



World Meteorological Organization  
Organisation météorologique mondiale

Secrétariat

7 bis, avenue de la Paix – Case postale 2300 – CH 1211 Genève 2 – Suisse

Tél.: +41 (0) 22 730 81 11 – Fax: +41 (0) 22 730 81 81

wmo@wmo.int – www.wmo.int

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Our ref.: RTC-G

GENEVA, 12 May 2015

Annexes: 2

Subject: Operation of WMO Regional Training Centres

Dear Mr President,

I am writing to request your assistance in implementing Resolution 15 of EC-66, "*Executive Council Criteria for the Recognition and Reconfirmation of WMO Regional Training Centres*". As you may recall, WMO Regional Training Centres (RTCs) are created by the Executive Council following a request by a regional association. The RTC is created to meet specific education and training needs identified within that regional association. Over the last 50 years the Executive Council has recognized 26 Regional Training Centres encompassing of 38 training institutions (see Annex I). Since the late 1990s each RTC has been inspected at least once and activity reports are requested on a regular basis.

In 2012 the Executive Council requested its Panel of Experts on Education and Training to carry out a review on the future roles and operations of WMO Regional Training Centres. The review was requested because whilst a number of the institutions are very active as RTCs, overall there was concern about the effectiveness of the RTC network as a whole.

At EC-66 in June 2014 the Executive Council considered the report of its Panel of Experts on Education and Training on the future roles and operations of WMO Regional Training Centres. The report confirmed that the basis for the RTC concept and network was still appropriate but identified that in most cases there was very little interaction between the RTCs and the regional associations that created them. This lack of interaction made it difficult for the training institutions to actually function as true Regional Training Centres. The report included a number of recommendations on how to ensure that the training institutions with WMO Regional Training Centre status were truly supporting regional needs. EC accepted the recommendations in Resolution 15 of EC-66 (see Annex II).

The main changes to the EC Criteria for the Recognition and Reconfirmation of WMO Regional Training Centres are:

To: Presidents of WMO Regional Associations (P.RA-1769)

cc: Permanent Representatives of Members hosting RTCs )  
All RTC Directors ) (for information)

- (a) Description of the roles and responsibilities of the bodies involved in the RTCs (regional associations, the Permanent Representative of the Member hosting the RTC and the RTCs themselves);
- (b) Introduction of an annual reporting requirement (was biannual prior to this);
- (c) RTC status to be reviewed every four years rather than every eight;
- (d) Formal role for the host regional association in the reconfirmation process;
- (e) Reconfirmation to be based upon performance as an RTC, not on national activity; and
- (f) The regional association to consider whether to recommend reconfirmation of each RTC to the Executive Council at each of its regular sessions.

The new criteria come into effect on 1 January 2016, thus RA II will need to consider whether to recommend the continuation of the RTCs in China, India, Islamic Republic of Iran, Iraq, Qatar and Uzbekistan at its session in 2016.

I recall that over the last four years, during its regular session, every regional association has requested its management group to create an education and training focal point to improve coordination between the management group and groups such as the RTCs in the Region, regional members on the EC Panel of Experts on Education and Training and the WMO Education and Training Office. The regional associations are expecting the focal point to act as a conduit between the RA Management Group and these other bodies to ensure that the RTCs are aware of the RA education and training needs and can bring issues from the RTCs to the attention of the Management Group. This coordination actually addresses part of the responsibility of the regional associations in the new RTC Criteria. I am pleased to hear that the RAs IV and VI Management Groups have ETR focal points and I encourage the Management Groups from the other RAs to follow suit.

