WMO OMM

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

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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	Calibration laboratory
RIC's website	http://www.shmu.sk/en/?page=1541
Institute hosting RIC	Slovak hydrometeorological institute
City	Bratislava
Country	Slovakia
Regional Association	RA VI

Contact Person for the Regional Instrument Centre	
Courtesy Title	
First name	Lenka
Family name	Leštinská
Street and number	Jeséniova 17
Postal code	833 15
City	Bratislava
State/Province	Slovakia
Country	Slovakia
Tel. number(s)	00421 2 59 415 124
Fax number(s)	
Email(s)	lenka.lestinska@shmu.sk

Has contact person changed since your last report?	☐ Yes	☒ No
If yes, provide the previous contact person?		

RIC's staff

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

- Managerial: 2
- Technical: 3

Interlaboratory Comparisons

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

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

- ILC for humidity organized by KZSR (Slovak republic calibration association), passed with En<1
- ILC for pressure organized by KZSR, passed with En<1

Applied International Standards/Norms

Is your RIC accredited according to ISO/IEC 17025?

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

Accreditation/certification body: SNAS (Slovak national accreditation service)

Date of the last audit: 2018

Link to the Certificate of Accreditation:

https://ais.snas.sk/ais/#!WebReports/1/list.accredited.subject.search.by field/AccreditedSubjectsByFields

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

-

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)

-

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): 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

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**)**

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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)

-
-
-

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)

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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

(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)

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Recent Changes in Circumstance

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

- Accreditation range was extended also for calibration of electronic thermometers in liquid bath and external (in situ) calibration of barometers.
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Have there been any significant changes in your RIC's infrastructure in the last calendar year? (If so, please specify)

- Modernization of calibration laboratory has started last year with the purchase of new liquid bath and new platinum thermometer standard from Hart Scientific.

Have there been any changes in your staffing in the last calendar year? (If so, please specify)

- 1 technical employee ended in October 2018

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)

- Our main plan for this year is modernization of laboratory equipment, purchase of new instruments and installation of new calibration sets, new software and database solutions, and then validation of these new devices and training of all staff.
- Participation in interlaboratory comparisons.

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

☒ Yes ☐ No

28. 2. 2019
Date

LEŠTINSKÁ, Klčlinská
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)

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
In-Glass thermometers	-30 °C to +40 °C	In-glass thermometer	0.2 °C	2019	SMU
Platinum resistance thermometers	-30 °C to +40 °C	SPRT + resistance bridge	0.05 °C	2018	SMU
Electronic thermometers	-30 °C to +40 °C	SPRT + resistance bridge	0.05 °C	2018	SMU
Electronic thermometers	-30 °C to +40 °C	PRT + data collector	0.3 °C	2019	SHMU
Bimetal thermometers	-30 °C to +40 °C	PRT + data collector	1 °C	2019	SHMU

Status of accreditation (date of the latest accreditation): 17.9.2018
Link to the accreditation certificate: www.snas.sk
Accreditation body: SNAS

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
Electronic RH sensors	(10 to 97) %	Dew point standard	2 %	2018	ČMI
Electronic RH sensors	(20 to 95) %	Capacitance RH sensor in climatic chamber	3 %	2018	SHMU

Mechanical hygrometers	(20 to 95) %	Capacitance RH sensor in climatic chamber	3 %	2018	SHMU

Status of accreditation (date of the latest accreditation): 17.9.2018
Link to the accreditation certificate: www.snas.sk
Accreditation body: SNAS

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
Absolute pressure	(700 to 1050) hPa	Calibrator DHI PPC2+ (laboratory calibration)	0.1 hPa	2019	SMU
Absolute pressure	(700 to 1050) hPa	Barometer Paroscientific model 760 (external calibration)	0.15 hPa	2019	SMU

Status of accreditation (date of the latest accreditation): 17.9.2018
Link to the accreditation certificate: www.snas.sk
Accreditation body: SNAS

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	(0.3 to 40) m/s	Thermal and rotating anemometer, Pitot tube	(0.013v+0.1) m/s	2018	ČMI

Status of accreditation (date of the latest accreditation): 17.9.2018
Link to the accreditation certificate: www.snas.sk
Accreditation body: SNAS

Precipitation:

Instrument Undergoing Calibration	Calibration Range	Reference standard, Equipment	Calibration and Measurement Capability (CMC)*	Traceability of Reference equipment	
				Last standard calibration date	Calibration body
Tipping bucket	(10 to 25) mm	Volumetric flask	2%	2005	SMU
Weight rain gauge	(0.1 to 260) mm	Set of weights	0.02 mm	2017	SLM

Status of accreditation (date of the latest accreditation): 17.9.2018
Link to the accreditation certificate: www.snas.sk
Accreditation body: SNAS

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
NOx analyzers	(0.1 to 500) nmol/mol	Standard analyzer	(0.04 hm + 2) nmol/mol	2017	CHMI
SO2 analyzers	(0.1 to 500) nmol/mol	Standard analyzer	(0.05 hm + 2) nmol/mol	2017	CHMI
O3 analyzers	(0.1 to 500) nmol/mol	Standard analyzer	(0.03 hm + 1.5) nmol/mol	2017	CHMI
CO analyzers	(0.01 to 20) μmol/mol	Standard analyzer	(0.02 hm + 0.4) μmol/mol	2017	CHMI

Status of accreditation (date of the latest accreditation): 17.9.2018
Link to the accreditation certificate: www.snas.sk
Accreditation body: SNAS

* 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.