member

- ☐ ANGOLA
- ☐ ARGENTINA
- ☐ BRAZIL
- ☐ CHINA
- ☐ COSTA RICA
- ☐ EGYPT
- ☐ INDIA

RTC Component

- ☐ Advanced Training Institute of Roshydromet (ATI)
- ☐ Agencia Estatal de Meteorología (AEMET)
- ☐ Agency for Meteorology, Climatology and Geophysics (BMKG)
- ☐ Centre Régional Agrhymet (AGRHYMET)

Duration

- ☐ Long-term (more than one month)
- ☐ Very short-term (less than one month)

Competency Framework

- ☐ Advisors Supporting Disaster Prevention and Mitigation and ...
- ☐ Aeronautical Meteorological Forecaster
- ☐ Aeronautical Meteorological Observer
- ☐ Competencies for Provision of Climate Services
- ☐ Competency Framework for Calibration (OBS)
- ☐ Competency Framework for Instrumentation (OBS)
- ☐ Competency Framework for Observing Program and Network...

Language

- ☐ Arabic
- ☐ Chinese
- ☐ English
- ☐ French
- ☐ Local
- ☐ Portugese
- ☐ Russian

Reset Selections

Member	RTC Component	Title of the Course	Delivery Mode	Duration	Language	Start Date	Competency Framework
ANGOLA	Instituto Nacional de Meteorologia e Geofísica (INAMET)	Aeronautical Meteorological Observer	Blended or Hybrid	Long-term (more than one month)	Portugese	18/08/2025	Aeronautical Meteorological Observer
ARGENTINA	Universidad de Buenos Aires (UBA)	Avances en el Estudio de la Capa Límite de la Atmósfera	Blended or Hybrid	Long-term (more than one month)	Spanish	17/03/2025	Other
ARGENTINA	Universidad de Buenos Aires (UBA)	Circulación y Masas de Agua del Atlántico Sudoccidental y su Impacto Ecológico	Blended or Hybrid	Long-term (more than one month)	Spanish	17/03/2025	Other
ARGENTINA	Servicio Meteorológico Nacional (SMN)	Climate models Verification	Fully Online	Very short-term (less than one month)	Spanish	Second Semester	Competencies for Provision of Climate Services
ARGENTINA	Universidad de Buenos Aires (UBA)	Climatología Sinóptica	Blended or Hybrid	Long-term (more than one	Spanish	13/10/2025	Other

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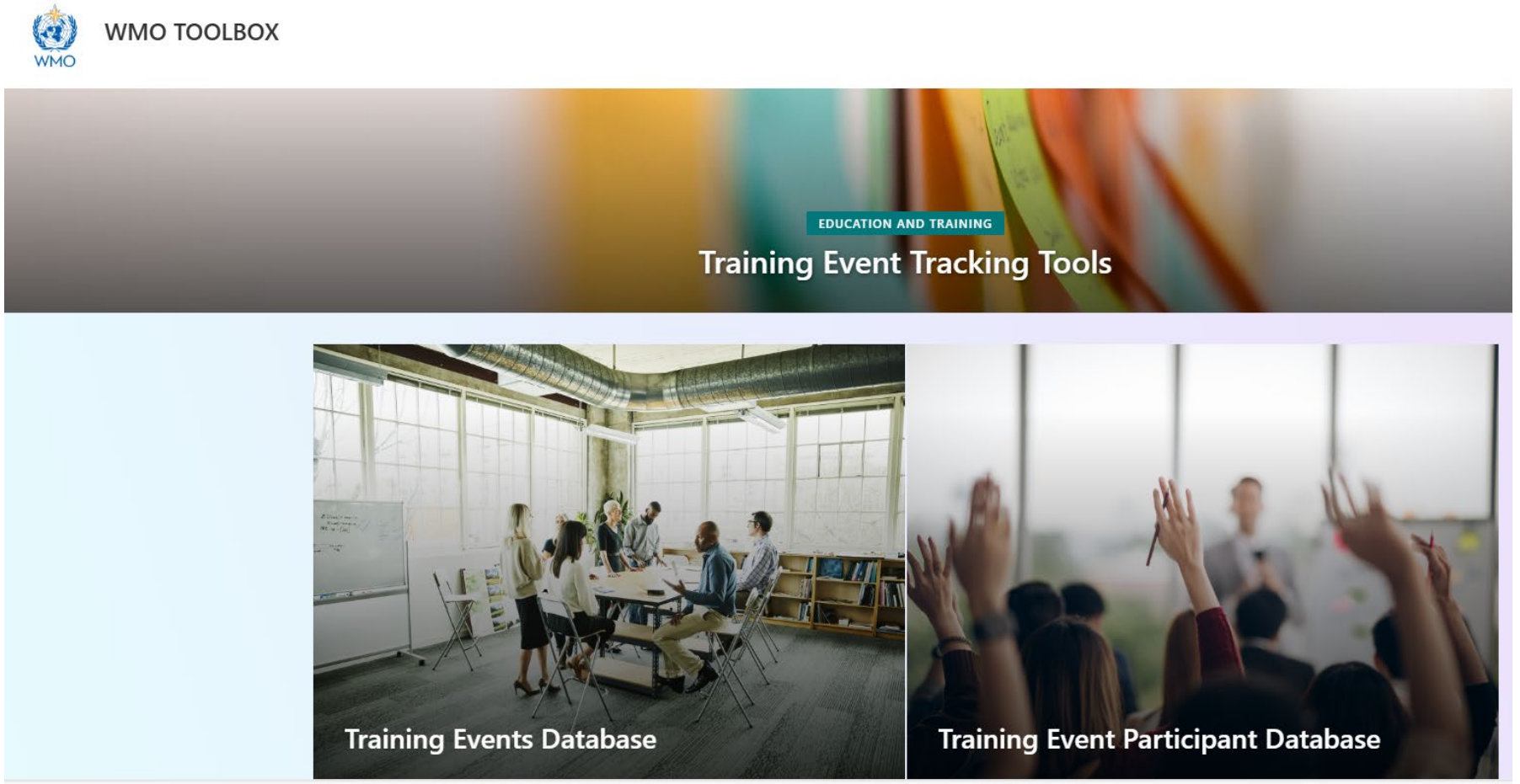
CLICK

