



**AGENDA ITEM 3: IMPLEMENTATION OF CONGRESS DECISIONS:
TECHNICAL MATTERS**

AGENDA ITEM 3.4: Long-term goal 4: Capacity Development

**CONCEPT NOTE ON CONSORTIUM OF WMO EDUCATION AND TRAINING
COLLABORATING PARTNERS (CONNECT)**

DRAFT DECISION

Draft Decision 3.4(1)/1 (EC-75)

**Concept Note on Consortium of WMO Education and Training Collaborating Partners
(CONNECT)**

The Executive Council decides to endorse the concept note on the Consortium of WMO Education and Training Collaborating Partners (CONNECT).

See the [annex](#) to the present decision for the concept note.

Decision justification: Since the initial concept of the "Board of Education and Training Collaborating Partners" was presented and discussed at the third meeting of the Capacity Development Panel (CDP-3), the concept was also shared with WMO technical departments and Regional Offices, and it was discussed during the fourteenth Symposium on Education and Training (SYMET-14), receiving substantial support and recommendations that contributed to further improve the concept. Participants of SYMET-14 have strongly endorsed the "Board of Education and Training Collaborating Partners" as a formal mechanism to achieve the goals of the WMO Global Campus initiative. This was formally expressed in the SYMET-14 Statement, where two activities were already recommended to be under the responsibility of the entity.

The improved concept of the Education and Training Collaborating Partners was widely discussed during CDP-4, receiving additional support and suggestions from the Panel. A suggestion was made to change the name of the entity, as the use of the term "Board" could mislead Members into considering the entity as part of governance. As the entity is not intended to be directly involved in governance, the name should more clearly reflect the purpose of the "Group".

Considering all comments and interventions from CDP-4 and beyond, the Secretariat further developed the concept under a newly proposed name: "Consortium of WMO Education and Training Collaborating Partners (CONNECT)".

Annex to draft Decision 3.4(1)/1 (EC-75)

Concept Note on Consortium of WMO Education and Training Collaborating Partners (CONNECT)

1. Background and justifications

Following the Eighteenth World Meteorological Congress (Cg-18, 2019), WMO embarked on reform of its structure, programme, and Secretariat. In the spirit of this reform exercise, there is the need to move towards a more coherent and effective delivery of the WMO Education and Training Programme at the global level. Some of the reasons for this are as follows:

- (a) The identified evolving education and training needs driving the WMO Strategic Plan and Long-Term Goals;
- (b) Changes in workforce numbers, profiles, and roles;
- (c) Expansion of existing and new services for National Meteorological and Hydrological Services (NMHSs) to Earth System Approach;
- (d) Lack of training resources in some countries to support development and expansion of current capacity;
- (e) New training and innovative approaches to facilitate meeting competency standards;
- (f) New training strategies, technologies, and delivery methods that could make training more efficient and cost-effective;
- (g) Stresses to training budgets.

WMO Regional Training Centres (WMO Regional Training Centres (RTCs)) and training partners have been sharing their experiences and expertise through WMO Global Campus events and publications, telling their stories on how they have been working to meet the challenges above mentioned. Increased collaboration between education and training providers is seen as a way to more coordinated efforts that could greatly support meeting the growing education and training needs of WMO Members.

The approach of establishing a *Consortium of WMO Education and Training Collaborating Partners* (CONNECT) as an entity to complement the work of the WMO Executive Council Capacity Development Panel (EC-CDP) will assist in building a critical mass of support for ensuring technically sound, coherent, consistent and timely input of stakeholders towards the provision of desirable strategic direction for education and training activities in meteorology, climatology, hydrology and related environmental disciplines. Consequently, it will constitute a viable ground for minimizing duplication, complementing efforts, maximizing impacts, and enhancing cost-effective use of resources.

The concept of CONNECT stems in part from the WMO Global Campus initiative, which is based upon WMO's tried and tested practice of linking Members' existing facilities to create a coordinated, distributed network from the existing specialist WMO-related education and training institutions. As with other WMO networking initiatives such as observations and communications, the Global Campus establishes a network of disparate institutions and defines a collaboration mechanism that allows sharing education and training resources and knowledge. An underlying premise is ensuring that all Members can contribute to, and benefit from, the proposed networking arrangements.

The WMO Global Campus complements the existing WMO RTCs and other institutions that provide education and training to WMO Members. By complementing the RTC network and providing additional access to education and training opportunities and resources that are not available nationally or through the RTCs, this initiative enhances the overall WMO Education and Training opportunities.

