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| **World Meteorological Organization**  **Commission for Instruments and Methods of Observation**  **Second Session of the Expert Team on Operational Metrology (ET-OpMet)**  Tokyo, Japan, 27-30 November 2017 | **CIMO/ET-OpMet-2/Doc. 5.2** |
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# Process for becoming a ric: from application to designation

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| **Summary and purpose of document**  This document summarizes information on different processes for designation of several types of WMO regional centres, and proposes a draft of an updated process for designation of a RIC. |

**Action proposed**

The Meeting is invited to discuss the draft and propose a way forward to its finalization. The meeting is also invited to review the Terms of Reference of RIC, as necessary.

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**Appendices:** I [Locations of RICs by WMO Regional Associations](#AppendixI)

II [Terms of Reference of RICs](#AppendixII)

III [Regional Marine Instrument Centres](#AppendixIII)

IV [Regional Climate Centres](#AppendixIV)

V [Regional Training Centres](#AppendixV)

VI [Regional WIGOS Centres](#AppendixVI)

# Process for becoming a ric: from application to designation

1. ***Introduction***

The purpose of this document is to review the mechanisms in place to strengthen Regional Instrument Centres (RICs), to ensure they meet their Terms of Reference, and they support the needs of the Members.

The document describes briefly the history of the RIC concept, the process followed for nominating them, as well as the process followed for the nomination of other types of WMO regional centres. It then proposes to formalize the nomination process, and proposes some possible ways to improve / clarify / homogenize practices relating to the nomination and regular evaluation of the RICs, inspired from the practices followed for other regional centres and the changing environment in which RICs are operating.

1. ***History of RICs***

In the past, many WMO Members were facing very limited resources for employing experts with scientific background or technical experience in the field of meteorological instruments and methods of observation. They also met difficulties when attempting to calibrate or compare their meteorological instruments against recognized standards.

Noting the benefit to Members and the experience gained from establishment of Regional Meteorological Training Centres (RMTCs, later called RTCs) and Regional Radiation Centres (RRCs), the WMO Commission for Instruments and Methods of Observation (CIMO), at its ninth session in 1985, adopted the Recommendation 19 (CIMO-IX) – Establishment of Regional Instrument Centres (RICs). Following functions were assigned to RICs:

* to assist in organizing training seminars and workshops;
* to advice on performance of instruments and availability of guidance material;
* to maintain a library of guidance and scientific instrument-related material;
* to maintain a set of standard instruments;
* to assist Members to calibrate their standard instruments.

CIMO-IX recommended that RICs should be located within or near an existing RMTC, so that both centres gain mutual benefit from expertise and equipment available. It was also proposed that efforts to combine RRCs and RICs should be considered whenever possible.

Since then, all Regional Associations (RAs) have designated RICs in their regions, what resulted with altogether 15 designated RICs ([Appendix I](#AppendixI)) in 2017. Only three WMO Members (Algeria, Argentina and Egypt) host all three above-mentioned types of centres (RIC, RRC and RTC). Three Members (Australia, France and Japan) host RIC and RRC, while five Members (Barbados, China, Costa Rica, Kenya and Philippines) host RIC and RTC.

Updated Terms of References for RICs were proposed by the Fourteenth Session of CIMO (CIMO-XIV Rec. 12), and approved by the Fifty-ninth Session of the WMO Executive Council (EC-LIX Res. 7). The current RIC’s Terms of Reference (ToRs) are available in [Appendix II](#AppendixII).

1. ***Existing process for designation of RIC***

CIMO-IX recommended that suitable criteria similar to those used in the establishment of RMTCs (RTCs) should be applied when establishing RICs.

In practice, although not specified in details and documented, a designation process was implemented. Recently, some Members have shown interest to propose new RICs. All of them were provided with similar guidance on the process to follow for applying as RIC, the main steps of which are being described below.

1. Prior to applying for being a RIC, a candidate laboratory must fulfil the current RIC Terms of Reference.
2. A proposal for RIC should include: a letter of Permanent Representative (PR) of county with WMO committing to offer the services of the RIC to Members of the Region (or beyond), a RIC Reporting form (doc) and a RIC Evaluation Scheme (xls).
3. The proposal for RIC should be submitted to President of Regional Association (RA), with a copy to President of CIMO and the WMO Secretariat.
4. President of CIMO, with the support of the WMO Secretariat, makes arrangements for evaluation of the proposal.
5. President of CIMO, with support of the WMO Secretariat, reports on outcomes of the evaluation to President of RA with a copy to PR of county with WMO.
6. The proposal evaluated as not successful should be improved by a candidate and resubmitted for evaluation.
7. The proposal evaluated as successful is submitted to RA session for endorsement.
8. RA, taking into account Members’ needs and positively evaluated proposal, designates a new RIC.

In accordance with Resolution 4 (Cg-XIV) and Resolution 27 (Cg-17), RA is requested to assess, together with CIMO, existing RICs against established criteria at least every five years.

1. ***Outcome of RIC evaluations and changes in the context in which RICs operate***

The evaluation of the RICs which happened in 2017 have shown the following points that are relevant for the evaluation, nomination and reconfirmation of RICs:

* Only 9 out of the 15 RICs responded and reconfirmed their willingness to act as RICs.
* One RIC informed that it had not received any request for support.