(Publicly Available)

Training Events Planning and Reporting Tools:

(Secretariat wide training events tracking tool has been developed and for better coordination and collaboration (pilot in 2025 and mandatory in 2026)



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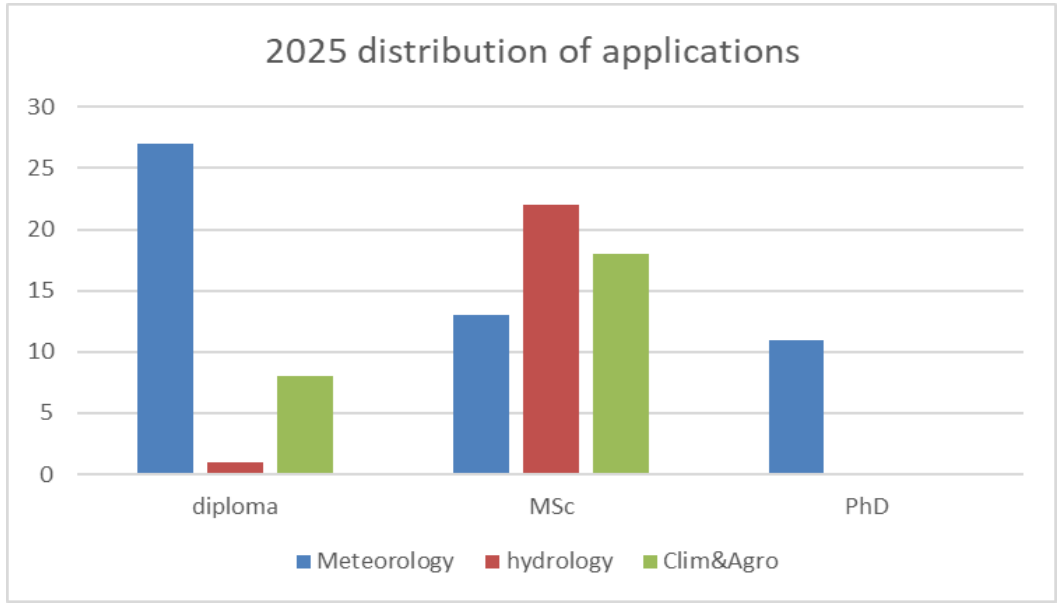
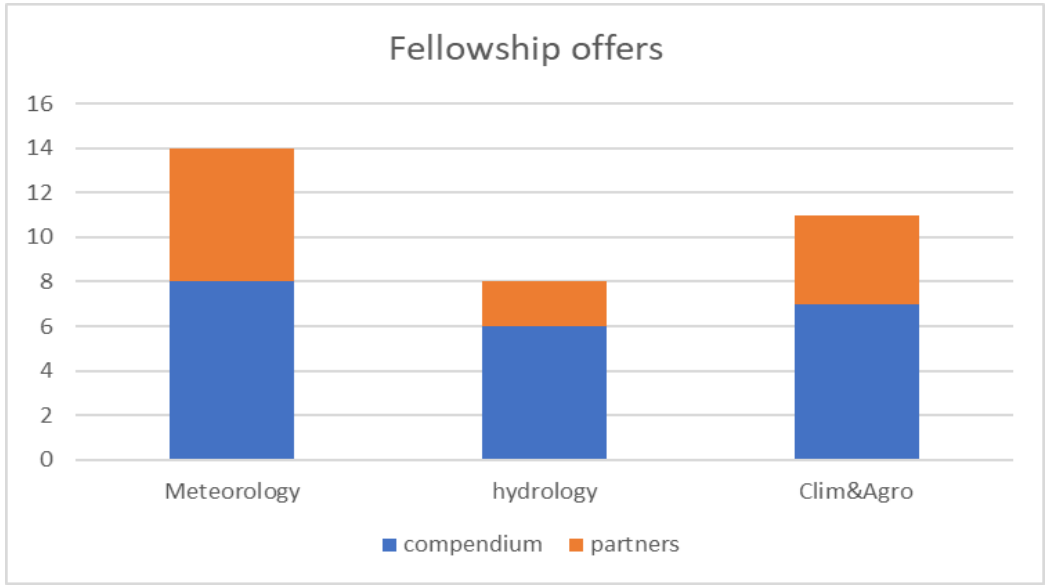
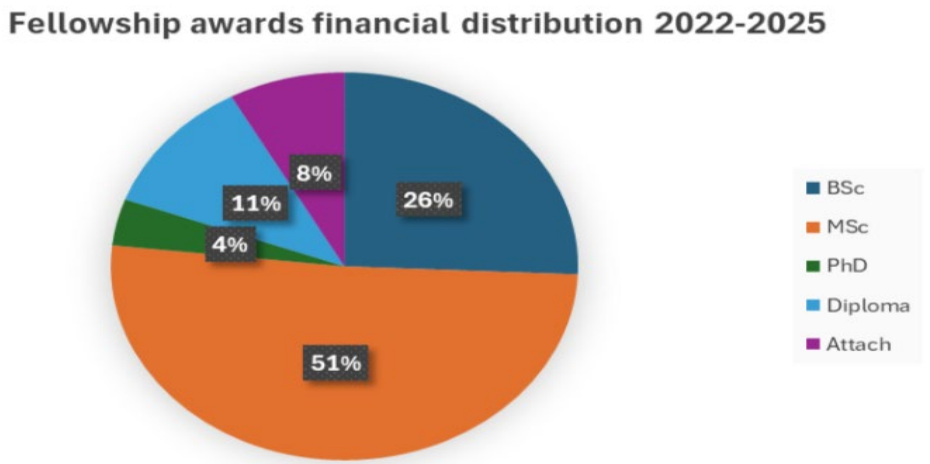
CLICK

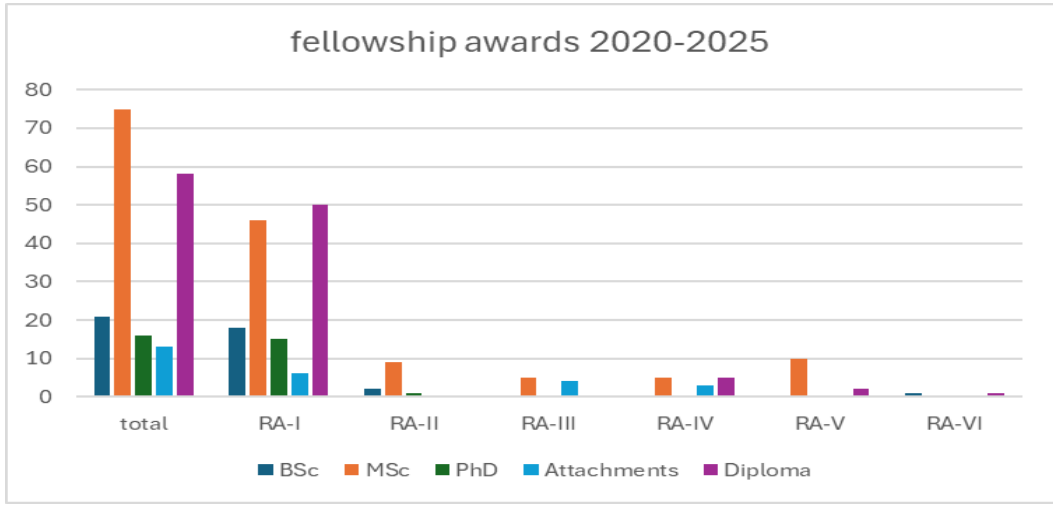
(Internally Available Only)