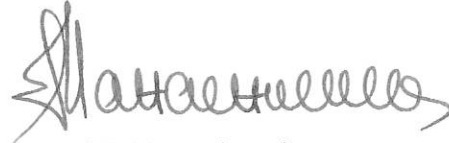
EC identified that it was only through active engagement of all parties involved in the RTC network that we would be able to increase the overall effectiveness of the RTCs to meet the regional education and training needs. Noting that education and training is of great importance to all WMO Members, but particularly those Members who do not have national facilities to train the staff of their NMHSs, I seek your assistance in implementing the revised RTC Criteria approved by EC-66 through activities such as:

- (a) Provision to RTCs of regional training needs in high priority areas in terms of level and types of courses, probable student numbers, suggested funding mechanisms and timelines;
- (b) Incorporation of the RTC capabilities in the RA activities and planning;
- (c) Monitoring and review of the RTC activities by the management group and the regional association;
- (d) Identification of an education and training focal point on the regional management group who keeps in regular contact with the RTCs, PRs of host countries and the Secretariat;
- (e) Engagement of the PR of Members hosting RTCs in discussions on education and training so they can subsequently work with and support the RTC components in their country;

- (f) Recommendations for the reconfirmation of RTCs based upon performance and the EC-66 Criteria for the recognition and reconfirmation of RTCs.

I would like to take this opportunity to thank you for your cooperation and contribution to improved education and training activities of WMO in all Regions.

Yours sincerely,

A handwritten signature in dark ink, appearing to read 'E. Manaekova', with a stylized, flowing script.

(E. Manaekova)  
for the Secretary-General

# WORLD METEOROLOGICAL ORGANIZATION

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RTC-G, ANNEX I

## RTCs AND RTC COMPONENTS BY REGION AND WITH CONTACT DETAILS

Region	RTC	Educational Facility	Year RTC established	RTC Director and contact details
I	RTC - ALGERIA	Institut Hydrométéorologique de Formation et de Recherches (IHFR) Oran	1973	Mr SAHABI, Abed Salah, E-mail= salah_sahabi@yahoo.com
I	RTC - ANGOLA	Instituto Nacional de Meteorologia e Geofísica (INAMET) Luanda	1982	Mr MABIKA, Makumbi, E-mail= makumbimabika@hotmail.com
I	RTC - EGYPT	The Egyptian Meteorological Authority (EMA) Cairo	1968	Mr AHMED IBRAHIM, Alaa El Din, E-mail= alla3001@yahoo.com
I	RTC - KENYA	Institute for Meteorological Training and Research (IMTR) Nairobi	1965	Ms AURA, Stella, E-mail= aura@meteo.go.ke
		University of Nairobi (UONBI) Nairobi	1965	Prof OPERE, Alfred, E-mail= owuoropere@gmail.com
I	RTC - MADAGASCAR	Ecole Nationale d'Enseignement de l'Aéronautique et de la Météorologie (ENEAM) Antananarivo	1982	Dr REALY, Flouti, E-mail= realy_flouti@yahoo.fr
		Ecole Supérieure Polytechnique d'Antananarivo (ESPA) Antananarivo	1982	Mr RAKOTOVAZAHA, Olivier, E-mail= servasia1@yahoo.fr
I	RTC - NIGER	Centre Régional Agrhymet (AGRHYMET) Niamey	1975	Mr YAHYA, Mohamed, E-mail= M.Yahya@agrhyment.ne
		Ecole Africaine de la Météorologie et de l'Aviation Civile (EAMAC) Niamey	1975	Mr SADAMBA, Tchagbele, E-mail= TchagbeleSad@asecna.org
I	RTC - NIGERIA	Federal University of Technology (FUT) Akure	1967	Dr OLALEYE, J.O., E-mail= joolaleye@yahoo.com
		Meteorological Research and Training Institute (MRTI) Lagos	1967	Mr NGANA, Dominic Tagbodom, E-mail= tagbodom@yahoo.com, nathaniel_aisiokuebo@yahoo.com
I	RTC - SOUTH AFRICA	South Africa Weather Service (SAWS) NMTC Pretoria	2011	Ms JORDAAN, Winifred, E-mail= winifred.jordaan@weathersa.co.za
II	RTC - CHINA	China Meteorological Administration Training Center (CMATC) Beijing	1993	Mr GAO, Xuehao, E-mail= gaioxueh@cma.gov.cn
		Nanjing University of Information, Science and Technology (NUIST) Nanjing	1993	Ms WANG, Suchun, E-mail= suchun@nuist.edu.cn
II	RTC - INDIA (2)	Central Training Institute (IMD) Pune	1986	Dr DUTTA, Somenath., E-mail= dutta.drsomenath@gmail.com

