

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

**Report of the first meeting (CONNECT-1)  
17–19 April 2023  
(Hybrid meeting)**



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## EXECUTIVE SUMMARY

The first meeting of the Consortium of WMO Education and Training Collaborating Partners (CONNECT-1) took place in a hybrid format, including both physical and virtual participation, from 17 to 19 April 2023. 96 participants, inclusive of those physically present in Geneva and those engaging online, convened to establish the foundations for enhancing collaborative efforts in education and training activities in meteorology, climatology, hydrology, and related environmental disciplines.

Participants were briefed on the CONECT Concept Note approved by the WMO Executive Council. This encompassed essential details regarding the general mandate, composition, structure, working procedures, and the respective responsibilities of participating entities within CONECT. Participants engaged in informed discussions, paving the way for decisive steps forward and the formulation of pertinent Terms of Reference.

A significant aspect of the meeting involved strategic deliberations on the Consortium's future directions. Participants actively engaged in discussions that led to the election of the Management Group entrusted with the coordination of CONECT's activities.

The following decisions, actions, and recommendations emerged from the meeting:

**Decision 1 (CONNECT-1):** The period of work of elected members of CONECT Management Group is 4 years (Add to Structure and working procedures).

**Decision 2 (CONNECT-1):** New nominations can be proposed by plenary and by PRs, based on criteria: a) representatives from institutions working with education and training in meteorology, hydrology, and climate. (Add to Structure and working procedures).

**Decision 3 (CONNECT-1):** Reports of CONECT activities will be shared with all partners interested in CONECT, PRs and hydrological advisors, and bodies of WMO.

**Decision 4 (CONNECT-1):** Use the WMO ETRP Moodle platform to keep information about meetings of CONECT and assist the work of the Management Group.

**Action 1 (CONNECT-1):** BIP Programme developed by AEMET to be shared with Global Campus Secretariat to make it available as example of application of BIPs (Trainer Resources Portal)

**Actionee(s):** Javier F. Villares (AEMET) to consult the possibility to share the document widely. Secretariat to make it available.

**Action 2 (CONNECT-1):** Management Group to be contacted to share draft documentation from CONECT-1 and book the first meeting of MG. First meeting to take place after WMO Congress.

**Actionee(s):** CONECT Chair and Vice-Chairs, and Secretariat.

**Action 3 (CONNECT-1):** Based on the key topics highlighted by participants of CONECT-1, the Management Group to consider the mechanisms for establishing 5 WGs for CONECT.

**Actionee(s):** CONECT Management Group assisted by Secretariat.

**Recommendation 1 (CONNECT-1):** Members of CONECT to work together to reach the common goals identified by the CONECT Plenary.

**Recommendation 2 (CONNECT-1):** CONNECT to encourage co-design and co-creation of training materials.

**Recommendation 3 (CONNECT-1):** CONNECT participants to write short case studies to illustrate their national models of engagement between universities and NMHSs. The case studies should contain a brief explanation of how the engagements work, celebrate the successes (what works well), present the challenges (where improvement is needed).

**Recommendation 4 (CONNECT-1):** WMO Secretariat and CONNECT partners to collaborate to promote exchange of human resources between institutions to move the Consortium forward.

**Recommendation 5 (CONNECT-1):** CONNECT to contribute to promoting sharing of education and training resources and events, in all languages, by using the WMO Global Campus tools.

**Recommendation 6 (CONNECT-1):** CONNECT to encourage education and training partners to use clear and objective language in the development of training materials to enhance the ability of translation.

## **FULL REPORT**

## 1. Opening of CONECT-1 and adoption of the Agenda

The inaugural session of the Consortium of WMO Education and Training Collaborating Partners (CONECT-1) took place in a hybrid format, including both physical and virtual participation, from 17 to 19 April 2023. Participants, inclusive of those physically present in Geneva and those engaging online, convened to establish the foundations for enhancing collaborative efforts in education and training activities in meteorology, climatology, hydrology, and related environmental disciplines.

The meeting was opened by Dr Wenjian Zhang, the WMO Assistant Secretary-General (ASG), who expressed gratitude to all participants for their keen interest in contributing to the Consortium, emphasizing the significance of their engagement. He particularly urged universities to actively participate, envisioning that an integrated relationship that is inclusive of academic insights and operational perspectives could contribute to fortify the capacities and competencies of WMO Members.

The meeting was chaired by Dr Winifred Jordaan (SAWS, WMO RTC South Africa). Dr Jordaan extended a warm welcome to all participants, emphasizing the importance of ensuring that each voice was heard. Her focus on the inclusion of diverse perspectives underscored the collaborative nature of CONECT, highlighting the essential role of collective contributions in advancing education and training initiatives.

Following the opening remarks, the Chair invited the participants to review the [Provisional Agenda](#), which was adopted without modifications.

The diverse representation of participants, as detailed in Annex-I, reflected a confluence of varied perspectives and experiences, promising a rich exchange of ideas and experiences throughout the duration of the first meeting of CONECT. 96 participants from 41 countries attended the meeting with representation from all 6 WMO Regional Associations.

## 2. The concept of CONECT and expected outcomes

The concept of CONECT, as expressed in the concept note approved in Decision 8 of EC-75, was presented by Dr Paul Bugeac, Coordinator of Education and Training (WMO Education and Training Office). Dr Bugeac highlighted the goal of CONECT as *“To assist 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”*.

Following the presentation, the Dr Jordaan set the tone for discussions on how to achieve the outcomes expected from CONECT by posing two questions to participants:

1. What will be the role of Meteorological Services and Education and training institutions?
2. How can we ensure optimal coordination between collaborating partners?

