

# **4<sup>th</sup> meeting of the EC Capacity Development Panel**

## **Report on Fourteenth WMO Symposium on Education and Training (SYMET-14) and discussion of its relevant outcomes**

Dr Anna Timofeeva,  
Director,  
Institute for Continuing Education,  
RSHU,  
WMO RTC in Russia

4th Meeting of the Capacity Development Panel (CDP)  
15 - 17 February 2022 (Videoconference)

# **Fourteenth WMO Education and Training Symposium (SYMET-14)**

**and**

## **Meeting of Directors of Regional Training Centres and Education and Training Collaborators**

**Date: 22 – 26 November 2021**

**Theme: “Education and Training During  
a Period of Rapid Change”**

# Members of International Advisory Committee:

**Co-Chairs: Dr Anna Timofeeva  
Professor Andrew Charlton-Perez**

1. Dr Anna Timofeeva, Russian Federation
2. Mr Omar Chafki , Morocco
3. Prof Andrew Charlton-Perez, UK
4. Mr Christophe Cudennec, Professor, France
5. Dr Somenath Dutta, India
6. Dr David Farrell, British Caribbean Territories
7. Dr Winifred Jordaan, South Africa
8. Ms Jennifer Milton, Canada
9. Prof Christoph Mueller, Germany
10. Prof Peter Odjugo, Professor, Nigeria
11. Mr John Ogren ,USA
12. Dr Mary Scholes, Professor, South Africa
13. Mr Roger Stone, Australia
14. Dr Zhiqiang Wang ,China
15. Mr Christopher Webster, New Zealand

# Symposium participants

The Symposium was attended by 280 registered participants from 65 WMO Members, representing developed, developing and least developed countries, all WMO languages, with a gender ratio of 53% female and 47% male.

Participants actively engaged in the presentations and discussions, and over the four days developed conclusions and recommendations which are included in the symposium statement.

Plenary Sessions saw over 160 attendees at many times during the four-day event.

# SYMET-14 Programme

The first day of the symposium was full of plenary sessions. They included 4 introductory keynote presentations:

**Keynote 1:** “Preparing the Earth System Scientist of 2040”, Dr Louis Uccellini, Permanent Representative of United States

**Keynote 2:** “The increasing importance of education and training in promoting the paradigm shift to multi hazard early warning systems for NMHSs”, Prof. Dwikorita Karnawati, Permanent Representative of Indonesia

**Keynote 3:** “A Look at the Future of International Meteorological and Hydrological Education”, Acad. Markku Kulmala, University of Helsinki

**Keynote 4:** “Preparing for the rapid changes required in the operations of hydrological and climate services”, Prof. Komi Sélom Klassou, University of Lomé, Former Prime-Minister of Togo

# SYMET-14 Programme

The keynotes presented on Day 1 of SYMET-14 were recorded and are available in the WMO Vimeo channel (English version). Links to watch each keynote are available at the SYMET-14 website at

<https://etrp.wmo.int/course/view.php?id=220>

and one panel discussion on the theme “WMO Global Campus: Next Areas of Collaboration”.

**Days 2 and 3** were devoted to discussions in thematic working groups, as well as discussions in regional and language working groups.

# SYMET-14 Programme

Thematic Working Groups:

**Theme #1:** Securing institutional commitment to share learning resources (Chair; Dr. Elizabeth Page, Director, The COMET Program)

**Theme #2:** Newly proposed WMO ETR Education and Training Board (Chair: Anna Timofeeva, RSHU, WMO RTC Russia, EC Capacity Development Panel)

**Theme #3:** Micro-credentials and credit transfer, how could we proceed (Chair: Yan Ma, Chair of Reading-NUIST Academy)

**Theme #4:** Considering new pedagogical approaches and assessment methods, including the future uses of blended learning (Co-Chairs: Bernie Connell, CIRA, WMO-CGMS VLab, and Noer Nurhayati, BMKG)

**Theme #5:** Technological barriers to online learning, and using partnerships between online education providers to overcome them (Chairs: Sarah Keeley (ECMWF))

# SYMET-14 Programme

**Theme #6:** Supporting the lifecycle of professionals: From the decision to enter the discipline, to continuous learning, to maintaining job satisfaction and competency. (Chair, Dr. Winifred Jordann, SAWS)

**Theme #7:** What are the content area expertise gaps within our academic teaching staff members? How do we identify and fill these? (Chairs: Victoria Sinclair (Univ. of Helsinki))

**Theme #8:** Update to the WMO Capacity Development Strategy (Chair: John Ogren, USA, and David Farrell, BB. Members: Michael Smith, USA, NOAA, EC Capacity Development Panel)

**Theme #9:** How do we identify the critical regional needs for the professional development of operational staff? How do we ensure that appropriately qualified participants attend our training events? Chair: Jim Poole (NOAA/NWS)

The discussion took place in eight regional and language working groups



# SYMET-14 Programme

**The last day** was mainly devoted to discussing and agreeing on recommendations and adopting the Statement of the Symposium SYMET-14.

The results of the poster session were also summed up

All the recommendations produced by working groups (thematic and regional) were captured and are included in the draft report. These recommendations were analyzed before being incorporated into the SYMET-14 Statement.

# Poster sessions

31 posters were presented at SYMET-14. Each poster had its own discussion forum, where the participants of the symposium could write comments and questions to the authors. On Day 4, there was also a plenary discussion of the topics of the posters, and the 5 best posters were selected by voting of the participants.