The WMO Secretariat has been approached by several Members interested in proposing new RICs (1 in RA-IV, 1 in RA-V, 2 in RA-VI).

One of the new candidate RICs has offered to also provide services to Members outside of its regional association. The reviewer of another new candidate RIC has recommended that this candidate RIC, which is located close to another regional association should also consider providing services to neighbouring Members in that other regional association.

1. ***Processes followed for designation of other types of regional centres***

The existing process for designation of RIC is rather simple and applicable, but is not formally documented yet. Moreover, by lacking more detailed description it leaves certain room for some misinterpretation of expected responsibilities and activities of RA and CIMO, particularly with regard to evaluation and supervision of RICs.

Aiming at improvement of the existing process, several designation processes for other types of WMO regional centres have been analysed.

Regional Marine Instrument Centres (RMICs) have functions similar to RICs. They are proposed and supervised by the WMO-IOC Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM), but designated by WMO and UNESCO/IOC Executive Councils ([Appendix III](#AppendixIII)).

Regional Climate Centres (RCCs), responsible for regional climate activities, are nominated by RA, in consultation with the WMO Commission for Climatology (CCl). Before submission to the WMO Executive Council for endorsement, a proposal should also be evaluated by the WMO Commission for Basic Systems ([Appendix IV](#AppendixIV)).

Regional training activities are coordinated by Regional Training Centres (RTCs). They are nominated by RA, in consultation with the technical commission concerned and the EC Panel of Experts on Education and Training. RTCs are designated by the WMO Executive Council ([Appendix V](#AppendixV)).

One of five priority areas of WIGOS is establishment of Regional WIGOS Centres (RWCs) that will advance implementation of WIGOS at regional level. Before designation by the Secretary-General of WMO, a candidate for RWC should pass start-up and pilot phases ([Appendix VI](#AppendixVI)).

1. ***Formalizing the RIC designation/supervision/reconfirmation processes***

From available examples it is obvious that having a unified designation process for all types of regional centre is not feasible.

It is proposed to formalize the designation process, as described below, following the practices that have been applied for RICs until now. However, taking into account the practices followed for other regional centres, and noting that some RICs are now offering to serve Members outside of their RA, it could be envisaged to later modify the process towards having instrument centres nominated by EC.

**Draft process for nomination:**

Whenever appropriate, RAs are invited to conduct, in collaboration with CIMO, a survey of Members on regional needs for RIC services, to underpin decisions related to a candidate entity seeking WMO RIC status.

1. Preparation

* A candidate RIC must fulfil the current RIC Terms of Reference.

1. Application

When the necessary preconditions from the preparatory phase are met, an application is developed. It should include:

* A letter of PR of Country with WMO offering services of the candidate RIC to the Members of the Region (or beyond);
* A filled out RIC Evaluation Scheme;
* A filled out RIC Reporting Form.

The application should be sent to the Secretary-General of WMO, with a copy to President of RA and President of CIMO. The WMO Secretariat should ensure that the application is complete.

1. Evaluation

Once the application is complete, the WMO Secretariat makes arrangements, in consultation with President of CIMO, for evaluation of the application. The WMO Secretariat communicates required improvement of the application, if needed, between the evaluation team and the candidate RIC, assuring all the RIC requirements are met. Results of the evaluation process, together with a proposal for acceptance/rejection of the application are submitted, through the President of CIMO, to the President of RA. The Secretary-General of WMO informs PR of country with WMO on the outcomes of evaluation.

1. Designation

Positively evaluated applications are submitted to RA session for endorsement. RA session designates the candidate entity to the WMO Executive Council.

**Draft process for reconfirmation:**

1. Supervision

All designated RICs are obliged to report, using RIC Reporting Form, on their activities annually, and conduct self-assessment, using RIC Evaluation Scheme, every three years. The RIC reporting forms and RIC evaluations scheme should be submitted to the WMO Secretariat, regularly. The WMO Secretariat publishes the RIC reporting forms on the WMO/CIMO website.

The WMO Secretariat ensures, in consultation with President of CIMO, regular evaluation of the RIC reporting forms and RIC evaluation schemes. The results of evaluation are submitted to President of RA to inform them on the compliance of the RICs with their Terms of Reference. If necessary, an audit team might be established to verify RIC’s capabilities and performance on site.

1. Regular reconfirmation of RICs

Based on the outcome of the RICs evaluation ascertaining their performance, the RA are invited to reconfirm their RICs at every session of their association.

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| **Appendix I** |
| ****Location of RICs by WMO Regional Association****  |  |  | | --- | --- | | **RA I** [Alger (Algeria)](https://www.wmo.int/pages/prog/www/IMOP/RICs/RIC_Alger.html) Cairo (Egypt) [Casablanca (Morocco)](https://www.wmo.int/pages/prog/www/IMOP/RICs/RIC_Morocco.html) Nairobi (Kenya) Gaborone (Botswana)  **RA II** [Beijing (China)](https://www.wmo.int/pages/prog/www/IMOP/RICs/RIC_China.html) [Tsukuba (Japan)](https://www.wmo.int/pages/prog/www/IMOP/RICs/RIC_Japan.html)  **RA III** [Buenos Aires (Argentina)](https://www.wmo.int/pages/prog/www/IMOP/RICs/RIC_Argentina.html) | **RA IV** Bridgetown (Barbados) San José (Costa Rica)   **RA V** Manila (Philippines) Melbourne (Australia)  **RA VI** [Toulouse (France)](https://www.wmo.int/pages/prog/www/IMOP/RICs/RIC_France.html) [Bratislava (Slovakia)](https://www.wmo.int/pages/prog/www/IMOP/RICs/RIC_Slovakia2.html) [Ljubljana (Slovenia)](https://www.wmo.int/pages/prog/www/IMOP/RICs/RIC_Slovenia.html) | |

Note: WMO Members hosting RIC, RRC and RTC and highlighted in yellow, those hosting only RIC and RTC in red, while others hosting RIC and RRC are in red.