Main points expressed by participants during the discussions follow below:



- Training needs of personnel working at National Meteorological and Hydrological Services (NMHSs) are evolving fast. The skills required of personnel are broader, including technology, social sciences, and communication.
- It is vital to work together in order to meet the training needs of NMHSs.
- There is increasing demand for good communicators.
- The range of skills required by personnel working in operations does not always match the skills provided by academic qualifications.
- Continuous professional development (CPD) is required to address the evolving training needs. Addressing this collaboratively will be more effective.
- Co-creation of content and co-design of training resources could assist sharing of resources more effectively.
- Sharing examples of training Programmes implementing the Basic Instruction Packages (BIPs) could assist widening the adoption by education and training partners worldwide.
- Moving collaborative efforts forward requires time and human resources. Effective coordination will be needed. The Management Group and partners of this Consortium will need to be prepared to dedicate time to plan, coordinate and implement actions for CONECT to achieve the expected goal.

As a result of the discussions, the following action and recommendations were agreed:

**Recommendation 1 (CONECT-1):** Members of CONECT to work together to reach the common goals identified by the CONECT Plenary.

**Recommendation 2 (CONECT-1):** Encourage co-design and co-creation of training materials.

**Action 1 (CONECT-1):** BIP Programme developed by AEMET to be shared with Global Campus. Secretariat to make it available as example of application of BIPs (Trainer Resources Portal)

**Actionee(s):** Javier F. Villares (AEMET) to consult the possibility to share the document widely. Secretariat to make it available.

**Recommendation 3 (CONECT-1):** CONECT participants to write short case studies to illustrate their national models of engagement between universities and NMHSs. The case studies should contain a brief explanation of how the engagements work, celebrate the successes (what works well), present the challenges (where improvement is needed).

**Recommendation 4 (CONECT-1):** WMO Secretariat and CONECT partners to collaborate to promote exchange of human resources between institutions to move the Consortium forward.

### 3. Nominations for CONECT Management Group

Following the concept note approved in Decision 8 of EC-75, participants of the first meeting of CONECT were tasked to elect a Management Group.

The Management Group should be composed of three co-chairs (1 chair and 2 vice-chairs) and additional 15 members from the three following groups (at least five from each composition group):

- (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).

Dr Jordaan instructed participants that the representatives wanting to be considered for the Management Group should submit a self-nomination form. The link to the online self-nomination form was emailed to all CONECT representatives nominated by Members to attend CONECT-1. The procedure for self-nominations was opened from 17 to 18 April 2023.

A total of 39 self-nominations were received. These were considered on the election of the Management Group that took place on the last day of the meeting (Agenda item 9).

#### 4. Global campus initiative and its connection with CONECT

Updates on the achievements of the WMO Global Campus initiative since approval by Congress-18 were presented by Ms Luciane Veeck, Education and Training Support Officer (WMO Education and Training Office). Ms Veeck highlighted six main achievements of the Global Campus:

- ❖ WMO Global Campus Events Calendar
- ❖ WMO Global Campus E-Library
- ❖ Trainer Resources Portal
- ❖ Publication: Global Campus Innovations
- ❖ WMO Course on Education and Training Innovations (2020)
- ❖ Responding to Challenges Beyond the New Normal: A WMO Global Campus Event (2021)

Information about each achievement mentioned is included in the slides presented (see <https://etrp.wmo.int/mod/folder/view.php?id=22822> )

Following the presentation, a question was posed for discussions: What are the ways in which CONECT can support achieving the aims of the Global Campus?

Main points expressed by participants during the discussions follow below:

- The publication Global Campus Innovations (ETR-27, 4 volumes) is a valuable reference resource that had been continuously consulted since 2020.
- Authoring an article for publication as part of the Global Campus Innovations was a valuable experience for the authors to reflect and document their achievements in education and training.
- The Global Campus section of the WMO E-Library was a valuable tool for searching educational resources.
- A new tool to replace the Global Campus section of the WMO E-Library is needed to support sharing of training resources. This is even more important as the number of resources available online is growing.

- Training trainers to develop skills designing interactive learning can assist enhancing quality of education and training resources.
- The Trainer Resources Portal is valued, and efforts should be made to keep it up to date and available in other languages.
- The Global Campus Calendar of Events is very good assisting to increase the visibility of training events.
- CONECT could serve as a mechanism to coordinate efforts, turning it into concrete actions.
- Managers also need training and would be most interested in learning how to evaluate the impact of training.
- Making the link between training resources that are available, and localizing content with regional examples could greatly assist avoiding replication of efforts.

Discussions concluded with two recommendations as follows:

**Recommendation 5 (CONNECT-1):** CONECT to contribute to promoting sharing of education and training resources and events, in all languages, by using the WMO Global Campus tools.

**Recommendation 6 (CONNECT-1):** CONECT to encourage education and training partners to use clear and objective language in the development of training materials to enhance the ability of translation.

## 5. Proposed structure and procedures

The structure and procedures of CONECT, as expressed in the concept note approved in Decision 8 of EC-75, were presented by the Chair of the meeting, Dr Jordaan. She highlighted the procedures for both, CONECT Plenary and CONECT Management Group:

### CONNECT 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 of 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

#### Management Group (MG)

- 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.

Participants suggested that meetings of the CONECT Plenary should continue being organized in a hybrid format to allow wide participation. In addition, it was suggested that meetings of the CONECT Plenary should be organized back-to-back with other events related to education and training, looking for opportunities to maximize participation.

Regarding meetings of the MG, these should be online. It was also suggested that the members of the MG should take the role for the duration of 4 years.

The following decisions were taking during the session:

**Decision 1 (CONECT-1):** The period of work of elected members of CONECT Management Group is 4 years (Add to Structure and working procedures)

**Decision 2 (CONNECT-1):** New nominations can be proposed by Plenary and by PRs, based on the criteria: a) representatives from institutions working with education and training in meteorology, hydrology, and climate. (Add to Structure and working procedures).

**Decision 3 (CONNECT-1):** Reports of CONECT activities will be shared with all partners interested in CONECT, PRs and hydrological advisors, and bodies of WMO.

