WMO OMM

World Meteorological Organization
Organisation météorologique mondiale
Organización Meteorológica Mundial
Всемирная метеорологическая организация
المنظمة العالمية للأرصاد الجوية
世界气象组织

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

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-Beijing
RIC's website	None
Institute hosting RIC	Meteorological Observation Centre of CMA
City	Beijing
Country	China
Regional Association	RA-II

Contact Person for the Regional Instrument Centre		
Courtesy Title	Deputy of National Centre for Meteorological Metrology, China	
First name	Xuejing	
Family name	Nan	
Street and number	No. 46, Zhongguancun Nandajie	
Postal code	100081	
City	Beijing	
State/Province	Beijing	
Country	China	
Tel. number(s)	8610-68400493	
Fax number(s)	8610-68409767	
Email(s)	576809156@qq.com	
Has contact person changed since 2013?	☒ Yes	☐ No
If yes, provide the previous contact person?	Ms LING BING	

RIC's staff

(Please specify the number of your managerial and technical staff)

- Managerial: 4
- Technical:17

Interlaboratory Comparisons

Have you organized any interlaboratory comparison? (If yes, please specify the event(s) and final reports, including their web links, if available)**:**

- No
-

Have you participated in any interlaboratory comparison? (If yes, please specify the event(s) and the report(s), including their web links, if available)**:**

- 12th WMO International Pyrheliometer Comparison IPC-XII (2015.9.28-2015.10.16) http://pmodwrc.ch/pdf/ipcxii-report.pdf
- Regional Pyrheliometer Comparison in RA-II (2017.1.23`2017.2.3, in Tsukuba and Tokyo, Japan)

Applied International Standards/Norms

Is your RIC accredited according to ISO/IEC 17025?

☐ **Yes** (please, specify the following):

Accreditation/certification body:

Date of the last audit:

Link to the Certificate of Accreditation:

☒ **No** (please, indicate if you have already applied any quality management system, and provide a reason for a lack of accreditation, if possible)

National Center for Meteorological Metrology, China (NCMM) is applying for being accredited according to ISO/IEC 17025 now. RIC-Beijing would be accredited by the end of June in 2018 as the constant temperature and constant humidity laboratories are used in daily operations.

-

Assessment by a recognized authority other than accreditation body

Was your RIC assessed by a recognized authority other than an accreditation body? (e.g. certification body, NMI, another RIC)

☐ **Yes** (please, specify the following):

Name of a recognized authority:

Date of the last assessment:

Standard against which the assessment was carried out:

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

As the laboratories have been reconstructed since 2015 years, our laboratories environment could be kept constant temperature and constant humidity until Sep. 2017. National Centre for Meteorological Metrology, China (NCMM) is applying for being accredited according to ISO/IEC 17025 now.

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):

☒ **No** (please, explain why, if possible) As the laboratories have been constructed since 2015 years, National Centre for Meteorological Metrology, China (NCMM) is applying for being accredited according to ISO/IEC 17025 now.

Calibrations of the Members' Instruments

Which calibration services, were provided by your RIC for other Members/countries since 2013? (Please specify)

Year	Type of instruments	Number of calibrated instruments	WMO Member/Country
2013	Temperature and Humidity	4	Vietnam
2013	Atmospheric pressure, temperature and Humidity, Radiation	6	Indonesia
2015	Atmospheric pressure, Radiation	2	Mongolia
2015	Atmospheric pressure, Temperature and Humidity, Wind	5	Indonesia
2016	Atmospheric pressure, Temperature, Radiation, Wind	4	North Korea
2016	Atmospheric pressure, Temperature	2	Mongolia

Capacity Development and Training Activities

Which capacity development/training activities have been carried out by your RIC since 2013 within the Region? (please specify events, WMO Members that participated and the number of participants**)**

- Three engineers in BMKG of Indonesia were trained on radiation equipment and technology related in 2013.
- Trainees over 20 from meteorological department of Pakistan, Kazakhstan, Bangladesh, Myanmar, South Africa, Nepal, Sri Lanka, Thailand, Yemen and other countries were trained about equipment operation and reparation in Nov. 2015.
-

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

- Three engineers in BMKG of Indonesia were trained on radiation equipment and technology related in 2013.
-

Which guidance documents, standard procedures or other publications were developed and published by your RIC since 2013? (Please, include full reference and web-link if available)

- Calibration method for ultraviolet radiometer，absolute pyrheliometer，photosynthetic active radiometer, etc. National Standard of China

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? If yes, please specify when and how)

- No

Recent Changes in Circumstance

Have there been any changes in your RIC's capabilities since 2013? (If so, please specify)

- Except the infrastructure.

Have there been any significant changes in your RIC's infrastructure since 2013? (If so, please specify)

- Yes, Our laboratories have been removed in Sep. 2017. The constant temperature and constant humidity circumstance was controlled in daily operation.
-

Have there been any changes in your staffing since 2013? (If so, please specify)

- No
-

Future Plans and any other relevant information
(Please provide plans/projects of your RIC for 2017, and add any other information you find relevant about your RIC) • Participate in the interlaboratory comparison organized by RIC-Tsukuba.

Are you in agreement with publishing this reporting form on WMO/CIMO website?	
☒ Yes	☐ No

Nov. 21th, 2017	Cao Xiaozhong
Date	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 https://www.wmo.int/pages/prog/www/IMOP/instrument-reg-centres.html)

Specific information on Instrument Calibration Capabilities

Temperature:

Instrument Undergoing Calibration	Calibration Range	Reference standard, Equipment	Calibration and Measurement Capability (CMC)*	Traceability of Reference equipment	
				Last standard calibration date	Calibration body
Standard Mercury-in-Glass Thermometers; Pt Resistance Thermometer	-60 to 80 °C	First-class Standard Pt Resistance Thermometer	Uncertainty: 0.02 °C	May 23th, 2017	National Institute of Metrology, China

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

Relative Humidity:

Instrument Undergoing Calibration	Calibration Range	Reference standard, Equipment	Calibration and Measurement Capability (CMC)*	Traceability of Reference equipment	
				Last standard calibration date	Calibration body
Standard Ventilation Psychrometer; hygrometer	-50 to 40 °C (dew point temperature)	Precision Dew point Hygrometer	MPE:±0.2 °C (-50 to -20 °C) MPE:±0.15 °C (-20 to 40 °C) (dew point temperature) Uncertainty: 0.15 °C (-20 to 20 °C) (dew point temperature)	Oct. 19th, 2017	National Institute of Metrology, China

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

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 Barometers	Measuring Range: 14 to 1720 hPa	Gas Piston Pressure Gauge	Uncertainty: 0.003 %×Reading (hPa) (500 to 1100 hPa)	May 26th, 2017	National Institute of Metrology, China

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

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	0.2 to 70 m/s	Pilot tube	Uncertainty: 0.5 %	April 7th, 2014	National Institute of Metrology, China

Status of accreditation (date of the latest accreditation):
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
Rain gauge, Measuring Cylinder	0 to 942.48 mL	Standard Capacity Measurement (glass)	MPE : ±(0.031 to 0.314) mL	Oct. 2016	National Institute of Metrology, China

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
Pyrheliometer	0 to 1400 W/m^2	Cavity Radiometer	Uncertainty: 0.3 % (k=2)	Oct. 2015	World Radiation Centre (Davos, Switzerland)

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.