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**Appendix II**

### ****Terms of Reference****

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| **Regional Instrument Centres with full capabilities and functions**should have the following capabilities to carry out their corresponding functions:  **Capabilities:**  (a) A RIC must have, or have access to, the necessary facilities and laboratory equipment to perform the functions necessary for the calibration of meteorological and related environmental instruments;  (b) A RIC must maintain a set of meteorological standard instruments and establish the traceability of its own measurement standards and measuring instruments to the SI;  (c) A RIC must have qualified managerial and technical staff with necessary experience to fulfil its functions;  (d) A RIC must develop its individual technical procedures for calibration of meteorological and related environmental instruments using calibration equipment employed by the RIC;  (e) A RIC must develop its individual quality assurance procedures;  (f) A RIC must participate in, or organize inter-laboratory comparisons of standard calibration instruments and methods;  (g) A RIC must, as appropriate, utilize the resources and capabilities of the Region to the Region's best interest;  (h) A RIC must, as far as possible, apply international standards applicable for calibration laboratories, such as ISO/IEC 17025;  (i) A recognized authority must assess a RIC, at least every five years, to verify its capabilities and performance;  **Corresponding Functions:**  (j) A RIC must assist Members of the Region in calibrating their national meteorological standards and related environmental monitoring instruments;  (k) A RIC must participate in, or organize, WMO and/or regional instrument intercomparisons, following relevant CIMO recommendations;  (l) According to relevant recommendations on the WMO Quality Management Framework, a RIC must make a positive contribution to Members regarding the quality of measurements;  (m) A RIC must advise Members on enquiries regarding instrument performance, maintenance and the availability of relevant guidance materials;  (n) A RIC must actively participate, or assist, in the organization of regional workshops on meteorological and related environmental instruments;  (o) The RIC must cooperate with other RICs in the standardization of meteorological and related environmental measurements;  (p) A RIC must regularly inform Members and report (2), on an annual basis, to the president of the regional association and to the WMO Secretariat on the services offered to Members and activities carried out.  (2) A Word file available here: [RIC-Reporting Form (.docx)](https://www.wmo.int/pages/prog/www/IMOP/RICs/Reporting_form/Form_for_RIC_Reporting_2017_final.docx), is recommended.    **Regional Instrument Centres with basic capabilities and functions** should have the following capabilities to carry out their corresponding functions:  **Capabilities:**  (a) A RIC must have, or have access to, the necessary facilities and laboratory equipment to perform the functions necessary for the calibration of meteorological and related environmental instruments;  (b) A RIC must maintain a set of meteorological standard instruments (3) and establish the traceability of its own measurement standards and measuring instruments to the SI;  (c) A RIC must have qualified managerial and technical staff with necessary experience to fulfil its functions;  (d) A RIC must develop its individual technical procedures for the calibration of meteorological and related environmental instruments using calibration equipment employed by the RIC;  (e) A RIC must develop its individual quality assurance procedures;  (f) A RIC must participate in, or organize, inter-laboratory comparisons of standard calibration instruments and methods;  (g) A RIC must, when appropriate, utilize the resources and capabilities of the Region to the Region's best interest;  (h) A RIC must, as far as possible, apply international standards applicable for calibration laboratories, such as ISO/IEC 17025;  (i) A recognized authority must assess a RIC, at least every five years, to verify its capabilities and performance;  **Corresponding functions:**  (j) A RIC must assist Members of the Region in calibrating their national meteorological standards and related environmental monitoring instruments according to Capabilities (b);  (k) According to relevant recommendations on WMO Quality Management Framework, a RIC must make a positive contribution to Members regarding quality of measurements;  (l) A RIC must advise Members on enquiries regarding instrument performance, maintenance and the availability of relevant guidance materials;  (m) The RIC must cooperate with other RICs in the standardization of meteorological and related environmental measurements;  (n) A RIC must regularly inform Members and report (2), on an annual basis, to the president of the regional association and to the WMO Secretariat on the services offered to Members and activities carried out.  (2) A Word file available here: [RIC-Reporting Form (.docx)](https://www.wmo.int/pages/prog/www/IMOP/RICs/Reporting_form/Form_for_RIC_Reporting_2017_final.docx), is recommended.  (3) For calibrating one or more of the following variables: temperature, humidity, pressure or others specified by the Region. |

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**APPENDIX III**

**Regional Marine Instrument Centres**

(WMO/TD no. 1564, JCOMM Technical Report No. 53)

The Regional Marine Instrument Centres (RMICs) are expected to facilitate adherence of observational data, metadata, and processed observational products to higher level standards for instruments and methods of observation, by providing (i) facilities for the calibration and maintenance of marine instruments and the monitoring of instrument performance; and (ii) assistance for instrument intercomparisons, as well as appropriate training facilities complementing what the manufacturers are also providing.