**Action 2 (CONNECT-1):** Management Group to be contacted to share draft documentation from CONECT-1 and book the first meeting of MG. First meeting to take place after WMO Congress.

**Actionee(s):** CONECT Chair and Vice-Chairs, and Secretariat

## 6. Approaches to collaboration and means of communication

The discussions about means of communications to be used by CONECT was facilitated by Dr Jordaan, who prompted participants to consider the frequency, methods, and purpose.

Participants raised the need to be inclusive and considerate of the various facets of communication needs, and the use of technology that is most appropriate for purpose.

There was consensus that a Working Group should be established to coordinate communications from CONECT. The Group should inter alia, work on the messages to be communicated via web presence and trigger a certain number of messages to CONECT Plenary within the year to keep the community engaged. The creation of a distribution list for group emails regarding CONECT should be considered.

The use of the WMO ETRP Moodle to keep information about meetings of CONECT and assist the work of the MG was considered appropriate.

**Decision 4 (CONNECT-1):** Use the WMO ETRP Moodle platform to keep information about meetings of CONECT and assist the work of the Management Group.

## 7. Key topics for activities of specialized working groups (WGs) of CONECT

The session started with a presentation about the World Meteorological Organization (WMO), made by Mr Mustafa Adiguzel, Scientific Officer (WMO Education and Training Office). The presentation aimed to introduce the work of WMO to participants who were not familiar with its mission, structure, and strategy.

Following the presentation, Dr Jordaan led a discussion to identify key topics in education and training where participants anticipated possibilities for CONECT making concrete contributions to assist building a critical mass of support for ensuring technically sound, coherent, consistent and timely input of stakeholders in education and training towards the provision of desirable strategic directions for education and training activities in meteorology, climatology, hydrology and related environmental disciplines.

Building on relevant discussions already started on the first day of the meeting, participants shortlisted five main topics to further discussions and considered the proposition of forming specialized WGs for coordination of main activities of CONECT. The five topics are listed below:

- ❖ Promoting BIP and Competency implementation
- ❖ Training Resources
- ❖ Communications and outreach of CONECT and Global Campus Initiative
- ❖ Work force / Human Resources
- ❖ Approaches to consistent adoption of certificates and microcredentials in training

Participants broke into groups by topics for focused discussions on specific workplans and proposals of deliverables and organization of Working Groups. To assist the coordination of group work, a Facilitator of discussions and a Rapporteur was agreed for each Group. Groups reported back to plenary at the end of the session providing a summary of outcomes. These can be consulted in Annex-II.

**Action 3 (CONNECT-1):** Based on the key topics highlighted by participants of CONECT-1, the Management Group to consider the mechanisms for establishing 5 WGs for CONECT.

**Actionee(s):** CONECT Management Group assisted by Secretariat.

## 8. Establishment of the terms of reference for CONECT and WGs

The responsibilities of CONECT participating entities, as described in the concept note approved in Decision 8 of EC-75, were thoroughly discussed by participants to establish the Terms of Reference for the Consortium.

As a result of discussions, two topics were added to the contributions expected from participants of the Consortium:

- ❖ Share information on the means of identifying education and training needs and filling the gap between education and operational activities to increase the level of effectiveness of learning.
- ❖ To keep under review where the relevant Universities and NMHSs with their training institutions can work together more effectively and issue relevant advisories from time to time.

It was also a consensus that as the organization of training for trainers was already part of the activities of the Education and Training Office of WMO to assist Members and WMO Regional Training Centres (RTCs), this should not be included as an expected contribution of WMO Secretariat to CONECT. Therefore, this point was not included in the ToRs of CONECT.

The “General Mandate”, “Composition”, “Structure and Working Procedures”, and the “Responsibilities of participating entities”, as described in the concept note approved in Decision 8 of EC-75 and amended as per discussions during CONECT-1, were used to compose the first version of the Terms of Reference (ToR) for CONECT. The agreed ToR is available in Annex-III.

## 9. Election of the CONECT Management Group and Chairpersons of MG and WGs

Thirty-nine nominations were received through the self-nomination process, indicating interest in being part of CONECT Management Group (MG). The list can be consulted in Annex-IV.

Meeting participants were grouped by WMO Regional Associations to elect 3 representatives from their regional candidates' list to join the MG. They were reminded of the importance of considering the balance of gender and country representation in their choices.

The 18 members elected by WMO Regional Associations to form the CONECT MG are listed below. The list is also available on Annex-V, where the affiliations are also stated.

- ❖ Mohamed Tawfik Abdeldayem, Egypt (Male)
- ❖ Winifred Jordaan, South Africa (Female)
- ❖ Diakaria Kone, Niger (Male)
- ❖ Valerii Mischeev, Russian Federation (Male)
- ❖ Gaurishankar kallappa sawaisarje, India (Male)
- ❖ YU Yubin, China (Male)
- ❖ Solangela Edit Sánchez Cuevas, Chile (Female)
- ❖ Vagner Anabor, Brazil (Male)
- ❖ Romina Nahir Mezher, Argentina (Female)
- ❖ ARPITA MANDAL, Jamaica (Female)
- ❖ Michelle Hardy, Canada (Female)
- ❖ Bernadette Connell, USA (Female)
- ❖ Mick Pope, Australia (Male)
- ❖ Nelly Florida Riama, Indonesia (Female)
- ❖ Michael S. Bala, Philippines (Male)
- ❖ Steven Callaghan, United Kingdom (Male)
- ❖ Barbara Bourdelles, France (Female)
- ❖ Marina Baldi, Italy (Female)

The 18 members of the MG were tasked to elect a Chair and two Vice-Chairs for the MG, with the following results:

- ❖ Chair of CONECT MG: Winifred Jordaan, South Africa
- ❖ Vice-Chair of CONECT MG: Steven Callaghan, United Kingdom
- ❖ Vice-Chair of CONECT MG: Vagner Anabor, Brazil

## 10. Outcomes of the Meeting

The decisions, actions and recommendations of CONECT-1 that were drafted during the meeting discussions were revised and approved by participants as follows:

**Decision 1 (CONECT-1):** The period of work of elected members of CONECT Management Group is 4 years (Add to Structure and working procedures)

**Decision 2 (CONNECT-1):** New nominations can be proposed by plenary and by PRs, based on criteria: a) representatives from institutions working with education and training in meteorology, hydrology, and climate. (Add to Structure and working procedures)

**Decision 3 (CONNECT-1):** Reports of CONECT activities will be shared with all partners interested in CONECT, PRs and hydrological advisors, and bodies of WMO.

