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| WEATHER CLIMATE WATER | **World Meteorological Organization**  **WORLD METEOROLOGICAL CONGRESS**  **Nineteenth Session** 22 May to 2 June 2023, Geneva | **Cg-19/Doc. 4.4(2)** |
| Submitted by:  Chair of the Plenary  26.V.2023  **APPROVED** |

**AGENDA ITEM 4: TECHNICAL STRATEGIES SUPPORTING LONG-TERM GOALS**

**AGENDA ITEM 4.4: Capacity development**

# Education and Training



# GENERAL CONSIDERATIONS

### Introduction

The importance of education and training was reiterated in [Resolution 71 (Cg-18)](https://library.wmo.int/doc_num.php?explnum_id=9827#page=235), which decided that the Education and Training Programme (ETRP) should be directed toward developing qualified and competent National Meteorological and Hydrological Services (NMHSs) staff. It should do this by ensuring the availability of quality education and training opportunities in collaboration with education and training providers at national and international levels.

(1) The building blocks of the Education and Training Programme are: Obtaining and maintaining continuous development of competencies;

(2) Enhancement of training capabilities of institutions and experts;

(3) Development of leadership and management capabilities of NMHSs;

(4) Assessment of new and emerging learning needs and capacity of NMHSs;

(5) Supporting technical departments of Secretariat in their training activities;

(6) Enhancement of collaboration between education and training institutions.

Guided by the afore-listed building blocks, the Executive Council (EC) Capacity Development Panel (CDP) made recommendations, some of which the EC endorsed through [Decision 3.4(1)/1 (EC‑76)](https://meetings.wmo.int/EC-76/_layouts/15/WopiFrame.aspx?sourcedoc=/EC-76/English/2.%20PROVISIONAL%20REPORT%20(Approved%20documents)/EC-76-d03-4(1)-CDP-RECOMMENDATIONS-approved_en.docx&action=default). Related aspects of the work of CDP have been distilled to enhance the activities of WMO as it deals with education and training-related challenges faced by Members.

Following the WMO Reform and considering the challenges that Members are facing such as the need for more infrastructure, and the need to ameliorate the dwindling human resources in NMHSs required to deliver adequate Services, it becomes expedient to ensure that the Education and Training Programme is repositioned to address these as well as contribute to emerging international initiatives such as Early Warnings for All for the benefit of Members. This resolution, therefore, addresses various important program-related approaches to deal with these issues.

**Expected action**

Based on the above, the Congress may wish to adopt Draft Resolution 4.4(2)/1 (Cg-19).

# DRAFT RESOLUTION

## Draft Resolution 4.4(2)/1 (Cg-19)

## Education and Training

THE WORLD METEOROLOGICAL CONGRESS,

**Recalling:**

(1) [Decision 13 (EC-72)](https://library.wmo.int/doc_num.php?explnum_id=10504#page=142) – Developing and Sustaining Core Competencies and Expertise,

(2) [Resolution 71 (Cg-18)](https://library.wmo.int/doc_num.php?explnum_id=9827#page=235) – The Education and Training Programme and Delivery Mechanism,

(3) [Resolution 4 (EC–75)](https://library.wmo.int/doc_num.php?explnum_id=11550#page=21) – Development of a WMO-coordinated Global Greenhouse Gas Monitoring Infrastructure,

(4) [Decision 8 (EC-75)](https://library.wmo.int/doc_num.php?explnum_id=11550#page=71) – Concept note on the Consortium of WMO Education and Training Collaborating Partners,

(5) [Decision 3.4(1)/1 (EC-76)](https://meetings.wmo.int/EC-76/_layouts/15/WopiFrame.aspx?sourcedoc=/EC-76/English/2.%20PROVISIONAL%20REPORT%20(Approved%20documents)/EC-76-d03-4(1)-CDP-RECOMMENDATIONS-approved_en.docx&action=default) – Recommendations of Capacity Development Panel (CDP),