According to the Terms of Reference of a WMO-IOC Regional Marine Instrument Centre (RMIC), the mechanism for formal WMO and UNESCO/IOC designation of RMICs implies the following:

* 1. Governance for defining the functions and adoption of an RMIC is proposed by JCOMM and endorsed by the WMO and UNESCO/IOC Executive Councils;
  2. A candidate RMIC is required to produce a statement of compliance, list capabilities of the proposed centre, state the suite of instrument expertise offered, state the formal commitment to voluntarily host the centre, and demonstrate capability to JCOMM.

The approach proposed by JCOMM is the following:

* The RMIC evaluates the extent to which it will be addressing the RMIC requirement in terms of capabilities and functions as described in the RMIC Terms of Reference.
* Once the candidate RMIC believes that it meets the requirements to a sufficient extent, its Director writes to the JCOMM Co-President to formally state the host commitment to voluntarily run and operate the RMIC on behalf of the WMO and IOC, and to request that the RMIC be listed in the list of RMICs through appropriate channels. In doing so, the candidate RMIC also provides for a statement of compliance in terms of RMIC capabilities and corresponding functions as described in the Annex of the RMIC Terms of Reference. The list of variables measured by specific instruments for which expertise will be offered as part of the RMIC activities is also provided. According to the ToR, an RMIC must apply international standards applicable for calibration laboratories, such as ISO/IEC 17025, to the extent possible. The Candidate RMIC will indicate to what extent it will meet these requirements. The letter should be copied to the Permanent Representative of the host country with the WMO, the IOC Action Addressee for the host country, the Secretary General of WMO, the Executive Secretary of IOC, and the President of the WMO Regional Association where the RMIC is located.
* Capability is also demonstrated by means of a training workshop on Marine instrumentation to be organized within 12 months of the request; resources should be committed by the host country for providing financial assistance to participants of developing countries in the region.
* As the JCOMM Observations Coordination Group (OCG) will be the primary advisory body for JCOMM regarding the RMICs, the JCOMM Co-President requests the OCG to evaluate and verify the capabilities of the proposed Centre.
* The OCG evaluates the request and advises whether the candidate RMIC should be endorsed. The OCG may wish to delegate this work to individuals and/or groups acting on its behalf (e.g. one of the component teams, depending on the nature of the proposed centre), but any advice and proposal to JCOMM should still be assessed by and come through the OCG. OCG will also conduct reviews of performance and capabilities at the required intervals.
* If endorsed by the OCG, and depending on timing, the latter makes an informed recommendation to the JCOMM Management Committee (MAN) or the JCOMM Co-Presidents (acting on behalf of the Commission) and invites them to provide further advice to the next JCOMM Session.
* If endorsed by MAN or the JCOMM Co-Presidents as appropriate, a recommendation is passed to the next JCOMM Session, or depending on timing directly to the WMO and IOC Executive Councils.
* If endorsed by the JCOMM Session or the JCOMM Co-Presidents as appropriate, a recommendation is passed to the WMO and IOC Executive Councils for including the candidate in the list of RMICs.
* If the JCOMM recommendations is approved by both the WMO and IOC Executive Councils, the candidate RMIC is listed in the WMO Publication No. 8 (CIMO Guide) and becomes a WMO-IOC RMIC;

It is expected that this process, from submission of the RMIC proposal to the JCOMM Co-President, to formal approval by either of both the WMO/IOC Executive Councils, may take from 6 to 12 months.

These procedures were formally approved by the WMO Congress through Resolution 3.1.4/3 (Cg-XVI), and the IOC Assembly through Resolution XXVI-6.2.

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**APPENDIX IV**

**Regional Climate Centres**

**(WMO/TD-No. 1534, WCAPS-No. 80)**

WMO Regional Climate Centres (RRCs) are centres of excellence that create regional climate products including long-range forecasts in support of regional and national climate activities and thereby strengthen capacity of WMO Members in a given region to deliver better climate services to national users.

**Step 0** Regional Associations (RAs) are strongly encouraged to conduct a survey of Members on regional needs for and capacity to deliver RCC services, to underpin decisions related to candidate entities seeking WMO RCC status. A draft survey template\*, based on the mandatory functions required for RCC designation as well as the associated highly recommended functions, is available through the WMO Secretariat, and can be modified based on regional requirements.

*Note: Ideally, the RA adopts a resolution formally committing itself to the establishment of RCCs, including the operation of a pilot phase, during one of its regular sessions. This resolution should be based on a related survey on regional needs for and capacity to deliver RCC services and should mandate a Working Group, Task Team or an appropriate body reporting to the President of the concerned RA (P/RA) to elaborate a WMO RCC implementation plan based on mutual consensus among the relevant stakeholders.*

**Step 1** The RCC candidate(s) will contact\* P/RA through, and with the endorsement of, the Permanent Representative of the country in which it is situated, expressing its intent to be designated as a WMO RCC, and to begin a pilot phase.