**Decision 4 (CONNECT-1):** Use the WMO ETRP Moodle platform to keep information about meetings of CONECT and assist the work of the Management Group.

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**Action 2 (CONNECT-1):** Management Group to be contacted to share draft documentation from CONECT-1 and book the first meeting of MG. First meeting to take place after WMO Congress.

**Actionee(s):** CONECT Chair and Vice-Chairs, and Secretariat.

**Action 3 (CONNECT-1):** Based on the key topics highlighted by participants of CONECT-1, the Management Group to consider the mechanisms for establishing 5 WGs for CONECT.

**Actionee(s):** CONECT Management Group assisted by Secretariat.

**Recommendation 1 (CONNECT-1):** Members of CONECT to work together to reach the common goals identified by the CONECT Plenary.

**Recommendation 2 (CONNECT-1):** CONECT to encourage co-design and co-creation of training materials.

**Recommendation 3 (CONNECT-1):** CONECT participants to write short case studies to illustrate their national models of engagement between universities and NMHSs . The case studies should contain a brief explanation of how the engagements work, celebrate the successes (what works well), present the challenges (where improvement is needed).

**Recommendation 4 (CONNECT-1):** WMO Secretariat and CONECT partners to collaborate to promote exchange of human resources between institutions to move the Consortium forward.

**Recommendation 5 (CONNECT-1):** CONECT to contribute to promoting sharing of education and training resources and events, in all languages, by using the WMO Global Campus tools.

**Recommendation 6 (CONNECT-1):** CONECT to encourage education and training partners to use clear and objective language in the development of training materials to enhance the ability of translation.

## 11. Next Meeting

Following the working procedures, the CONECT Plenary is requested to meet annually, with meetings being held on a rotational basis by WMO regions.

The China Meteorological Administration Training Centre (CMATC, WMO Regional Training Centre in China), kindly offered to host the next CONECT Plenary meeting in 2024.



## 12. Any Other Business

No additional business was requested for discussion during CONECT-1.

## 13. Closure of the Meeting

As the first meeting of the Consortium of WMO Education and Training Collaborating Partners (CONECT) drew to a close, Dr Winifred Jordaan, expressed heartfelt gratitude to all participants for their substantial contributions to discussions and the pivotal decisions made during the proceedings.

Dr Jordaan highlighted the critical role the Management Group will play in maintaining the engagement of WMO Members who have expressed interest in joining the Consortium. She noted that the success of CONECT moving forward relies significantly on the foresight and dedication of this coordinating body.

In looking towards the future, Dr Jordaan also noted that ultimately, the success of CONECT depends on the continuous involvement and collaboration of all education and training partners. Each participant, representing an integral piece of the puzzle, is essential to the collective success of CONECT. The collaborative efforts of education and training partners within the meteorological and climatological community are paramount to achieving the Consortium's goals.

In her closing statements, Dr Jordaan urged participants to carry forward the spirit of collaboration and shared purpose. She expressed optimism about witnessing the positive impact that CONECT will undoubtedly have on advancing education and training within the WMO community. Dr Jordaan concluded by thanking the participants for their dedication, contributions, and unwavering commitment to the future success of CONECT.

## **ANNEXES**

## Annex-I List of Participants CONECT-1

### Participants attending the meeting in Geneva

Name	Organization	Country
Romina Mezher	SMN / RTC Argentina	Argentina
Mick Pope	BoM Australia	Australia
Frédéric Ouatarra	UNIV. NORBERT ZONGO	Burkina Faso
Samuel KAISSASSOU	Univ. of Yaounde	Cameroon
Michelle Hardy	ECCC Canada	Canada
Fang CHENG	NUIST / RTC Nanjing	China
Guolin Han	CMATC / RTC Beijing	China
Yong WANG	NUIST / RTC Nanjing	China
Yubin YU	CMATC / RTC Beijing	China
Abdalla Abdelrahman Baligh	EMA / RTC Cairo	Egypt
BarbaraBOURDELLES	ENM Météo-France	France
Vesa Nietosvaara	EUMETSAT	Germany
Gaurishankar Sawaisarje	MTI/ IMD / RTC India	India
Roro Yuliana Purwanti	BMKG / RTC Indonesia	Indonesia
Marina Baldi	CNR-IBE / RTC Italy	Italy
Heleen ter Pelkwijk	KNMI Netherlands	Netherlands
Effiom Oku	Nigerian Met. Agency	Nigeria
Winifred Jordaan	SAWS / RTC SA	South Africa
Javier Fernández Villares	AEMET / RTC Spain	Spain
Hazim Surag	Sudan Met. Authority	Sudan
John Methven	University Reading	UK
Steven Callaghan	UK Met Office	UK
Bernadette Connell	CIRA / NOAA / VLab	USA
Elizabeth Page	The COMET Program	USA
Tambu Pasipangodya	Zimbabwe MSD	Zimbabwe
VIMBAI MAMOMBE	Zimbabwe MSD	Zimbabwe
Hong FAN	WMO	Switzerland
Luciane Veeck	WMO	Switzerland
Paul Bugeac	WMO	Switzerland
Mustafa Adiguzel	WMO	Switzerland
Yinka Adebayo	WMO	Switzerland
Wenjian Zhang	WMO	Switzerland
Filipe Lucio	WMO	Switzerland
K.J. Park	WMO	Switzerland
Silvana Alcoz	WMO	Switzerland
Nirina Ravalitera	WMO	Switzerland