		India Meteorological Department Training Centre (IMD) New Delhi	1986	Dr ATTRI, S.D., E-mail= sdattri@gmail.com
		National Water Academy (NWA)	1986	Dr CHASKAR, Dattakumar, E-mail= dschaskar@yahoo.com
II	RTC - IRAN	Islamic Republic of Iran Meteorological Organization (IRIMO) Tehran	1993	Dr TAJBAKHS, Sahar, E-mail= sahartajbakhsh@gmail.com
II	RTC - IRAQ	Iraqi Meteorological Organization (IMO) Baghdad	1976	Dr AL HASSAN, Sajidah, E-mail= imos.train@meteoseism.gov.iq
II	RTC-KOREA (3)	To be considered at Cg-17		To be advised following Cg-17
II	RTC - QATAR	Qatar Aeronautical College (QAC) Doha	2010	Dr Albarazanchi, Najim Abid Ali, E-mail= najimabidali@yahoo.com
II	RTC - UZBEKISTAN	Tashkent Hydrometeorological Profesional College (THMPC) Tashkent	1994	Mr GANIEV, Baydullo, E-mail= Uzhymet@meteo.uz
III	RTC - ARGENTINA	Servicio Meteorológico Nacional (SMN) Buenos Aires	1965	Lic. ROLON, Graciela, E-mail= grolon@smn.gov.ar
		Universidad de Buenos Aires (UBA) Buenos Aires	1965	Prof RUSTICUCCI, Matilde, E-mail= direccion@at.fcen.uba.ar
III	RTC – BRAZIL (1)	Universidade Federal do Pará (UFPA) Bélem	1975	Dr MOTA, Galdino Viana,. E-mail= galdinov@ufpa.br
III	RTC - PERU	Universidad Nacional Agraria La Molina (UNALM) Lima	2011	Profesora Principal Calle Montes, Victoria, E-mail= vcmquebec@lamolina.edu.pe
III	RTC - VENEZUELA	Universidad Central de Venezuela (UCV) Caracas	1975	Ing SALCEDO, Abraham, E-mail= Salcedoa54@gmail.com
IV	RTC - BARBADOS	Caribbean Institute for Meteorology and Hydrology (CIMH) Bridgetown	1975	Dr FARRELL, David, E-mail= dfarrell@cimh.edu.bb
IV	RTC - COSTA RICA	Universidad de Costa Rica (UCR) San José	1968	Dr AMADOR, Jorge, E-mail= jorge.amador@ucr.ac.cr
V	RTC - INDONESIA	Research Centre for Water Resources (RCWR)	2012	Dr ADI, Suko Prayitno, E-mail= sukoprayitno1963@gmail.com
		The Agency for Meteorology, Climatology and Geophysics (BMKG)	2012	Dr ADI, Suko Prayitno, E-mail= sukoprayitno1963@gmail.com
V	RTC - PHILIPPINES	Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) Quezon City	1984	Dr CELEBRE, CYNTHIA P., E-mail= cynthia_celebre@yahoo.com
		University of the Philippines (UP) Quezon City	1984	Dr Rollon, Rene, E-mail= renerollon@gmail.com

VI	RTC - ISRAEL	Postgraduate Training Centre for Applied Meteorology (PTCAM) Bet Dagan	1994	Mr GERSHTEIN, Giora, E-mail= gershteing@ims.gov.il; giora.gershtein@gmail.com
VI	RTC - ITALY	National Research Council Institute of Biometeorology (IBIMET-CRN) Florence	1983	Dr BALDI, Marina, E-mail= m.baldi@ibimet.cnr.it
VI	RTC - RUSSIAN FEDERATION	Advanced Training Institute of Roshydromet (ATI) Moscow	1994	Prof CHICHASOV, Gregory, E-mail= rmtc@mecon.ru
		Moscow Hydrometeorological Technical School (MGMTEH) Moscow	1994	Ms NIKITINA, Irina. Email= dir@mgmteh.ru
		Russian State Hydrometeorological University (RSHU) St. Petersburg	1994	Dr Maria MAMAEVA Vice Rector of International Affairs, E-mail= rector@rshu.ru, mamaeva@rshu.ru
VI	RTC - TURKEY	Turkish State Meteorological Service (TSMS)	1999	Mr PULLA, Haci Murat, E-mail= hmpulla@mgm.gov.tr