*Notes:*

*(1) It is highly recommended that RCC candidates take part in a pilot phase during which they (i) build their capacity to perform the mandatory RCC functions, (ii) undertake any other functions of high priority in the region, and (iii) prepare to demonstrate that they meet the requirements laid down in the Manual on the GDPFS. Pilot programmes will be organized through the RAs, at the discretion of the RA Members. The duration of a pilot phase will be determined as needed on a case-by case basis. The official title of WMO RCC, however, is only granted following the complete WMO designation process.*

*(2) If a group of centres would like to collectively fulfil all the required functions of a WMO RCC (termed as WMO RCC-Network), P/RA might mandate any relevant coordination group of the RA dealing with climate related matters to provide the required coordinating assistance throughout the entire designation process.*

**Step 2** P/RA will inform P/CCl, with copy to P/CBS and the SG, of the intent expressed by the candidate(s). In consultation with the CCl, the appropriate coordination group of the RA dealing with climate related matters and WMO Secretariat, P/RA will consider the criteria for designation (as per the Manual on the GDPFS, Vol 1, Global Aspects), respective regional requirements and any existing pilot or existing WMO RCC(s) in the region. If needed, P/RA will provide information on regional needs and fulfilment of WMO designation criteria.

**Step 3** The candidate(s) will work in contact with the relevant coordination group of the RA dealing with climate related matters, the CCl, other experts nominated by the P/RA, other existing WMO RCCs in the region if any, WMO Secretariat and possibly the existing WMO GPCs during its preparations for designation.

**Step 4** Upon successful conduct of the pilot phase and based on the respective positive assessment of the mandated (climate) coordination group of the RA, P/RA will contact the SG with a request for formal designation of the candidate(s) as WMO RCC, providing information/documentation on the process followed, and an assessment of the capability to meet requirements of the designation criteria.

**Step 5** WMO SG will arrange for appropriate consultations with P/CCl and will take up any concerns with P/RA.

**Step 6** When advised by P/CCl on satisfactory compliance with the designation criteria, SG will forward the request for formal designation to P/CBS for further action with copy to P/CCl and P/RA for information.

**Step 7** CBS, through its relevant bodies, will review the submission and will discuss any concern with the RA and CCl through WMO Secretariat. The proposal may need to be resubmitted with all required clarifications addressed.

**Step 8** When appropriate, the candidate(s) will be invited by CBS to present the proposal (in the form of an amendment to the Manual on the GDPFS) at one of its sessions for decision. The presentation of the proposal shall be complemented by the respective demonstration of capabilities, through documentation as well as oral presentation. WMO Secretariat will assist in the development of the proposed amendment to the Manual on the GDPFS.

**Step 9** With the approval of the Members of CBS, the amendment to the Manual will be put up to WMO Congress or to WMO Executive Council for approval.

**Step 10** With this final WMO approval, the Manual on the GDPFS will be revised and the RA and the candidate(s) will be advised in writing on the designation of the respective WMO RCC or WMO RCC-Network.

\*relevant templates are available at: http://www.wmo.int/pages/prog/wcp/wcasp/RCCs.html.

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**APPENDIX V**

**Regional Training Centres**

(Excerpts from Part VI, 1.5 and Appendix B to WMO-No. 49 Vol 1, WMO Technical Regulations)

**1.5. Meteorological education and training facilities**

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

1.5.2 As not all national training facilities are recognized as regional training facilities, the criteria given in Appendix B to this volume apply to each institution designated as being part of a WMO Regional Training Centre (RTC). Each of those institutions is referred to as an RTC component.

Note: In recognizing, reconfirming and managing an RTC component, the regional association, the Permanent Representative of the host country, the Director of the RTC component and the Coordinator of the RTC with multiple components take shared responsibility for the performance and ongoing status of the institution(s) as an RTC. Guidance on the roles and responsibilities of each of the parties is provided in Guide to the Management and Operation of WMO Regional Training Centres and Other Training Institutions (in preparation).

**Regional association**

• Prioritize education and training needs of the regional association and communicate them to the RTCs at least every four years;

• Keep abreast of the activities and plans of each RTC and its components through the annual report they provide;

• Provide RTCs, Members and the Secretary-General with feedback on whether the RTCs are meeting the needs of the regional association;

• Contribute to quadrennial reviews of the RTCs arranged by the Executive Council in order to address 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 possible confirmation, based on performance against the established 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 the Coordinator of an RTC and the Director of an RTC component and of any changes thereto;

• Where the RTC is made up 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 concerned 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 the regional association and the Secretary-General with 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;

• 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 activities of the RTC component 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 the skills and capabilities of the RTC staff informing the appropriate authorities of the requirements to develop and maintain the professional and training expertise of staff and to ensure the availability and maintenance of an adequate infrastructure for training and for information and communications technology;

• Submit to the Permanent Representative annual reports about the activities of the RTC component in the previous 12 months and plans for the next 12 months with an outlook for future years;

• Inform Members, through regular communication, of the benefits of the services offered by the RTC component and provide them 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 experience 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 among the RTC components in addressing regional education and training needs;

• Ensure that the RTC components collaborate and that 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.