## Annex-I List of Participants CONECT-1

### Participants attending the meeting online

Name	Organization	Country
Marcela Perez	FICH / RTC Argentina	Argentina
Nunufar Stepanyan	NMHS	Armenia
Vagner Anabor	UFSM	Brazil
Guergana Guerova	Uni Sofia	Bulgaria
Jennifer Milton		Canada
Solangela Sánchez	DGAC	Chile
GUANGQIU SHEN	NUIST / RTC Nanjing	China
DIAKARIA Kone	EAMAC	Niger
mohamed Abdeldayem	EMA / RTC Cairo	Egypt
Martyna Stelmaszczuk-Górska	EOTEC DevNet	Germany
Aditya warman	BMKG / RTC Indonesia	Indonesia
Doni Khaira Arya	Ministry of Public Works and Housing of the Republic of Indonesia	Indonesia
Fitri Riandini	Ministry of Public Works and Housing of the Republic of Indonesia	Indonesia
Madona	BMKG / RTC Indonesia	Indonesia
Mirwan Rofiq Ginanjar	Ministry of Public Works and Housing of the Republic of Indonesia	Indonesia
Muhammad Rizal	Ministry of Public Works and Housing of the Republic of Indonesia	Indonesia
Nelly Florida Riama	BMKG / RTC Indonesia	Indonesia
Nina Amelia Sasmita	BMKG / RTC Indonesia	Indonesia
Noer Nurhayati	BMKG / RTC Indonesia	Indonesia
Ratih Prasetya	BMKG / RTC Indonesia	Indonesia
Rena Sempana Wahyu Putri	Ministry of Public Works and Housing of the Republic of Indonesia	Indonesia
Yosha Aulia Dananti	Ministry of Public Works and Housing of the Republic of Indonesia	Indonesia
Attilio Di Diodato	Italian Air Force	Italy
ARPITA MANDAL	The University of the West Indies	Jamaica
Shaneica Lester	The University of the West Indies	Jamaica
Sarah Kimani	IMTR/WMO-RTC/ Kenya Meteorological Department	Kenya
Simon Gichomo	IMTR/WMO-RTC/ Kenya Meteorological Department	Kenya
CALVIN ALVIN GAYE	University of Liberia	Liberia
Tareq Soubai	DGM	Morocco
TIN YI	Department of Meteorology and Hydrology	Myanmar
Roelof Burger	NWU	New Zealand
Odjugo Peter A. Ovuyovwiroye	RTC Nigeria	Nigeria
Michael Bala	PAGASA	Phillipines

<b>DAHYE LEE</b>	KMA	Republic of Korea
<b>Eunsuk KIM</b>	KMA	Republic of Korea
<b>Bogdan Antonescu</b>	University of Bucharest	Romania
<b>Oleg Lomakin</b>	Advanced Training Institute of Roshydromet	Russian Federation
<b>Anna Timofeeva</b>	RSHU	Russian Federation
<b>Eduard Podgaiskii</b>	RSHU	Russian Federation
<b>Maria Mamaeva</b>	Advanced Training Institute of Roshydromet	Russian Federation
<b>Valentina Gorbatenko</b>	Tomsk Polytechnic University	Russian Federation
<b>Gina Lafortune</b>	Seychelles Meteorological Authority	Seychelles
<b>Abdisamad Mohamed Ali</b>	Somalia Meteorological Office	Somalia
<b>Abubakar Lungo</b>	TMA	United Republic of Tanzania
<b>Danford Nyenyema</b>	TMA	United Republic of Tanzania
<b>Elias Lipiki</b>	TMA	United Republic of Tanzania
<b>ESTON MOGHA</b>	TMA	United Republic of Tanzania
<b>Hekima Jozania</b>	TMA	United Republic of Tanzania
<b>JOHNSON EMMANUEL LUHIMBO</b>	TMA	United Republic of Tanzania
<b>Mathew Ndaki</b>	TMA	United Republic of Tanzania
<b>Peter Mlonganile</b>	TMA	United Republic of Tanzania
<b>Tunsume Mwamboneke</b>	TMA	United Republic of Tanzania
<b>Veronica Mgalula</b>	TMA	United Republic of Tanzania
<b>Wilbert Muruke</b>	NMHS	United Republic of Tanzania
<b>Becky Hemingway</b>	ECMWF	UK
<b>Romina Elizabeth Freire Giménez</b>	INUMET	Uruguay
<b>Erin Martin</b>	NASA / EOTEC DevNet	USA
<b>Yasha Moz</b>	NASA / EOTEC DevNet	USA
<b>Suman Jain</b>	University of Zambia	Zambia
<b>Charles Chisanga</b>	Copperbelt University	Zambia

## Annex-II CONECT Working Groups

### Reports from initial discussions during CONECT-1

#### Working Group 1: Promoting Basic Instruction Packages (BIPs) and competency frameworks implementation

Chair – Gaurishankar Sawaisarje (India)

Rapporteur – Steven Callaghan (UK)

- **Communications** with stakeholders around promotion and adoption of BIP and frameworks is key. All that people need to know has been written, so simply producing yet more documents is not the answer – need more attractive (video/website, etc) means of communication.
- **Compendium of approaches** on BIP implementation would be worthwhile. To include outcomes, constraints, length, hours, methods of teaching and assessment, etc.
- **Pre-requisite maths/physics** remain a problem for some, but also some great initiatives to solve these problems. Compendium to include the different routes through the education system suitable for those with different maths and physics backgrounds (different routes for those with high-school maths/physics, vs full bachelors course, vs those with engineering/etc degree already and just need top-up.)
- There may be value in conducting a survey or other outreach to order for CONECT to build awareness of what the barriers to adoption of BIPs and competence frameworks might be, but also to gather positive examples for sharing with the community.
- **Certification and accreditation**
  - Need to ensure ease of checking Programmes – through production (or update) of checklists/tables, etc.
  - Need to ensure clarity of certification, through common language on certificates and include a statement of compliance on certificates. (link to WG5)
- **Duration** of BIP compliant courses – this is too nuanced, so we cannot be prescriptive. Meeting the outcomes/competencies is the only criteria imposed by WMO.
- **Success stories of competence framework use** should be compiled and shared.
- Early warning systems for all and other WMO Programmes can act as **leverage for promoting use of frameworks** (outside of Aviation where there is regulatory need to comply).