Recognizing the value of having CONECT as a formal mechanism to achieve the WMO Global Campus initiative goals, the Fourteenth WMO Symposium on Education and Training (SYMET-14) participants strongly endorsed its establishment, as expressed in the SYMET-14 Statement.

2. Benefits of the new entity

The overall benefits to Members from enhanced capacity and competence expected from the WMO Global Campus include, but are not limited to:

- (a) Increased education and training opportunities and enhanced communication with a broader community, including universities and partner training institutions, to support broadening of the knowledge base, skills, and job competencies of NMHS staff, especially NMHSs in Least Developed Countries (LDCs), Small Island Developing States (SIDS) and Developing Countries in general;
- (b) Increased cooperation among WMO RTCs, universities and other training institutions and access to existing training for WMO competencies resulting in streamlining the development of education and training programmes and resources by participants;
- (c) Narrowing the gap in the quality of training programmes and resources between training institutions;
- (d) Increased interaction with WMO programmes and Commissions and promotion of compliance with WMO standards;
- (e) Reduction in the overall cost of some training events, thus allowing more persons to receive high-quality training because of the Global Campus quality assurance process;
- (f) Reduction in the environmental impact of training;
- (g) And contribute to developing and delivering high-quality products and services by NMHSs and other beneficiaries.

Moreover, CONECT will bring additional benefits by:

- (a) Increasing communication at global and regional levels and with WMO Executive Council Capacity Development Panel (EC-CDP) and Education and Training (ETR) regarding regional and thematic training needs;
- (b) Identifying innovative training solutions that can be adopted by all partners, contributing to closing the gap of capacity development among WMO Members;
- (c) Identifying training resources that can be shared and localized for use in different Regions;
- (d) Sharing ideas and viable solutions to challenges in education and training.

3. General Mandate

The overall objective of CONECT is to strengthen coordination and sustainability of education and training efforts by providers on Earth Systems, including weather, climate, water and related environmental disciplines, being a formal mechanism to achieve the goals of the WMO Global Campus initiative.

CONECT is not intended to have legislative authority but rather be a sounding self-governing entity formed by education and training stakeholders from WMO designated Regional Training Centres, WMO Global Campus collaborating institutions, universities, training networks and learned societies, training centres and institutions of WMO global and regional partners and programmes (see [appendix](#) for a list of active partners of WMO Education and Training), with the view of having a structured platform for discussion and sharing of ideas that can contribute to improving capacity development.

4. Composition

CONECT shall be an open membership community composed of experienced members from education and training stakeholders worldwide who recognize, endorse, and/or have an active interest in WMO capacity development, education and training goals and strategy on Earth System Sciences, including meteorology, hydrology, and related environmental disciplines (see list of active partners of WMO Education and Training in the [appendix](#)).

This will include, but not be limited to, representatives of institutions supporting the WMO Global Campus initiative, such as:

- (a) WMO designated Regional Training Centres (Group A);
- (b) WMO Global Campus collaborating institutions, universities, training networks and learned societies (Group B);
- (c) The relevant training centres and institutions of WMO global and regional key partners and programmes (Group C).

Representatives of WMO Technical Commissions, Research Board, and Regional Associations will be invited to participate in CONECT discussions and meetings, assisting in addressing the evolving education and training needs in close coordination with WMO technical programmes and activities.

Members of CONECT will be invited by the WMO Secretary-General to collaborate on a voluntary basis, in the discussions of education and training matters, which could then be brought to the attention of EC-CDP.