(6) [Recommendation 3.4(1)/1 (EC-76)](https://meetings.wmo.int/EC-76/_layouts/15/WopiFrame.aspx?sourcedoc=/EC-76/English/2.%20PROVISIONAL%20REPORT%20(Approved%20documents)/EC-76-d03-4(1)-CDP-RECOMMENDATIONS-approved_en.docx&action=default) – WMO Capacity Development Strategy (WCDS),

(7) [Draft Resolution 4.1(1)/1 (Cg-19)](https://meetings.wmo.int/Cg-19/_layouts/15/WopiFrame.aspx?sourcedoc=/Cg-19/English/1.%20DRAFTS%20FOR%20DISCUSSION/Cg-19-d04-1(1)-STRATEGY-FOR%20SERVICE-DELIVERY-draft1_en.docx&action=default) – WMO Strategy for Service Delivery and its implementation plan,

**Having examined** the recommendations made in the publication [*Education and Training in a Period of Rapid Change: Highlights of the Fourteenth WMO Symposium on Education and Training*](https://library.wmo.int/index.php?lvl=notice_display&id=22147#.Y5ciFnbMI2w) (WMO-No. 1291),

**Having considered:**

(1) The decisions taken by the seventy-sixth Executive Council on the recommendations of the Capacity Development Panel,

(2) The need to train experts to deal with emerging focus areas of WMO such as the Early Warnings for All Initiative, Global Greenhouse Gas Monitoring Infrastructure and the implementation of additional outputs associated with ongoing changes in the cryosphere and downstream impacts on water resources and sea level rise,

(3) The need to respond to areas identified in the content of the WMO [*Survey on the Status of Human Resources in National Meteorological and Hydrological Services: Staff, Competencies and Qualifications*](https://library.wmo.int/index.php?lvl=notice_display&id=22234) (WMO‑No. 1305),

(4) The [draft Resolution 3.1(1)/1 (Cg-19)](https://meetings.wmo.int/Cg-19/_layouts/15/WopiFrame.aspx?sourcedoc=%7b4F26F339-1DAD-4762-B2C2-56471A1101BE%7d&file=Cg-19-d03-1(1)-STRATEGIC-PLAN-draft1_en.docx&action=default) of the Strategic Plan 2024-2027 and its three strategic initiatives, namely, Early Warnings for All, Global Greenhouse Gas Monitoring Infrastructure, and the implementation of additional outputs associated with ongoing changes in the cryosphere and downstream impacts on water resources and sea level rise,

**Recognizing** that the implementation of outputs associated with the Strategic Plan 2024-2027 are subject to the outcome of budgetary decisions or the Secretary-General being able to identify efficiencies,

**Taking into account** the need to 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 through a wider collaboration between education and training providers,

**Decides:**

(1) To endorse the Consortium of WMO Education and Training Collaborating Partners as a formal mechanism to achieve the goals of the WMO Global Campus initiative to raise more resources in support of Members’ education and training needs and endeavours;

(2) To request the Consortium of WMO Education and Training Collaborating Partners to amongst others work towards enhancing resource mobilization and supporting competencies development in NMHSs and other related national institutions;

**Invites** Members:

(1) To consider the benefits of the competency approach, in collaboration with relevant WMO departments, and promote and implement the relevant competencies in the different areas of meteorology, climatology, hydrology and related disciplines [Guyana];

(2) To collaborate in developing group leadership and management activities at subregional and regional levels;

(3) To establish a policy to facilitate distance-learning and blended learning in NMHSs [BCT];

**Requests** Members to implement the updated Basic Instruction Package for Meteorologists (BIP-M) and Meteorological Technicians (BIP-MT) as described in the [*Guide to the Implementation of Education and Training Standards in Meteorology and Hydrology, Volume I – Meteorology*](https://library.wmo.int/index.php?lvl=notice_display&id=10770#.Y5cib3bMI2w) (WMO-No. 1083);

**Requests** the RTCs and Education and Training Collaborating Partners to:

(1) Make their facilities and relevant resources available to support the development and delivery of WMO training activities on Early Warnings for All, Impact-based forecasting, Greenhouse Gas Initiative, new generation satellites, leadership and management development, specific train the trainers courses to ensure implementation of WMO initiatives and programmes, among others;