#### Other notes giving a flavor of our discussion:

- Final BIP-M/MTs document available after Congress in June, assuming they are approved
- BIP-CS is still under discussion – something on table. Barbara working on BIP-CS. She will share current status.
- BIP-H also in progress. Both CS and H should be presented in similar ways to M and MT for ease of use.
- Specialization (for example, agrometeorology) do not belong in BIPs, but new competence frameworks might be needed
- BIPs seen as only a NMHS thing – need more awareness of how universities are using.

#### Database/survey needed?

- For new/revised BIPs, perhaps encouraging gap analysis for each member state?
- We cannot define how BIPs map to specific levels of academic study – this is down to member states to define, using the BIPs as a framework alongside their national needs and academic regulations
- Important to note that courses include a section (maybe last semester) on area of specialization.
- Burden of proving compliance lies on employer. But sometimes bounces between individual and their education institution. Clarity is important. Statement of compliance OR mapping table. Cannot tell universities what to do, only guide them as to what might be useful for employers.

- Prioritization is important when planning Programmes. For some the pure atmospheric physics is what is needed (especially for preparing people for research roles), but for others a more applied approach is needed to serve particular jobs. Need to tailor training and education to the needs of people. Then can do further specific training after people enter the workforce, otherwise the course becomes too long.
- A number of issues around maths and physics arose. For example, Spain seeing online participants failing due to inadequate pre-requisites and helping NMHSs to prepare future participants. Conversely a great example from United Republic of Tanzania of collaborative approach to provide this necessary education before people progress to the meteorology.
- Is there value in establishing a database of collaborating partners who are potential users of BIPs (maybe)

## Working Group 2: Training Resources

Chair – Mick Pope

Rapporteur – John Methven

### Discussion points

1. Learning platform (inc copyright standards, minimum metadata for sharing resources, QA)
2. Coordination of efforts and co-development of new training resources
3. Designing resources fit for adaptation and re-use
4. Training needs and gaps in Global Campus material

Mohamed Abdeldayem: Training needs assessment (RTC Egypt). Sent to countries in Africa and Arab countries to collect learning needs across region. Then design a course to provide competency need for all countries in a particular area. Can provide document with development plans.

What are the gaps and how to fill them? With self-taught learning materials available, can be used by a) individual learners or b) with instructor but in flipped classroom setting.

Any QA for material available on Global Campus? There is some metadata, but not QA process. In EUMETCAL there is some feedback from learners on each course. Also COMET star rating. How to give feedback to people creating the training?

Starting point. What is on Global Campus and what are the gaps relative to the competencies identified in the BIP family? Currently dominated by COMET material with only a handful of other contributions.

Diversity of training materials is a challenge. Ranging from slides to materials using other software. Also copyright on the materials. How to keep the modules current, update or take down?

How to access the training material? Do I access it to download, or link to it? Link is preferable because then owner/developer is responsible for keeping it up to date and it maybe integrated within a platform. Aim to make hill to get to other material as little as possible (e.g., links and LTI connections). Mustafa on technical side: different options for sharing and LTI connections etc (LTI provider and consumer).

Might be easier to manage as 6 hubs corresponding to the WMO RAs, with common needs – or possibility to re-align by language. RA3 already has grouped its own materials on the Moodle. Hub would be a one-stop shop linked back to Global Campus. Example, others can use these hubs hosted on learning management systems to co-create and share resources. This would be the gold standard is shared learning materials but is a major human resources issue (for instance, 2.0FTE per hub to manage the learning management system).

Community of practice – exchange of training practice between RTCs (overlap with WG5). Sharing materials and encouraging others to share. Extolling the benefits of sharing. Concerns about sharing – for example, charging people for training courses, but not all the material is created by the training institution. How to reference materials appropriately – credit to creator of materials. Example, text books written on basis of lecture material and re-use by others.

Pathways through Global Campus material for learners without an instructor (type (a) above) – for example, lesson plans using the resources. Reducing the barriers to using the materials. Curating the materials.

Coordination and co-creation. Sharing work in progress and plans. Who would be interested in contributing? Organize webinars (for example, once per month) sharing experiences and latest problems and activities as part of community of practice.

How to take it further into shared materials and IP, contracts and jointly funded development.

### Working Group 3: Communications and outreach of CONECT and Global Campus initiative

Rapporteur – Marina Baldi

- Work of CONECT
- Within CONECT
- To policy makers

Develop a Communication strategy and communication plan at first stage considering that

- All the external communication should go through the Management Group with support of members.
- Management Group will set up a communication plan, which will support the strategic goals of the annual calendar of activities.
- Each Member is invited to participate to internal communication and contribute to the communication plan adopted.
- Human Resources to be found among the Member of Plenary to designate for Communication planning

#### **Communication tools**

The role of social media: they can be used, but probably there are some limitations (for example, facebook and instagram in some cases are not available).

Visual Identity (brand, logo, etc). CONECT and Global Campus should go hand by hand, so the CONECT logo should be embedded in GC

#### **External Communication**

Importance of identifying the audience

- Policy makers are Meteorological/Hydrological/climate services, Government and Control/Licensing Agencies and Institutions
- Stakeholders: private companies in the relevant socio-economic sectors.