- (1) Cg-17 will consider a proposal from Brazil to reconfigure the RTC. The new proposal is a consortium of institutions rather than a single institution. There will be a secretariat for the new virtual centre based in Brasilia
- (2) Cg-17 further consider a proposal from RA II for a new RTC in Korea hosted by KMA
- (3) Cg-17 will consider a proposal from RA II for the Department of Hydrology at the Indian Institute of Technology in Roorkee to be a fourth RTC component

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**Resolution 15 (EC-66)**

**EXECUTIVE COUNCIL CRITERIA FOR THE RECOGNITION AND RECONFIRMATION OF  
WMO REGIONAL TRAINING CENTRES**

THE EXECUTIVE COUNCIL,

**Noting** the *Abridged Final Report with Resolutions of the Sixty-second Session of the Executive Council* (WMO-No. 1059), general summary, paragraph 6.16(c) and its annexes regarding the Executive Council criteria for the recognition and reconfirmation of WMO Regional Training Centres (RTCs),

**Noting further:**

- (1) That the Executive Council criteria are included the *WMO Technical Regulations* (WMO-No. 49, Volume I, Appendix E,
- (2) That RTCs play a key role in assisting Members with no, or limited, national capacity to address their need for quality education and training of personnel,
- (3) That the existing network of RTCs would make a greater contribution to meeting the training needs of WMO Members if all RTCs were fully effective,
- (4) That for institutions having no national accreditation as providers of vocational training, an appropriate standard is provided in ISO 29990:2010 – *Learning services for non-formal education and training – Basic requirements for service providers*,
- (5) That there is a need to clarify the roles and responsibilities of the various partners involved in the nomination, approval, monitoring and support of RTCs to ensure optimum performance,
- (6) That the Secretary-General supports the RTCs in a variety of ways including: (i) seeking to hold WMO supported training events using RTC facilities and capabilities; (ii) supporting the development of the professional and training expertise of RTC staff; (iii) promoting education and training opportunities in RTCs to Members; (iv) facilitating collaboration amongst RTCs and between RTCs and other training partners; and (v) promoting relationships between RTCs and regional associations,
- (7) That a WMO Member can host only one RTC, but an RTC might consist of several components, with each component being required in order to satisfy all the criteria to be recognized or reconfirmed as an RTC,
- (8) That the Executive Council decides on the recognition or reconfirmation of an RTC component, in the light of the recommendation of the regional association and, where appropriate, the advice of the relevant technical commission, and the Executive Council Panel of Experts on Education and Training, and the comments of the Secretary-General,

**Decides:**

- (1) That, at each of their normal sessions, regional associations should make recommendations to the following Executive Council session regarding the status of the RTCs located in their Region;

- (2) To incorporate the new material held as an annex to the present resolution as replacement of the existing Executive Council criteria in the *Technical Regulations*, (WMO-No 49), Volume I, effective 1 January 2015;
- (3) That these criteria will apply to all RTC components considered for recognition or reconfirmation at sessions of regional associations held after 1 January 2016;

**Requests** presidents of regional associations to inform Members hosting RTCs of the new criteria and the effective dates of implementation;

**Requests** Members hosting RTCs to inform the institution(s) comprising the RTC in their country of the revised criteria and effective dates of implementation;

**Requests** the Secretary-General:

- (1) To update the Technical Regulations and authorize the Secretary-General to make editorial changes to the criteria to ensure consistency with the Technical Regulations formatting and style;
- (2) To take account of the new criteria as well as the roles and responsibilities of the various parties involved in monitoring and supporting RTCs when drafting Memorandum of Understanding with the Members hosting RTCs;

**Requests** the Executive Council Panel of Experts on Education and Training to prepare the draft publication Guide for the recognition, reconfirmation and management of Regional Training Centres in time to be discussed at the Seventeenth World Meteorological Congress in May 2015.