All posters are available for viewing at

<https://symet-14.virtualpostersession.org/>

# Poster sessions

## 1<sup>st</sup> place

How to break the Ice in Online International Training (CHEN J., ZHANG Y., CMATC)

## 2<sup>nd</sup> shared place

- Reaction of the WMO RTC Network to the Required Rapid Changes in Education and Training (Mustafa A., Patrick P., WMO)
- Action Learning (Noer N., Adityawarman, Roro Y.P., Ratih P., WMO RTC Indonesia)
- Eumetcal (Eumetcal Network)

## 5<sup>th</sup> place

Responding to a pandemic – ECMWF's move to virtual training (Sarah K., Becky H., Chris S., ECMWF)

# Symposium Statement (key points)

New advances in the provision of scientific and technical knowledge and meteorological, hydrological and climate services, and the impact of the COVID-19 pandemic has accelerated changes in content and providing training services.

Various international and national initiatives and commitments to address global environmental issues necessitate for WMO to make a significant contribution to the United Nations Agenda that stimulate changes in the WMO community, such as new requirements for WMO data, mechanisms and policies for sharing data within the Earth System Strategy, and initiatives and issues that drive change in the broader education and training sector across world economy

# Symposium Statement (key points)

## 1. Observations and conclusions

- The COVID-19 pandemic has brought significant and rapid changes, has revealed many innovative approaches to online and blended learning that can be more widely adopted.
- The workforce is becoming increasingly interdisciplinary, and accelerating progress in research and development each year opens up new opportunities to improve service
- The WMO EC Capacity Development Panel that was established by Resolution 7 (EC-71) is providing an effective means of driving forward innovation in capacity development.
- Collaboration between universities, NMHS training centres, WMO Regional Training Centres, WMO/CGMS VLab, CALMET and international education and training partners lays a solid foundation for enhancing the exchange of teaching and learning resources and approaches
- The decision to establish and promote the WMO Global Campus initiative has helped education and training providers and has proven to be effective.

# Symposium Statement (key points)

## General recommendations:

- The WMO Secretariat is requested to play an active role in supporting and promoting the development and ongoing activities that comprise the WMO Global Campus initiative.
- The participants of SIMET-14 strongly endorse the benefits of organizing a joint discussion of the future of education and training and suggest holding interim meetings between the symposiums.

## To policy makers and governments:

- More funding needed to support initial and continuing education and training for NMHS staff, new funding models needed education and training, including loans and work-study schemes.
- A priority in attracting the best students to our field of work is to inform about careers in our field from early childhood education to vocational training.
- To retain highly qualified staff, it is necessary to ensure that they are adequately paid, rewarded and recognized for their contributions, especially in those where the development of skills makes them more attractive to work in other sectors

# Symposium Statement (key points)

## **To the World Meteorological Organisation and other international organisations:**

- The WMO Global Campus initiative is strongly endorsed. WMO encourages relevant international programs to participate in the WMO Global Campus on the principles of mutual benefit for all.
- A new sustainable technology solution should be developed and supported to achieve the goal of the Global Campus, partnerships or sponsorships should be explored through wider collaboration with the private and philanthropic sectors
- The Board of Education and Training Collaborating Partners as a formal mechanism to achieve the goals of the WMO Global Campus initiative is also strongly endorsed. The proposed Board of Education and Training Collaborating Partners is called upon to develop a pilot system to support the adoption of micro-credentials through the use of open badges and a mutual credit-sharing system that can be tested by a subset of institutions on a voluntary basis.

# Symposium Statement (key points)

-WMO to re-consider the competencies required of trainers operating within a WMO Global Campus, which are broader than those traditionally acknowledged. There is a need to revise the Guidelines for Trainers in Meteorological, Hydrological and Climate Services (WMO-No. 1114) and the Compendium of WMO Competency Frameworks (WMO-No. 1209) to reflect the evolving needs of WMO.

-Ensure the WMO Capacity Development Strategy makes appropriate reference to education and training. This should be future looking and collaborative in nature to promote innovation in training development and delivery.

## **To the education and training community:**

-The community is recommended to review the continuing professional development needs of their staff in light of the rapid changes in Earth system science and education and training practices. The community is encouraged to carry out a review of their curricula in light of the new BIP-M and BIP-MT specifications and future Basic Instructional Packages and competency frameworks.



# Symposium Statement (key points)

- The community is encouraged to advocate for increased collaboration whenever possible, especially between NMHSs and universities, including work-based learning
- The community is encouraged to commit the time of their staff to participating in the WMO Global Campus initiatives identified above, including the proposed Board of Education and Training Collaborating Partners. They should communicate this commitment to the ETR office, in return for the new recognition of their collaborating status. As part of this commitment, a set of institutions are invited to partner with WMO for the trial of micro-credentials and credit sharing.

**SYMET-14 Statement is available in all WMO Official Languages.  
CDP is invited to note the recommendations.**

The WMO Education and Training Office is using the recommendations to inform activities taking place in 2022 as well as planning for the years ahead. This includes continued and increased support for the WMO Global Campus initiative through a variety of mechanisms.

**Thank you  
for your  
attention!**



**Dr Anna Timofeeva,  
[annatimofeeva1002@gmail.com](mailto:annatimofeeva1002@gmail.com)**