WMO web page dedicated to CONECT open to the public including the annual calendar announcements, reports from the CONECT Plenary, invitation for new Members.

FAQ page for external entities (how to become member, how to participate to activities, ....)

Social Media can be used to invite new Members training opportunities and direct this public to the CONECT web page

#### **Internal Communication**

Regular bulletin to be distributed among CONECT Members. The Bulletin is an internal tool with the aim to share information and foster communication among members.

Internally promote the use of Moodle as a platform to share information, discussion results, communicate to CONECT Members

Connection between Global Campus and CONECT Moodle

Management Group can do management for the Communication Group, but some support must come from the Plenary



Consider cooperation cooperative opportunities can be advertised internally through the bulletin.  
Push Members to cooperate in communication.  
Share ideas within CONECT and inform each other about activities and initiatives, and invite others to contribute and join networks  
Establish a way to explore the training needs within the CONECT and in the large external community, and, on this basis, localize the experts, the financial resources to make this action happen.

#### Working Group 4: Work force/Human Resources

Rapporteur – Bernie Connell

##### **Succession:**

Awareness of organization changes in personnel with the goal of preserving institutional knowledge; The organization/individual ensures documentation/ resources is/are available to prepare the new people. It is recommended to have overlap time between existing and incoming personal to gain better continuity. It is best to provide enough time for mentoring and encouraging/ promoting self-learning of the available documentation/ resources.

##### **Gender Balance:**

Reiterate WMO policies and be a good model (culture, language etc)

##### **Attracting new people to the profession, education and outreach, other professions that use atmosphere, ocean, and water resources information.**

Initially propose a single section where members can point to resources and provide stories of benefits and limitations. As these accumulate, add different sections.

Take the advantages of the social media to promote the profession

##### **Resource mobilization:**

- a. Audiences: Provider vs. recipient
- b. Invitation comes from WMO
- c. Needs assessment/ fact finding
- d. Timeline mutually agreed
- e. Incorporate quality and quantity aspects
- f. Empowerment of the recipients

##### **Benefits of belonging to CONECT:**

- a. Gaining Trust with partners, sharing resources, etc. Initially members can share their examples of collaborative experiences and best practices, and expectations and then annually be requested to share additional stories and case studies.
- b. Moving forward, how can CONECT provide **match-making services** between demand and resources available?

#### Working Group 5: Approaches to consistent adoption of certificates and microcredentials in training

Rapporteur – Lu Veeck

**Approach to certificates** – certificates of participation versus attendance and minimum elements

Deliverables: Make an inventory/investigation of minimum requirements for recognition of certificates in different countries. Write a document with guidance on elements to be contained in certificates.

**Microcredentials** – Explore the benefits and challenges of using and sharing microcredentials, look for examples implemented by partners, explore linking them with competency frameworks, organize sessions to explain the concept and show examples.

**Suggested way to move forward:**

The WG will need more people to explore these themes.

1. Create a list of people interested in discussing the topics.
2. Invite for a first meeting to work on plans to further discuss and agree on activities and deliverables .

## **Annex-III Terms of Reference of CONECT**

### **Terms of Referenced as agreed during CONECT-1**

#### **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, with the view of having a structured platform for discussion and sharing of ideas that can contribute to improving capacity development.

#### **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.

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.

#### **Structure and working procedures**

The structure of CONECT comprises CONECT Plenary and CONECT Management Group.

##### **CONECT 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. 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) CONECT 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) CONECT Plenary meets annually. Meetings shall be held on a rotational basis by WMO regions;
- d) CONECT Plenary shall elect, at their first plenary meeting, three co-chairs (one chair and two vice-chairs) and additional 15 members from Principals among the above three groups (five from each composition group, A, B, and C) to form the CONECT 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) New nominations can be proposed by plenary and by WMO Permanent Representatives (PRs), based on criteria: a) representatives from institutions working with education and training in meteorology, hydrology, and climate;
- h) 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;
- i) 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;
- j) 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;
- k) CONECT members shall coordinate their work and communications using the online communication platform that will be established by the Secretariat.

#### **CONECT Management Group (MG)**

- a) CONECT Plenary co-chairs act as the co-chairs of the CONECT MG;
- b) The period of work of elected members of CONECT MG is 4 years;
- c) CONECT MG shall meet twice every year to maintain effective communication and sharing of progress on activities being coordinated;
- d) 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;
- e) Proposals for new CONECT subsidiary bodies (including their ToR and composition) should be reviewed by the MG before submitting to the plenary for consideration and decision;
- f) CONECT MG shall make the best efforts for ensuring regional and gender balance, and inclusiveness in all its structures and work plans.

### **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.

### **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;
- i) Share information on the means of identifying education and training needs and filling the gap between education and operational activities to increase the level of effectiveness of learning;
- j) To keep under review where the relevant Universities and National Meteorological and Hydrological Services (NMHSs) with its training institutions can work more together and issue relevant advisories from time to time.