5. Structure and Working procedures

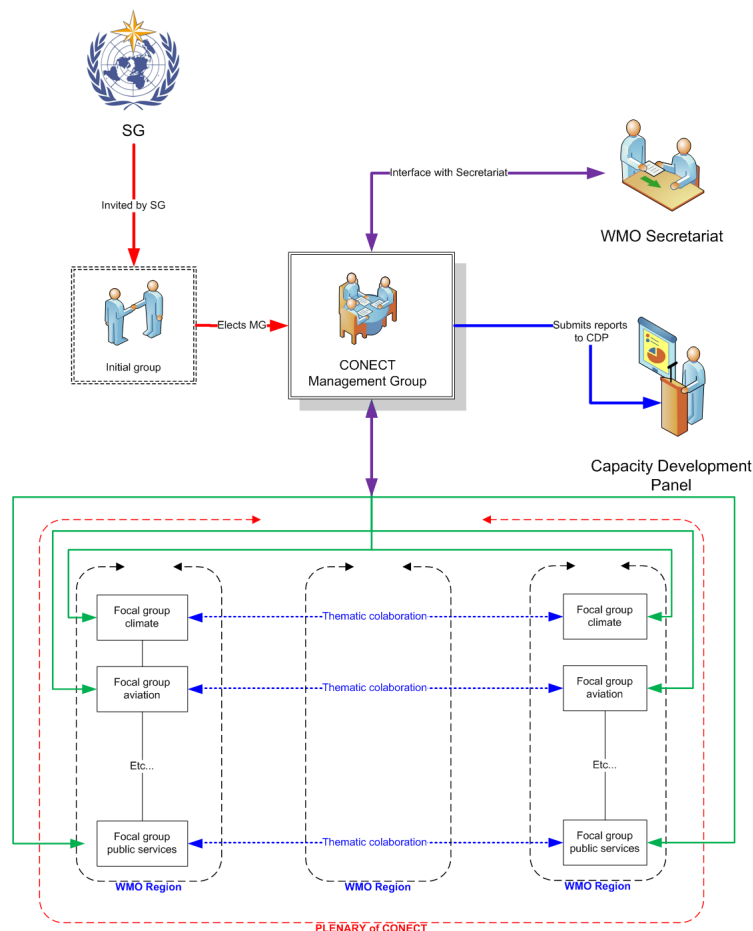
5.1 Plenary

- (a) CONECT plenary is the full body of representatives of participating entities of the consortium. It is composed of representatives from all the CONECT members plus the invited representatives of WMO Technical Commissions, Research Board, WMO Regional Associations and Capacity Development Panel (Facilitator of Expert Team on Human Resources Development, Education and Training). Each CONECT member should designate a Principal delegate as their primary designated representative, at the senior official level. Each member shall also designate a focal point as the WMO Secretariat liaison person for working-level communications;

- (b) The plenary shall provide the strategic development direction of CONECT in close alignment with the WMO Strategic Plan and Long-Term Goals and adopt the CONECT strategic plan and annual activities;
- (c) The plenary meets annually. Meetings shall be held on a rotational basis by WMO regions.
- (d) CONECT shall elect, at their first plenary meeting, three co-chairs (1 chair and 2 vice-chairs) and additional 15 members from Principals among the above three groups (five from each composition group) to form the Management Group (MG). The vice-chairs will occupy the chair position by rotation. The chair, assisted by the members of the MG and the Secretariat staff, has the responsibility to ensure the coordination of CONECT activities;
- (e) The first plenary session shall decide the Terms of Reference of CONECT (ToR), subject to the approval by the Secretary-General, and terms of the co-chairs and MG members.
- (f) Each plenary meeting shall review proposals for new CONECT members, which should be pre-reviewed and proposed by the MG;
- (g) A report shall be provided after each CONECT plenary meeting, reporting on main achievements, key discussion consensus, decisions, and recommendations of the Consortium. The report should communicate any recommendations to WMO that might have resulted from their collaborative work;
- (h) Any decision of CONECT which is intended to convey information, an opinion, or which concerns only the internal activities of the consortium such as its future work plan, the establishment and terms of reference of subsidiary bodies, shall be recorded as a decision of CONECT;
- (i) Any considerations that include proposals for actions by WMO Constituent bodies shall be recorded only as a recommendation. The recommendations shall be submitted to WMO EC-CDP for review and consideration;
- (j) CONECT members shall coordinate their work and communications using the online communication platform that will be established by the Secretariat.

6.1 Management Group

- (a) CONECT plenary co-chairs act as the co-chairs of the MG;
- (b) CONECT MG shall meet twice every year to maintain effective communication and sharing of progress on activities being coordinated;
- (c) Proposals for new CONECT members should be first reviewed by the MG, with the support, consolidation, and confirmation of the Secretariat. Confirmed proposals shall be submitted for plenary considerations;
- (d) Proposals for new CONECT subsidiary bodies (including their ToR and composition, etc.) should be reviewed by the MG before submitting to the plenary for consideration and decision.
- (e) CONECT MG shall make the best efforts for ensuring regional and gender balance, and inclusiveness in all its structures and work plans.



Representation of the collaborations between the CONECT members, between CONECT and EC-CDP, and between CONECT and Secretariat

6. Responsibilities of participating entities

6.1 Key responsibilities of all participating entities

- (a) Share their annual education and training plans, with the aim of aiding coordination and collaboration between training providers to meet the education and training needs of WMO Members in line with the WMO Strategic Plan;
- (b) Participate in the discussion of training priorities with the aim of enhancing collaboration for the provision of well-balanced subject coverage and geographical distribution of education and training.