**APPENDIX B. CRITERIA FOR THE DESIGNATION OF WMO REGIONAL TRAINING CENTRES**

A Regional Training Centre (RTC) is a national education and training institution, or group of institutions, recognized by Congress or the Executive Council (following recommendation of the relevant WMO regional association(s) as:

* 1. Providing education and training opportunities for WMO Members in the Region, particularly staff of National Meteorological and Hydrological Services (NMHSs);
  2. Providing advice and assistance on education and training to WMO Members;
  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 several Members to provide such services could also be recommended by the relevant regional association as an RTC.

Each institution forming part of an RTC is considered to be an RTC component.

When a Member proposes an institution or a group of institutions to the relevant regional association for recommendation as an RTC, the proposal shall meet the following criteria:

* 1. An RTC or its 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 or its component is designed to meet the requirements of the Region, as expressed in a decision of the regional association and recorded in a resolution or statement in the general summary of the abridged final report of the regional association session. However, it is recognized that some RTCs or their components might also take on a broader international remit;
  3. The RTC is located within the Region concerned, its location decided by the Executive Council in the light of the recommendation of the regional association, 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.

A Member hosting the institution to be designated as an RTC component shall ensure it has the human and financial resources and facilities to satisfy the following:

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, such as delivering or developing e-learning, running off-site activities and providing advice or 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 contributed 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 that is conducive to learning, with adequate learning resources, buildings, information and communication technology 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 stakeholders.

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, it 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 carried out in the previous twelve months, and on 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.

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**APPENDIX VI**

**Regional WIGOS Centres**

(Excerpt from WMO-NO. 1164))

**Decision 30 (EC-69)**

**GUIDANCE ON ESTABLISHING REGIONAL WMO INTEGRATED GLOBAL OBSERVING SYSTEM CENTRES IN PILOT PHASE**

THE EXECUTIVE COUNCIL,

**Recalls** Resolution 2 (EC-68) - Plan for the WMO Integrated Global Observing System (WIGOS) pre-operational phase 2016-2019, and Decision 30 (EC-68) - Regional WMO Integrated Global Observing System Centres;

**Having examined** the Guidance developed by the Intercommission Coordination Group on WIGOS on establishing a WMO Regional WIGOS Centre in pilot phase,

**Decides** to endorse the Guidance on establishing a WMO Regional WIGOS Centre in pilot phase (thereafter referred to as “RWC guidance”) as provided in the Annex to this Decision as technical guidance to regional associations for establishing such a RWC and its implementation arrangements;

**Requests** regional associations to support the establishment of RWC(s) in their Region;

**Urges Members**:

1. To familiarize themselves with the RWC guidance;
2. To actively participate in the implementation of RWCs in their Region, in collaboration with other RWCs where applicable;

**Requests** the Secretary-General to provide the necessary assistance and Secretariat support for the establishment of RWCs in the WMO Regions;

**Authorizes** presidents of regional associations to approve the pilot RWC(s) with applications from Members;

**Invites** the regional partner organizations to participate in establishing RWC(s) in the Region.

## Annex to Decision 30 (EC-69)

**ESTABLISHING REGIONAL WMO INTEGRATED GLOBAL OBSERVING SYSTEM CENTRES IN PILOT PHASE**

WORLD METEOROLOGICAL ORGANIZATION

**WMO INTEGRATED GLOBAL OBSERVING SYSTEM (WIGOS)**

# ESTABLISHING A REGIONAL WIGOS CENTRE IN PILOT MODE

**DURING THE WIGOS PRE-OPERATIONAL PHASE 2016-2019**

*(Technical Guidance)*



**EXECUTIVE SUMMARY**

According to the decision of the Seventeenth World Meteorological Congress (Cg-17, 2015), the concept development and initial establishment of Regional WIGOS Centres (RWCs) is one of five priority areas for the WIGOS pre-operational phase 2016-2019. The RWCs will play a critical role in advancing the implementation of WIGOS within their Region (or subregion) and will be providing regional coordination and technical support to Members.

RWCs will be working closely with data providers to facilitate primarily: (i) regional WIGOS metadata management (OSCAR/Surface); and (ii) regional WIGOS performance monitoring and incident management (WIGOS Data Quality Monitoring System).

This document provides: (i) the justification of the Project; (ii) its alignment with WMO strategic priorities and Member’s priorities; (iii) compliance with WMO regulations and rules;

1. description of the Project; and (v) its implementation arrangements.

**CONTENT**

* 1. INTRODUCTION
  2. RATIONALE FOR THE PROJECT AND ITS RELEVANCE TO WMO
  3. PROJECT DESCRIPTION
  4. RESOURCING
  5. IMPLEMENTATION STAGES
  6. RISK ASSESSMENT/MANAGEMENT
  7. GOVERNANCE, MANAGEMENT AND EXECUTION
  8. MONITORING AND EVALUATION

ANNEX 1 CONCEPT NOTE ON ESTABLISHMENT OF WMO REGIONAL WIGOS CENTRES ANNEX 2 APPLICATION TEMPLATE FOR A RWC CANDIDATE

1. **INTRODUCTION**

This document describes how to establish a Regional WIGOS Centre in Pilot mode to support and coordinate the WIGOS implementation activities in a given WMO Region or subregion.

1. **RATIONALE**

Congress-17 decided that WIGOS, supported by WIS, is one of the WMO strategic priorities for 2016-2019. Subsequently, the concept development and initial establishment of Regional WIGOS Centres (RWCs) was identified as one of five priority areas for the WIGOS pre- operational phase 2016-2019.

