



## Form for Regular Reporting of Regional Instrument Centres

(please expand the cells as required to properly reflect your activities)

Terms of Reference for Regional Instrument Centres (RICs) are available under:  
<https://www.wmo.int/pages/prog/www/IMOP/instrument-reg-centres.html>

Regional instrument Centre - General Information	
Name of RIC	RIC Tsukuba
RIC's website	<a href="http://www.jma.go.jp/jma/jma-eng/jma-center/ric/RIC_HP.html">http://www.jma.go.jp/jma/jma-eng/jma-center/ric/RIC_HP.html</a>
Institute hosting RIC	Japan Meteorological Agency
City	Tsukuba
Country	Japan
Regional Association	Region II

Contact Person for the Regional Instrument Centre	
Courtesy Title	Mr
First name	Kouichi
Family name	NAKASHIMA
Street and number	1-2 Nagamine
Postal code	305-0052
City	Tsukuba
State/Province	Ibaraki
Country	Japan
Tel. number(s)	+81 298 51 4123
Fax number(s)	+81 298 51 1670
Email(s)	kouichi.nakashima@met.kishou.go.jp ric-tsukuba@met.kishou.go.jp
Has contact person changed since your last	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

report?	
If yes, provide the previous contact person?	

<b>RIC's staff</b>
(Please specify the number of your managerial and technical staff)
<ul style="list-style-type: none"> <li>• Managerial: 3</li> <li>• Technical: 5</li> </ul>

<b>Interlaboratory Comparisons</b>
<p><b>Have you organized any interlaboratory comparison in <u>the last calendar year</u>?</b> (If yes, please specify the event(s) and final reports, including their web links, if available):</p> <ul style="list-style-type: none"> <li>• No.</li> </ul>
<p><b>Have you participated in any interlaboratory comparison in <u>the last calendar year</u>?</b> (If yes, please specify the event(s) and the report(s), including their web links, if available):</p> <ul style="list-style-type: none"> <li>• No.</li> </ul>

<b>Applied International Standards/Norms</b>
<p><b>Is your RIC accredited according to ISO/IEC 17025?</b></p> <p><input checked="" type="checkbox"/> <b>Yes</b> (please, specify the following):</p> <p><b>Accreditation/certification body:</b> National Institute of Technology and Evaluation (Japan)</p> <p><b>Date of the last audit:</b> 29-Aug-2017</p> <p><b>Link to the Certificate of Accreditation:</b> <a href="https://www.nite.go.jp/en/iajapan/jcss/labsearch/pdf/d0295m-e.pdf">https://www.nite.go.jp/en/iajapan/jcss/labsearch/pdf/d0295m-e.pdf</a></p> <p><input type="checkbox"/> <b>No</b> (please, indicate if you have already applied any quality management system, and provide a reason for a lack of accreditation, if possible)</p> <p>-</p>

<b>Assessment by a recognized authority other than accreditation body</b>
<p><b>Was your RIC assessed by a recognized authority other than an accreditation body?</b> (e.g. certification body, NMI, another RIC)</p> <p><input type="checkbox"/> <b>Yes</b> (please, specify the following):</p> <p><b>Name of a recognized authority:</b></p> <p><b>Date of the last assessment:</b></p> <p><b>Standard against which the assessment was carried out:</b></p>

**No** (please, explain why, if possible)

- RIC Tsukuba is accredited by ISO/IEC 17025.

#### WMO/CIMO [Evaluation Scheme \(excel file\)](#)

**Have you filled out the WMO/CIMO Evaluation Scheme (excel) and submitted it to the WMO Secretariat?**

**Yes** (please, specify when you submitted the most recent one): 11 May 2017.

**No** (please, explain why, if possible)

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#### Calibrations of the Members' Instruments

**Which calibration services, were provided by your RIC for other Members/countries in the last calendar year? (Please specify)**

Year	Type of instruments	Number of calibrated instruments	WMO Member/Country
2017	Anemometer	1	Philippines

#### Capacity Development and Training Activities

**Which capacity development/training activities have been carried out by your RIC within the Region in the last calendar year? (please specify events, WMO Members that participated and the number of participants)**

- Technical training for Department of Meteorology, Sri Lanka (DOM)

In January 2017, two RIC Tsukuba experts were despatched to DOM to provide on-site training in meteorological instrument calibration.