### **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.

## Annex-IV Elections for CONECT Management Group

### Self-nominations received from WMO Regional Associations

Name	Gender	Country	Organization
<b>Yusra Ali Khaleel Abu Nejem</b>	Female	Amman	Jordanian Meteorological Department
<b>Marcela Perez</b>	Female	Argentina	Facultad de Ingeniería y Ciencias Hídricas. Universidad Nacional del Litoral Component of the WMO RTC Argentina
<b>Romina Nahir Mezher</b>	Female	Argentina	National Meteorological Service (SMN)
<b>Mick Pope</b>	Male	Australia	Australian Bureau of Meteorology / Bureau of Meteorology Training Centre (BMTC)
<b>Vagner Anabor</b>	Male	Brazil	Federal University of Santa Maria
<b>Frédéric Ouattara</b>	Male	Burkina Faso	Université Norbert zongo
<b>Kaissassou Samuel</b>	Male	Cameroon	University of Yaounde
Michelle Hardy	Female	Canada	Environment and Climate Change Canada (ECCC)
<b>Solangela Edit Sánchez Cuevas</b>	Female	Chile	DGAC/Escuela tecnica Aeronautica
<b>Yu Yubin</b>	Male	China	CMA Training Centre / RTC Beijing
<b>Saifidine Mohibaca Baco</b>	Female	Comoros	National Agency Of Civil Aviation And Meteorology
<b>Ya Kouakou Firmin</b>	Male	Côte d'Ivoire	Aeronautical and meteorological airport operating and development company (SODEXAM)
<b>Abdalla Abdelrahmabaligh</b>	Female	Egypt	Egyptian Meteorological Authority – RTC Egypt
<b>Mohamed Tawfik Abdeldayem</b>	Male	Egypt	Egyptian meteorological Authority – RTC Egypt
<b>Barbara Bourdelles</b>	Female	France	École nationale de la météorologie, Météo-France
<b>Gaurishankar Kallappa Sawaisarje</b>	Male	India	India Meteorological Department
<b>Nelly Florida Riama</b>	Female	Indonesia	BMKG
<b>Marina Baldi</b>	Female	Italy	Regional Training Centre in Italy / National Research Council of Italy
<b>Arpita Mandal</b>	Female	Jamaica	The University of The West Indies
<b>Simon Ndirangu Gichomo</b>	Male	Kenya	Institute for Meteorological Training and Research / WMO RTC
<b>Diakaria Kone</b>	Male	Niger	École Africaine De La Météorologie Et De L'aviation Civile (EAMAC)
<b>Effiom Essien Oku</b>	Male	Nigeria	Nigerian Meteorological Agency
Michael S. Bala	Male	Philippines	Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)
<b>Nunufar Stepanyan</b>	Female	Republic of Armenia	Hydrometeorology and Monitoring Centre
<b>Valerii Micheev</b>	Male	Russian Federation	Russian State Hydrometeorological University

<b>Denis Leontyev</b>	Male	Russian Federation	Russian State Hydrometeorological University
<b>Abdisamad Mohamed Ali</b>	Male	Somalia	Somalia Met. Office
<b>Winifred Jordaan</b>	Female	South Africa	South African Weather Service
<b>Steven Callaghan</b>	Male	UK	Met Office
<b>Elias Julius Lipiki</b>	Male	United Republic of Tanzania	Tanzania Meteorological Authority (TMA)
<b>Peter Nicky Mlonganile</b>	Male	United Republic of Tanzania	National Meteorological Training Centre (NMTC)
<b>Danford Emmanuel Nyenyema</b>	Male	United Republic of Tanzania	Tanzania Meteorological Authority (TMA)
<b>Tunsume Gideon Mwamboneke</b>	Female	United Republic of Tanzania	Tanzania Meteorological Authority (TMA)
<b>Wilbert Timiza Muruke</b>	Male	United Republic of Tanzania	Tanzania Meteorological Authority (TMA)
<b>Elizabeth Page</b>	Female	USA	The COMET Program
<b>Bernadette Connell</b>	Female	USA	CIRA/NOAA
<b>Yasha Moz</b>	Male	USA	EOTEC DevNet and NASA's Capacity Building Program
<b>Elijah Phiri</b>	Male	Zambia	University of Zambia
<b>Charles B. Chisanga</b>	Male	Zambia	Copperbelt University

## **Annex-V Elected members of CONECT Management Group**

### **18 members elected by WMO Regional Associations**

#### WMO Regional Association I

**Winifred Jordaan - Chair of CONECT**

South African Weather Service (SAWS), WMO Regional Training Centre in South Africa  
South Africa

**Mohamed Tawfik Abdeldayem**

Egyptian meteorological Authority (EMA), WMO Regional Training Centre in Egypt  
Egypt

**Diakaria Kone**

École Africaine De La Météorologie Et De L'aviation Civile (EAMAC), component of the  
WMO Regional Training Centre in Niger  
Niger

#### WMO Regional Association II

**Valerii Micheev**

Russian State Hydrometeorological University (RSHU), component of the WMO Regional  
Training Centre in Russian Federation  
Russian Federation

**Gaurishankar Kallappa Sawaisarje**

India Meteorological Department (IMD), component of the WMO Regional Training Centre  
in India  
India

**YU Yubin**

China Meteorological Administration Training Centre (CMATC), component of the WMO  
Regional Training Centre in China  
China

#### WMO Regional Association III

**Vagner Anabor – Co-Vice-Chair of CONECT**

Universidade Federal de Santa Maria (UFSM), active component of CVEM, WMO Regional  
Training Centre in Brazil  
Brazil

**Solangela Edit Sánchez Cuevas**

Escuela tecnica Aeronautica (DGAC)  
Chile

**Romina Nahir Mezher**

Servicio Meteorológico Nacional (SMN), component of the WMO Regional Training Centre  
in Argentina  
Argentina



#### WMO Regional Association IV

**Arpita Mandal**

The University of The West Indies  
Jamaica

**Michelle Hardy**

Environment and Climate Change Canada (ECCC)  
Canada

**Bernadette Connell**

Cooperative Institute for Research in the Atmosphere (CIRA/NOAA)  
USA

#### WMO Regional Association V

**Mick Pope**

Australian Bureau of Meteorology / Bureau of Meteorology Training Centre (BMTTC)  
Australia

**Nelly Florida Riama**

Meteorological, Climatological and Geophysical Agency (BMKG), component of the WMO  
Regional Training Centre in Indonesia  
Indonesia

**Michael S. Bala**

Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA),  
component of the WMO Regional Training Centre in Philippines  
Philippines

#### WMO Regional Association VI

**Steven Callaghan – Co-Vice-Chair of CONECT**

Met Office  
United Kingdom

**Barbara Bourdelles**

École nationale de la météorologie, Météo-France  
France

**Marina Baldi**

National Research Council of Italy, WMO Regional Training Centre in Italy  
Italy