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### **Annex to Resolution 15 (EC-66)**

## **EXECUTIVE COUNCIL CRITERIA FOR THE RECOGNITION AND RECONFIRMATION OF WMO REGIONAL TRAINING CENTRES**

### **Section 1**

#### **Addition to Abbreviations**

#### **Regional Training Centre (RTC)**

A national education and training institution, or group of institutions in that country, recognized by the relevant WMO Regional Association as:

- (1) Providing education and training opportunities for WMO Members, particularly NMHS staff;
- (1) Providing advice and assistance on education and training matters to other WMO Members; and
- (3) Promoting education and training opportunities in weather, water and climate for WMO Members.

These activities are undertaken in accordance with WMO regulations and guidelines. An institute supported by multiple countries to provide such services could also be recognised by the relevant regional association as an RTC.



## **Section 2 – Replacement text for WMO-No. 49 Vol. I**

4.5.1 Members should endeavour to provide national facilities, or participate in regional facilities, for the education and training of their personnel.

4.5.2 As not all national training facilities are recognized as regional training facilities, the criteria given in Appendix E to WMO-No. 49 Vol. 1 apply to each institution designated as being part of a WMO Regional Training Centre (RTC). Each such institution is referred to as an RTC component.

4.5.3 In recognizing, reconfirming and managing an RTC component, the regional association, the Permanent Representative of the host country, the Director of an RTC component and Coordinator of an RTC with multiple components take on the following roles and responsibilities. The performance and ongoing status of the institution(s) as an RTC is dependent upon each of the parties carrying out their roles and addressing their responsibilities. Failure of one party to carry out its role could jeopardise any subsequent reconfirmation of RTC status.

### *Regional Association*

- Prioritize education and training needs of the regional association, and provide them to the RTCs at least every four years.
- Keep abreast of the activities and plans of each RTC and its components via the annual report they provide.
- Provide feedback to the RTCs, Members and Secretary-General on whether the RTCs are meeting the needs of the regional association.
- Contribute to quadrennial reviews of the RTCs arranged by the Executive Council for addressing the extent to which the RTCs are meeting the identified education and training needs of the regional association.
- At each session of the regional association recommend RTCs to the WMO Executive Council for consideration for confirmation based on performance against the criteria.
- Promote the activities and use of the RTCs by members of the regional association.
- Seek funding and resource opportunities to support and expand the work of the RTCs in addressing the education and training needs of the regional association.

### *Permanent Representative of the host country*

- Inform the Secretary-General and the regional association of the contact details of, and any changes to, the Coordinator of an RTC and the Director of an RTC component.
- Where the RTC is composed of multiple components, ensure ongoing communication and coordination between the components to maximize education and training opportunities for Members.
- Facilitate coordination between the RTC and the regional association regarding regional education and training needs, funding and resource opportunities.
- Promote the resourcing of the RTC through support from government and other national and international funding bodies.
- Provide annual reports about the RTC's activities in the previous 12 months and its plans for the next 12 months with an outlook for future years to the regional association and the Secretary-General.
- Collaborate with other Permanent Representatives hosting RTCs to promote collaboration between the RTCs.

- Oversee and act as an advocate for the RTC to (a) comply with national and WMO standards and guidelines and (b) keep pace with evolving technological and educational developments.

*Director of an RTC component*

- Monitor and plan the RTC component's activities in accordance with the expressed education and training needs of the regional association.
- For vocational training activities, use processes within the RTC component that are consistent with ISO 29990:2010 (*Learning services for non-formal education and training – Basic requirements for service providers*).
- Monitor and inform the appropriate authorities of the requirements to develop and maintain the professional and training expertise of RTC staff, and the availability and maintenance of adequate training and Information Communications Technology infrastructure.
- Submit annual reports about the RTC component's activities in the previous 12 months and plans for the next 12 months with an outlook for future years to the Permanent Representative.
- Promote the RTC component's services to Members through regular communication and provide Members with easy access to the RTC's education and training programme and contact information.
- Work with other RTC components to (a) coordinate activities and (b) share resources and experiences in addressing regional education and training needs.
- Seek additional funding and resource opportunities to expand the ability of the RTC component to address the regional education and training needs.