<http://www.jma.go.jp/jma/jma-eng/jma-center/ric/News%20Release/DOM201701/DOM201701.html>

In June 2017, two RIC Tsukuba experts were despatched to DOM to provide on-site training in meteorological instrument calibration and discuss the establishment of a traceability system. This followed the initial course of on-site

training held at DOM in January 2017.

<http://www.jma.go.jp/jma/jma-eng/jma-center/ric/News%20Release/DOM201706/DOM201706.html>

**Has your RIC provided services on capacity development and training outside the Region in the last calendar year?** (If yes, please specify to whom and when)

- No.
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**Which guidance documents, standard procedures or other publications were developed and published by your RIC in the last calendar year?** (Please, include full reference and web-link if available)

- No.
- 

### Utilization of Resources and Capabilities of the Region

(Have you collaborated with other RICs, RRCs, RTCs, NMHSs or NMIs on standardization of meteorological and other related environmental measurements in the last calendar year? If yes, please specify when and how)

- RIC Manila staff paid a visit to RIC Tsukuba in January 2017 for discussions.

### Recent Changes in Circumstance

**Have there been any changes in your RIC's capabilities in the last calendar year?** (If so, please specify)

- No.
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**Have there been any significant changes in your RIC's infrastructure in the last calendar year?** (If so, please specify)

- No.
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**Have there been any changes in your staffing in the last calendar year?** (If so, please specify)

- Director of RIC changed in April 2017.
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### Future Plans and any other relevant information

(Please provide plans/projects of your RIC for this calendar year, and add any other information you find relevant about your RIC)

- <Future plan>

Intercomparison is planned in the field of temperature, humidity and pressure in RA-II, V and VI in 2018.

The participants are RIC Beijing (RA II), RIC Tsukuba (RA II), RIC Manila (RA V), RIC Melbourne (RA V), RIC Ljubljana (RA VI) and University of Ljubljana, Faculty of Electrical Engineering (RA VI).

- <Other relevant information>

Second session of the WMO/CIMO Expert Team on Operational Metrology (ET-OpMet) (Tokyo, Japan, 27 - 30 November 2017).

[http://www.jma.go.jp/jma/en/photogallery/session\\_of\\_ET-OpMet\\_2017.html](http://www.jma.go.jp/jma/en/photogallery/session_of_ET-OpMet_2017.html)

- <Other relevant information>

JMA/WMO Workshop on Quality Management of Surface Observations - RA II WIGOS Project (Tokyo, Japan, 19-23 March 2018)

The documents and presentations on the workshop are available at:

[http://www.jma.go.jp/jma/en/Activities/qmws\\_2018/qmws\\_2018.html](http://www.jma.go.jp/jma/en/Activities/qmws_2018/qmws_2018.html)

**Are you in agreement with publishing this reporting form on WMO/CIMO website?**

Yes

No

30 March 2018

Date

Hideo Tada

Name and Signature of Person in Charge of RIC

## ANNEX

(Following information will be a part of your RIC's website as published on the [WMO/CIMO website](#))

<b>Specific information on Instrument Calibration Capabilities</b>					
<b>Temperature:</b>					
Instrument Undergoing Calibration	Calibration Range	Reference standard, Equipment	Calibration and Measurement Capability (CMC)*	Traceability of Reference equipment	
				Last standard calibration date	Calibration body
Contact Type Thermometer	-40~50 °C	Platinum resistance thermometer NSR-160 (Netsushin)	From -40 °C to less than 0 °C : 45 mK, 0 °C : 13 mK, from more than 0 °C up to 50 °C : 36 mK	18 August 2017	Tanaka Kikinzoku Kogyo K.K. Isehara Works Thermometer Calibration Laboratory
		Triple point of water cell 5901C-G (Hart Scientific)	(Level of confidence approximately 95 %)	7 August 2017	Tanaka Kikinzoku Kogyo K.K. Isehara Works Thermometer Calibration Laboratory
Status of accreditation (date of the latest accreditation): 29 August 2017 Link to the accreditation certificate: <a href="https://www.nite.go.jp/en/iajapan/jcss/labsearch/pdf/d0295m-e.pdf">https://www.nite.go.jp/en/iajapan/jcss/labsearch/pdf/d0295m-e.pdf</a> Accreditation body: National Institute of Technology and Evaluation (Japan) ( <a href="http://www.nite.go.jp/en/iajapan/information/index.html">http://www.nite.go.jp/en/iajapan/information/index.html</a> )					
<b>Relative Humidity:</b>					
Instrument Undergoing Calibration	Calibration Range	Reference standard, Equipment	Calibration and Measurement Capability (CMC)*	Traceability of Reference equipment	
				Last standard calibration date	Calibration body
Dew point hygrometer	Dew point From -5~0 °C	Chilled-mirror dewpoint hygrometer (display) DewStar S-1M-0	Dew point 0.12 °C (Level of confidence approximately 95 %)	14 February 2018	National Metrology Institute of Japan