EC-68 recognized the critical role that Regional WIGOS Centres (RWCs) will play in advancing the implementation of WIGOS at the regional level by providing regional coordination, technical guidance, assistance and advice to Members and regional associations in accordance with *Technical Regulations* (WMO-No. 49), Volume I – General Standards and Recommended Practices, and its Annex VIII, *Manual on the WMO Integrated Global Observing System*

(WMO-No. 1160).

The WMO Regions differ in terms of WIGOS readiness, economic strength, cultural and linguistic characteristics, and these differences need to be taken into account in establishing and operating their respective RWCs.

EC-68 endorsed the “Concept Note on establishment of WMO Regional WIGOS Centres” (thereafter referred to as “RWC Concept”, and included as Annex 1 to this document) as general guidance to regional associations outlining the basic principles and providing a clear specification of mandatory and optional functions.

1. **PROJECT DESCRIPTION**
   1. **Objectives**

Expected results of establishing a RWC in pilot phase include an assessment of the feasibility of subsequently establishing a fully operational RWC, and, based on the final project evaluation, a set of recommendations on key aspects of such a centre, including institutional set-up, concept of operations and strategy for long-term sustainability.

* 1. **Terms of Reference**

The Terms of Reference (to include the main WIGOS functionalities offered by the Centre) must be defined; as a minimum, they must include the mandatory functions as specified in the RWC Concept (see Annex 1); however, depending on available resources and the willingness of the Member with primary responsibility for the RWC, one or more optional functions may be considered, e.g. assistance with regional and national observing network management, calibration support, education and training.

* 1. **Infrastructure**
     1. **Basic infrastructure**

In order to ensure a rapid start-up for the Centre, it would be desirable for the host country to make available to the Centre, either permanently or on a temporary basis, adequate, secure, fully-equipped, and easily accessible premises. These premises must be supplied with water and electricity and be equipped with a reliable telecommunications system.

* + 1. **Technical infrastructure**

The Centre must have adequate IT facilities and infrastructure (work stations, high speed Internet access, data processing and storage capabilities) needed for RWC mandatory functions.

1. **RESOURCING**

There is no funding for RWC operations in the regular WMO budget. The responsibility for funding the establishment and operations of an RWC thus rests with the Member(s) involved. Suitable resources for establishment and sustained operations of the Centre must be identified. The amount and nature of resources required will depend on the intended functionalities of the Centre.

In order to ensure the long-term sustainability of the RWC, the Pilot phase should include the development of a long-term funding strategy based on effective resource mobilization where appropriate.

* 1. **Human resources**

The necessary human resources (management staff, scientific staff, technical staff and administrative staff) should be specified in terms of competencies and number of staff (expressed in full-time equivalents) allocated to the RWC development and operations. The staff may be permanent NMHS employees or may be temporarily hired project staff. Where appropriate, some of the responsibilities of the RWC may be fulfilled through secondment of staff from other WMO Members in the Region.

* 1. **Funding resources**

The responsibility for funding the RWC operations rests with the Member(s) involved, and it is expected that efficiencies facilitated by the RWC in designing, procuring and operating the observing systems will offset most of these costs. Nonetheless, there will be less well-resourced Members that will have difficulties in identifying the required resources at the national level. In these cases the RWC partner(s) will have to develop effective resource mobilization strategies with a view to deriving maximum benefit from the various multilateral funding mechanisms, and regional development institutions, etc. The WMO Secretariat is prepared to support all stages of such resource mobilization efforts.

1. **IMPLEMENTATION STAGES**

To be designated as a WMO RWC, after the launch period (start-up phase), there must be a successful pilot phase, after which the Centre may enter an operational phase.

* 1. **Start-up phase**

The RWC candidate will contact the president of the respective WMO Regional Association (P/RA) in writing through, and with the endorsement of, the Permanent Representative(s) of the Member(s) with WMO in which the RWC candidate is situated, expressing its intent to be designated as a WMO RWC in Pilot Mode. The Application template for a RWC candidate is reproduced in Annex 2.

P/RA, in close collaboration with the management group and related expert group of the RA, Intercommission Coordination Group on WIGOS (ICG-WIGOS), and the WIGOS Project Office in the WMO Secretariat, will consider the proposal. The candidate(s) will follow recommendations and guidance for further elaboration of the proposal.

During this phase, which may last several months, the framework for Pilot phase operations is created, the infrastructure and human resources are made available, the functionalities assigned to the Centre are specified and clarified, partners are mobilized and consortia of technical, scientific and financial partners, if needed, are developed.

* 1. **Pilot phase**

The aims of this phase are: (i) to begin helping a group of Members within the domain1 of the RWC to benefit from WIGOS; and (ii) to prepare the solid basis for a transition to a subsequent Operational phase, depending on final assessment. The functionality and services provided during this phase are evaluated on a regular basis by the RWC Project Manager2, with methods readjusted as necessary.

In the beginning of the Pilot phase, the RWC Project Manager will ensure that the required preparatory work is conducted and implementation arrangements are put in place according to the Project document.