6.2 Contributions expected from members of the Consortium of WMO Education and Training Collaborating Partners

- (a) Provide required input to meetings of the CONECT.
- (b) Actively engage in the discussion and development of guidelines on educational practices to be recommended to collaborating partners as means to achieving the goals of the WMO Global Campus.
- (c) Actively contribute to activities and working groups that may be set by the MG of CONECT.

- (d) Advocate for the adoption of shared practices recommended by the WMO Global Campus.
- (e) Based on identified priority areas from WMO Strategic Plan, review and assess WMO training requirements; plan, deliver, and evaluate training events and activities in subject areas relevant to meteorology, hydrology, and related environmental disciplines.
- (f) Share relevant information related to the organization and implementation of the training events and activities for information.
- (g) Share post-event evaluation reports and evaluations of the impacts of training provided.
- (h) Share information on the implementation of new training approaches and their impacts on the development of staff and the organization.

6.3 WMO Secretariat support

- (a) Provide advice and suggestions on education and training priority areas after due consultation with scientific and technical departments and according to outcomes of survey of Members' priorities and the implementation plans.
- (b) Coordinate meetings of CONECT, with the aim of garnering updates, reviewing approaches, and developing strategies on delivery of education and training activities.
- (c) Publicize through Website and its Community Platform the themes and foci of training events and activities that have a high probability of being held in the coming year(s) based on communication from stakeholders (Members, RTCs and partners).
- (d) Provide reports on the planning and implementation of training events and activities.
- (e) Assist in fostering cooperation and establishing partnerships between education and training providers.
- (f) Organize appropriate events of training for trainers in Regional Training Centres (RTCs) to ensure a harmonized implementation of innovative approaches in competency-based learning. [Taj Bakhsh]

Active partners of WMO Education and Training



Group A: WMO designated Regional Training Centres.

Group B: WMO Global Campus collaborating institutions, universities, training networks and learned societies.

Group C: The relevant training centres and institutions of WMO global and regional key partners and programmes.

WMO RA	Country	Name of Centre/Network	Institution Name	Groups	
I	Algeria	RTC Algeria	Institut Hydrométéorologique de Formation et de Recherches (IHFR)	A	
	Angola	RTC Angola	Instituto Nacional de Meteorología e Geofísica (INAMET)	A	
	Egypt	RTC Egypt	The Egyptian Meteorological Authority (EMA)	A	
	Kenya	RTC Kenya		Institute for Meteorological Training and Research (IMTR)	A, C
				University of Nairobi (UON)	A, B
	Madagascar	RTC Madagascar		Ecole Nationale d'Enseignement de l'Aéronautique et de la Météorologie (ENEAM)	A
Ecole Supérieure Polytechnique à Antananarivo (ESPA)				A	

WMO RA	Country	Name of Centre/Network	Institution Name	Groups
I	Niger	RTC Niger	Centre Régional Agrhymet (AGRHYMET)	A
			Ecole Africaine de la Météorologie et de l'Aviation Civile (EAMAC)	A, C
	Nigeria	RTC Nigeria	Federal University of Technology, Akure (FUTA)	A, B
			Meteorological Research and Training Institute (MRTI)	A
	South Africa	RTC South Africa	South Africa Weather Service (SAWS)	A, C
II	China	RTC China	China Meteorological Administration Training Centre (CMATC)	A, C
			Nanjing University of Information, Science and Technology (NUIST)	A, B, C
	China	China-BCC	Beijing Climate Centre	C
	China	China-HOHAI	Hohai University (HOHAI)	B
	Hong Kong, China	Hong Kong-HKO	The Hong Kong Observatory (HKO)	B
	India	RTC India	Indian Institute of Technology Roorkee (IITR)	A
			India Meteorological Department, Meteorological Training Institute (IMDMTI)	A
			India Meteorological Department Training Centre (IMDTC)	A
			National Water Academy (NWA)	A
	Iran, Islamic Republic of	RTC Iran	Islamic Republic of Iran Meteorological Organization (IRIMO)	A
	Iraq	RTC Iraq	Iraqi Meteorological Organization (IMO)	A
	Japan	Japan-KU	Kyoto University (KU)	B
	Qatar	RTC Qatar	Qatar Aeronautical College (QAC)	A
	Republic of Korea	RTC Republic of Korea	Korea Meteorological Administration (KMA)	A, C
		Korea-EWHA	Ewha Woman's University (EWHA)	B
Uzbekistan	RTC Uzbekistan	Tashkent Hydrometeorological Profecional College (THMPC)	A	