*Coordinator of an RTC with multiple components*

- Coordinate the overall activities of the RTC components in accordance with the expressed education and training needs of the regional association.
- Coordinate preparation of annual reports about the RTC's activities in the previous 12 months and plans for the next 12 months with an outlook for future years for submission to the Permanent Representative.
- Coordinate arrangements for (a) promoting and providing information about the RTC's services to Members through regular communication, and (b) the sharing of resources and experience between the RTC components in addressing regional education and training needs.
- Ensure the RTC components collaborate and each is apprised of the other's education and training activities.
- Support the RTC components in seeking additional funding and resource opportunities to expand the ability of the RTC to address the regional education and training needs.

**Section 3 – Replacement for Appendix E to WMO-No. 49 Vol. 1, WMO Technical Regulations**

A Regional Training Centre (RTC) is a national education and training institution, or group of institutions in that country, recognized by the relevant WMO Regional Association(s) as:

- (1) Providing education and training opportunities for WMO Members, particularly NMHS staff;
- (2) Supplying advice and assistance on education and training matters to WMO Members; and

- (3) Promoting education and training opportunities in weather, water and climate for WMO Members.

These activities are undertaken in accordance with WMO regulations and guidelines. An institute supported by multiple countries to provide such services could also be recognised by the relevant regional association as an RTC.

Each institution forming part of an RTC is considered to be an RTC component. To be designated as an RTC component, an institution that undertakes education and training related to weather, water and climate shall satisfy the following criteria:

- (1) An RTC component is established only to meet the expressed requirements of more than half of the Members of the regional association that cannot be met by existing resources;
- (2) An RTC component is designed to meet the requirements of the Region, as expressed in a decision of the regional association as recorded in a resolution or statement in the general summary of the Abridged Report, though it is recognized that some RTC components might also take on a broader international remit;
- (3) The RTC component is located within the particular Region concerned and its location decided by the Executive Council, in the light of the recommendation of the regional association, the advice of the technical commission concerned and the EC Panel of Experts on Education and Training, and the comments of the Secretary-General.

The following criteria shall apply to each RTC component:

#### *Identifying learning needs*

- The RTC component has processes in place to gain information about the education and training needs of the Region.

#### *Designing the learning service*

- The RTC component selects methods of learning that respond to the aims and requirements of the curriculum and learning outcomes, and are appropriate for the learners.
- The RTC component ensures that its courses of instruction and other activities (e.g. delivering/developing e-learning, running off-site activities and providing advice/support) are carried out in a way that is consistent with the standards and guidance material issued by WMO.
- The RTC component provides courses and other resources and activities that address the expressed education and training needs of the Region.

#### *Delivering the learning service*

- The RTC component demonstrates that, during the previous four years, it has made a contribution to meeting the education and training needs identified by the regional association.
- The RTC component delivers training: (a) with competent instructors in terms of their scientific/technical ability and training expertise; and (b) in an environment which is conducive to learning with adequate learning resources, buildings, ICT systems and training facilities.

#### *Assessing learning and evaluating the learning service*

- The RTC component assesses the knowledge and competency of students, documents this information in a fashion suitable for a recognized quality management system, and provides students with a record of the education and training that has been successfully completed.

- The RTC component has processes for measuring the effectiveness and quality of the learning service, including obtaining feedback from learners.

*Administering and managing the learning service*

- The RTC component has adequate arrangements for administration, governance, planning, staffing, continuous professional development, reporting and self-assessment.
  - If the RTC component has no national accreditation as a provider of vocational training, the RTC component can demonstrate that it carries out its training activities in accordance with the requirements of ISO 29990:2010.
  - The RTC component produces an annual report on activities in the previous twelve months, and its plan for the next 12 months with an outlook for future years.
  - The RTC component is: (a) open to students from all countries in the Region and, subject to availability of resources, to interested countries in other Regions; and (b) has appropriate services in place to support international/regional students.
-