At the end of the Pilot phase, the RWC Project Manager will prepare and submit a Project Final Report to P/RA, evaluating the performance of the Project, sustainability of results and documenting the experience. For this purpose, the RWC Project Manager will:

1. Assess the Centre performance in terms of achievements as compared to the targets, as well as their sustainability; the assistance and benefits received by Members of the (sub)Region should be documented;
2. Assess the Project financial management including allocation of funds (final status as compared to the initial budget);
3. Draw lessons from the overall project management experience including stakeholders engagement, monitoring and reporting system to feed into subsequent implementation project;
4. Describe the measures put in place to ensure continuity of the Centre in operational mode, as appropriate.

Upon successful completion of the Pilot phase and based on the respective positive assessment of the management group of the RA, P/RA will contact the Secretary-General of WMO with a request for formal designation of the candidate as WMO RWC, providing documentation on the assessment of the capability to meet requirements of the designation criteria.

1 Geographical/economical/linguistic region for which the RWC functionalities are offered

2 RWC Project Manager is the expert proposed by the RWC candidate

1. **RISK ASSESSMENT/MANAGEMENT**

The main risks, how they might affect the RWC operations and WIGOS as a whole, and possible mitigation measures should be considered. The level of risk should be assessed (low, medium, high) for each type of risk. Typical risk factors include:

1. Political/institutional risks, such as low political commitment to the Project, interest from stakeholders, change in government, etc.;
2. Financial/resources risks, e.g. inadequacy of the financial management system, availability of project resources;
3. Human resources/capacity risks, e.g. skills and/or expertize availability; adequacy between existing and required experience and specialized skills.

The Risk Management Plan will be developed for each implementation activity/sub project, including risk mitigation.

1. **GOVERNANCE, MANAGEMENT AND EXECUTION**

The Project management (i.e. RWC Project Manager, Project Executive) should work closely with the P/RA, management group and relevant WIGOS working body of the RA, WMO Secretariat (OBS Department), and other WMO related entities.

1. **MONITORING AND EVALUATION**

The RWC Project Manager has the routine responsibility for management, coordination, monitoring and evaluating the Project, and for reporting to Executive Management of the organization under which the RWC is framed.

He is also responsible for updating the procedures and practices if and when needed. The monitoring and evaluation process should demonstrate the progress achieved as well as identify risks, encountered problems and difficulties, and the need for adjustment of the Project accordingly.

**ANNEX 1**

**Annex to Decision 30 (EC-68)**

**CONCEPT NOTE ON ESTABLISHMENT OF WMO REGIONAL WIGOS CENTRES**

(See Executive Council, Sixty-eighth session, Geneva, 15–24 June 2016, Abridged final report with resolutions and decisions (WMO-No. 1168))

**ANNEX 2**

**APPLICATION TEMPLATE FOR A RWC CANDIDATE**

An agency or organization that wishes to be considered for WMO designation as a RWC will make this known to the president of the respective WMO Regional Association in writing through, and with the endorsement of, the Permanent Representative with WMO of the country in which the candidate RWC is situated.

The written communication should comprise a ***letter of intent*** that clearly states the candidate’s willingness and ability to provide RWC functionalities with an ***annex*** providing the following information (applies also to individual members of a virtual RWC which will collectively fulfil the RWC functions):

1. Name of the country, WMO Regional Association, name of the organization and full address;
2. Affiliation (sponsors, stakeholders, partnering agencies, etc.) at the global, regional and national levels;
3. Mandate of the Centre relevant to WIGOS activities (mandatory and optional functions) ;
4. Liaison with relevant existing WMO Centres, particularly regional centres;
5. Website relevant to the Centre with WIGOS relevant activities;
6. Current operational activities relevant to the RWC application (structured along the mandatory and optional RWC functions);
7. Staff deployment/human resources relevant to RWC-related activities (management, scientific, technical and administrative categories);
8. Description of current facilities, the necessary basics, physical infrastructure and communication systems relevant to RWC mandatory and optional functions;
9. Funding strategy to ensure the long-term sustainability of the RWC;
10. Geographical/economical/linguistic region for which the RWC functionalities are offered;
11. Type of RWC (a single multifunctional RWC or as a virtual/distributed RWC (RWC- network) provided by a group of Members);
12. Proposed RWC Project Manager (name, position, contacts; CV);
13. Stakeholders engaged in the current and planned RWC operations;
14. Relevant National Focal point(s);
15. Project proposal:
    * Prepared by (name, position);
    * Approved by (name, position);
    * Project Executive (name, position);
    * RWC Terms of Reference;
    * Implementation period;
    * Project budget;
    * Funding sources;
    * List of activities, deliverables, outcomes, milestones, resources required and associated risks;
    * Additional documentation demonstrating the experience and the capacity of the candidate organization to fulfil the described functions;
16. Additional information as appropriate.

**References:**

1. Seventeenth World Meteorological Congress: Abridged final report with resolutions (WMO-No. 1157; <http://library.wmo.int/)>
2. Executive Council - Sixty-eighth session: Abridged final report with resolutions (Resolution 2 and Decision 30; WMO-No. 1168; <http://library.wmo.int/)>
3. Project Management Guidelines and Handbook: Part I – Project Management Guidelines, Part II – Project Management Handbook (<http://library.wmo.int/pmb_ged/2016_wmo_project-management-guidelines-> handbook\_en.pdf)

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