WMO RA	Country	Name of Centre/Network	Institution Name	Groups
III	Argentina	RTC Argentina	Servicio Meteorológico Nacional (SMN)	A, C
			Universidad de Buenos Aires (UBA)	A, B
			Facultad de Ingeniería y Ciencias Hídricas, UNL (FICH)	A, B
	Brazil	RTC Brazil	Centro Virtual de Ensino e Treinamento em Meteorología (CVEM)	A, B
		Brazil-INPE	National Institute for Space Research (INPE)	C
	Peru	RTC Peru	Universidad Nacional Agraria La Molina (UNALM)	A, B
			Servicio Nacional de Meteorología e Hidrología (SENAMHI)	A
Venezuela, Bolivarian Republic of	RTC Venezuela	Universidad Central de Venezuela (UCV)	A, B	
IV	Barbados	RTC Barbados	Caribbean Institute for Meteorology and Hydrology (CIMH)	A, C
	Costa Rica	RTC Costa Rica	Universidad de Costa Rica (UCR)	A, B, C
	Canada	MSC-Canada	Meteorological Service of Canada (MSC)	B
	USA	IRI	International Research Institute of Climate and Society (IRI)	B
		NHC	NOAA National Hurricane Centre (NHC)	B
		NOAA	National Oceanic and Atmospheric Administration (NOAA)	B, C
		UCAR	The University Corporation for Atmospheric Research (UCAR)	B
V	Indonesia	RTC Indonesia	Agency for Meteorology, Climatology and Geophysics (BMKG)	A
			Research Centre for Water Resources (RCWR)	A
	Philippines	RTC Philippines	Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)	A
			University of the Philippines (UP)	A, B
	Australia	Australia-BMTC	Bureau of Meteorology Training Centre (BMTC)	C

WMO RA	Country	Name of Centre/Network	Institution Name	Groups
VI	Israel	RTC Israel	Postgraduate Training Centre for Applied Meteorology (PTCAM)	A
	Finland	Finland-FMI	Finnish Meteorological Institute (FMI)	B
	France	France-ENM	Ecole Nationale de la Météorologie (ENM)	B
	Germany	Germany-DWD BTZ	The Deutscher Wetterdienst (DWD)'s Meteorological Training and Conference Centre (BTZ)	B
	Germany	Germany-LUH	Leibniz Universität Hannover (LUH)	B
	Germany	EUMETSAT	The European Organization for the Exploitation of Meteorological Satellites (EUMETSAT)	C
	Italy	RTC Italy	National Research Council – Institute for BioEconomy (CNR-IBE)	A
		Italy-TWAS	The World Academy of Sciences (TWAS)	B
	Netherlands	Netherlands-IHE	Institute for Water Education (IHE)	B
	Norway	Norway-NMI	Norwegian Meteorological Institute (NMI)	B
	Russian Federation	RTC Russian Federation	Advanced Training Institute of Roshydromet (ATI)	A, C
			Moscow Hydrometeorological Technical School (MGMTEH)	A
			Russian State Hydrometeorological University (RSHU)	A, B, C
	Spain	RTC Spain	Agencia Estatal de Meteorología (AEMET)	A
	Turkey	RTC Turkey	Turkish State Meteorological Service (TSMS)	A
	UK	ECMWF	European Centre for Medium Range Weather Forecast (ECMWF)	C
		UK-MOC	MetOffice College (MOC)	B
UK-Reading University		University of Reading (UR)	B	
European Countries	Eumetcal	Eumetcal – European Network	C	

WMO RA	Country	Name of Centre/Network	Institution Name	Groups
All RAs	Global reach	CALMet	CALMet – Global Network	C
		WMO-Vlab (Centres of Excellence (CoE) on applications of Meteorological satellites)	WMO-Vlab – Global Network	C
		EOTEC DevNet	Earth Observation Training, Education, and Capacity Development Network (EOTEC DevNet) – Global Network	C
		WCRP Academy	World Climate Research Programme (WCRP) Academy - Climate science research and training	C
		WIGOS/WIS	WMO Integrated Global Observing System (WIGOS) (including Instruments) and WMO Information System (WIS) centres	C
		GAWTEC	Global Atmosphere Watch Training and Education Centre	C

Supplementary to the list above, potential partners from the top universities around the world¹ can be invited to contribute to the Consortium.

¹ <https://edurank.org/environmental-science/meteorology/>