(2) Increase the use of distance-learning and blended-learning techniques, using technologies available to them;

(3) Develop partnerships with academic institutions and professional and scientific associations, for exchange of relevant information and human resources with the aim of enhancing research and development for the benefit of Service delivery and exchange of academic staff; and make relevant training resources on education and training available as open access for others to use, particularly under the aegis of WMO Global Campus and working with the Consortium of WMO Education and Training Collaborating Partners;

(4) [BCT]Use the WMO Capacity Development Framework (WCDF) [Secretariat ref. approved 4.4(1)] as a guiding tool in identifying training needs and planning education and training programmes;

**Requests** the Secretary-General to:

(1) Provide Secretariat with the necessary support for the activities related to the Consortium of WMO Education and Training Collaborating Partners;

(2) Initiate a review of the existing process for designation and reconfirmation of WMO RTCs and related WMO Centres with the aim of enhancing the standards and efficiency of these institutions and support them in resource mobilization endeavours;

(3) Render advisory services to WMO RTCs and Education and Training Collaborating Partners on training related matters concerning services on weather, water and climate, related environmental, related social sciences, and [Guyana] policy and development;

(4) To consider, within the framework of building on the achievements of WMO Education and Training Programme (ETRP), especially under the Early Warnings for All Initiative and other strategic initiatives when necessary, and also under the aegis of WMO reform, inter alia focus on the following key activity‑areas, namely:

(a) Develop suitable and sustainable [BCT] [Guyana] programs and projects in support of the [Guyana] capacity of Members to develop appropriate early warning initiatives for saving lives and property, and promote [Guyana] socioeconomic benefits;

(b) Enhancement of leadership and management skills of managers of NMHSs through development of learning resources, organization of Permanent Representative Familiarization visits, leadership and management training, and by ensuring collaboration at subregional and regional levels in these endeavours;

(c) Develop suitable programmes and projects in support of the Members appropriate capacity development [Barbados] initiatives according to the WMO Strategic Plan, such as Global Greenhouse Gas Monitoring Infrastructure and the implementation of additional outputs associated with ongoing changes in the cryosphere and downstream impacts on water resources and sea level rise;

(d) Survey the human resources capacity in NMHSs as well as assess the new and emerging education and training needs [Guyana];

(e) Further develop and implement, as needed, the [Guyana] WMO Competency frameworks and continuous development learning resources in support of NMHSs staff competencies to deliver service and work with partners to ensure effective application;

(5) To further expand [Barbados] the current WMO fellowship system to include more Members from SIDS and LDCs in particular Members that are involved with the EW4ALL Initiative [Barbados].

(6) Put in place mechanisms that will better enable twinning between NMHS and RTCs of LDCs and SIDS, and with well advanced NMHS and RTCs, to build capacity in early warning practices and systems, and education and training exchange opportunities in order to promote and achieve sustainable outcomes in capacity and institutional development [BCT].

**Requests** Technical Commissions, the Research Board and the Hydrological Coordination Panel:

(1) To guide and support the work of WMO on education and training in the development of human capacity on Early Warnings for All and other strategic initiatives such as Global Greenhouse Gas Monitoring Infrastructure and the implementation of additional outputs associated with ongoing changes in the cryosphere and downstream impacts on water resources and sea level rise, Impact-based Forecasts and other initiatives;

(2) To support development and delivery of education and training activities by contributing to development of learning resources and by rendering the necessary expertise in delivering education and training events.

(3) To work with the Capacity Development Panel to ensure that WMO education and training initiatives, and the connections between them, are well managed and that emerging needs are considered.

**Requests** the presidents of the regional associations to evaluate the progress of the e-learning projects in order to set up an integrated capacity development system, adapted to the regional specifications.

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See [Cg-19/INF. 4.4(2)](https://meetings.wmo.int/Cg-19/InformationDocuments/Forms/AllItems.aspx) for more information.