	Dew point From 0~25 °C	(sensor) DewStar S-2S-0K (Shinyei technology, Japan)	Dew point 0.09 °C (Level of confidence approximately 95 %)		
Electronic hygrometer	Relative humidity from 20~30 % at calibration temperature 20~26 °C		Relative humidity 0.8 % (Level of confidence approximately 95 %)		
	Relative humidity from 30~95 % at calibration temperature 20~26 °C		Relative humidity 1.7 % (Level of confidence approximately 95 %)		
	Relative humidity from 20~30 % at calibration temperature 20~26 °C(*)		Relative humidity 0.6 % (Level of confidence approximately 95 %)		
	Relative humidity from 30~95 % at calibration temperature 20~26 °C(*)		Relative humidity 1.4 % (Level of confidence approximately 95 %)		

(\*)Calibration which regards a dew points a dew point hygrometer as the hygrometer of a relative humidity indication.

Status of accreditation (date of the latest accreditation): 29 August 2017  
 Link to the accreditation certificate:  
<https://www.nite.go.jp/en/iajapan/jcss/labsearch/pdf/d0295m-e.pdf>  
 Accreditation body: National Institute of Technology and Evaluation (Japan)  
 (<http://www.nite.go.jp/en/iajapan/information/index.html>)

**Atmospheric pressure:**

Instrument Undergoing Calibration	Calibration Range	Reference standard, Equipment	Calibration and Measurement Capability (CMC)*	Traceability of Reference equipment	
				Last standard calibration date	Calibration body

Digital Pressure Gauge	50~1150 hPa	Pressure balance AV-02 (Futaba sokki)	The larger one of the two 0.0085% or 7.5 Pa (Level of confidence approximately 95 %)	24 September 2015	National Metrology Institute of Japan
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Status of accreditation (date of the latest accreditation): 29 August 2017  
 Link to the accreditation certificate: <https://www.nite.go.jp/en/iajapan/jcss/labsearch/pdf/d0295m-e.pdf>  
 Accreditation body: National Institute of Technology and Evaluation (Japan)  
 (<http://www.nite.go.jp/en/iajapan/information/index.html>)

**Wind:**

Instrument Undergoing Calibration	Calibration Range	Reference standard, Equipment	Calibration and Measurement Capability (CMC)*	Traceability of Reference equipment	
				Last standard calibration date	Calibration body
Anemometer	0.5~90 m/s	0~20m/s Ultrasonic anemometer DA-700 (Sonic, Japan)	N/A	1 December 2017	National Metrology Institute of Japan
		20~90m/s Pitot tube JB151254 (Tsukuba Rikaseiki, Japan), Differential pressure gauge MT210 (2sets) (YOKOGAWA, Japan)		5 March 2018	

Status of accreditation (date of the latest accreditation): No  
 Link to the accreditation certificate:  
 Accreditation body:

**Precipitation:**

Instrument Undergoing Calibration	Calibration Range	Reference Standard, Equipment	Calibration and Measurement Capability (CMC)*	Traceability of Reference Equipment	
				Last Standard Calibration Date	Calibration Body




Status of accreditation (date of the latest accreditation):  
 Link to the accreditation certificate:  
 Accreditation body:

**Other** (please specify if applicable):

Instrument Undergoing Calibration	Calibration Range	Reference Standard, Equipment	Calibration and Measurement Capability (CMC)*	Traceability of Reference Equipment	
				Last Standard Calibration Date	Calibration Body

Status of accreditation (date of the latest accreditation):  
 Link to the accreditation certificate:  
 Accreditation body:

\* A **CMC (calibration and measurement capability)** is the smallest uncertainty (k=2) of measurement that can be expected to be achieved by the RIC during a calibration under normal conditions. This CMC is evaluated by the RIC itself and described in the scope of accreditation of the RIC, if available.