Fellowship program









WMO RTC External Reviews Update:

(EC-79 Reconfirmed existing RTCs in Argentina, Brazil, Iran, Nigeria)
(Two new RTCs in Ethiopia and Fiji and a new component in Egypt proposed and to be reviewed)

Year of Review	Host Member	Review Dates	Last Review	Comments	8 years (as of expected review year)	Expert by CDP
Reviewed in 2024 and approved by EC-79 in 2025	Brazil	21-27 August 2024	2015	One year delay	+1	Albert Martis
	Peru	9-11 October 2024	2010 (UNALM) 2017 (SENAMHI)	Review of components combined	+6 / -1	Carla Gulizia
	Argentina	28 October – 1 November 2024	2016	On time	0	Albert Martis
	Nigeria	3-9 November 2024	2016	On time (A new component added)	0	Winifred Jordaan
	Iran	10-12 December 2024	2016	On time	0	Maria Mamaeva
Planned to be reviewed in 2025	Fiji	11-14 November 2025 (TBC)	n/a	Candidate New RTC	n/a	
	Egypt	To be decided	2018	Candidate new component to existing RTC	-1	
	Ethiopia	To be decided	n/a	Candidate New RTC	n/a	

Planning ahead for 2026

WMO SYMET-15

•Identify emerging trends, needs, opportunities, and challenges in meteorological and hydrological education and training.
•Define the international organizing committee, theme, sessions, expected outcomes, and financial resources.
•*If held in person or hybrid:* Explore the possibility of organizing SYMET back-to-back with a CDP session.

WMO Quadrennial Survey on the status of human resources in NMHSs

- Conduct a comprehensive survey of staff, competencies, and qualifications.
- Design the survey to:

  Capture evolving needs and priorities.
  Ensure broad representation and relevance.
  Provide data to guide ETR program updates and resource prioritization.

Prioritization of training needs in 2026

- Establish a systematic approach combining bottom-up needs assessment with top-down planning.
- Strengthen coordination with all stakeholders
- Provide targeted guidance to Regional Training Centres (RTCs).

Cost-efficiency and impact of fellowship program

•Update criteria, standards and rules for fellowship management.
•Improve award structure, ensuring fair regional distribution.
•Evolve the centralized fellowship database.
•Build new cost-effective and regional-distributed partnerships

Mandatory Publications to be updated by 2027

- **Guidelines for the education and training of personnel in meteorology and operational hydrology Volume II: Hydrology WMO 258,**

containing the Basic Instruction Package for hydrologists and hydrological technicians, to be published as WMO 1083 Vol II, with impact on update of WMO 49

- **Guide to competency – WMO 1205**

Updates based on the feedback from the Members in the process of competency implementation

To address the link between competency and job description

To address the “not yet competent” cases

- **Compendium of WMO Competency Frameworks – WMO 1209 – updated in 2025 for TC**

A knowledge framework on the use of NWP is requested as being overarching.
Lack of consistency in approach and needs more clarity on performance criteria
Ambiguous information in “Background knowledge and skills”

Other Publications to be updated by 2027

- Guide to the Management and Operation of WMO Regional Training Centres and Other Training Institutions – WMO 1169
- Guidelines for Designation or Reconfirmation of WMO Regional Training Centres (RTCs)
- Manual on policies and procedures for WMO Fellowships – ETR – 18
- Guidelines for Applying for a WMO Fellowship – WMO 1104

Recommended actions for consideration by CDP

- **Authorize** the Secretariat to explore the feasibility of holding the CDP session back-to-back with SYMET-15 in the second half of 2026.

- **Include** the review of the draft updates of relevant publications in its workplan.

- **Provide guidance** on key activities — including the survey, SYMET-15 concept and organization, RTC recognition and review, training needs prioritization, and the evolution of the fellowship program — based on the Secretariat's updates.

Thank you !