



World Meteorological Organization
Organisation météorologique mondiale

Secrétariat

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Weather • Climate • Water
Temps • Climat • Eau

Notre réf.: DRA-AP/RA V/OBS(survey)

GENÈVE, le 2 août 2013

Annexe: 1 (disponible en anglais seulement)

Objet: Questionnaire sur la traçabilité des mesures aux fins d'étalonnage dans la Région V (Pacifique Sud-Ouest)

Suite à donner: Renvoyer le questionnaire dûment rempli à M. Wan Mohd Nazri Wan Daud (Malaisie) **au plus tard le 31 août 2013**

Madame, Monsieur,

Vous vous rappelez sans doute qu'à sa quinzième session (Bali, Indonésie, 30 avril–6 mai 2010), le Conseil régional V (Pacifique Sud-Ouest) a établi le Groupe de travail de l'infrastructure. M. Wan Mohd Nazri Wan Daud (Malaisie) a été nommé, au sein de ce groupe, responsable thématique pour l'étalonnage des instruments et les centres régionaux d'instruments. Lors de sa première session, qui s'est tenue à Melbourne (Australie) du 24 au 27 avril 2011, le Groupe de travail a décidé, dans le cadre du plan de mise en œuvre du Système mondial intégré des systèmes d'observation de l'OMM (WIGOS), de faire le point sur la traçabilité des mesures portant sur les paramètres météorologiques au sein des Services météorologiques et hydrologiques nationaux.

Vous trouverez en annexe le questionnaire élaboré par le responsable thématique et par M. John Gorman (Australie), expert bénévole faisant partie du Groupe de travail. Les réponses à ce questionnaire seront analysées en vue de faire le point sur la traçabilité des mesures dans l'ensemble de la Région et d'y faciliter la mise en œuvre du WIGOS sous l'angle du développement des capacités.

Aussi, pour faciliter la tâche du responsable thématique, vous saurais-je gré de lui renvoyer le questionnaire dûment rempli **au plus tard le 31 août 2013**.

Votre coopération à cet égard sera très appréciée.

Veuillez agréer, Madame, Monsieur, l'expression de ma considération distinguée.



(M. Jarraud)
Secrétaire général

Aux: Représentants permanents des Membres du Conseil régional V (PSW-440)

cc: Président et vice-président du Conseil régional V (pour information)



WORLD METEOROLOGICAL ORGANIZATION

DRA-AP/RA V/OBS(survey), ANNEX

QUESTIONNAIRE ON TRACEABILITY OF CALIBRATION IN REGIONAL ASSOCIATION V (SOUTH-WEST PACIFIC)

Introduction

At its first session held in Melbourne, Australia, 24-27 April 2013, the Working Group on Infrastructure (WG-INFR) of Regional Association V (South-West Pacific) agreed to assess the status of traceability for measured meteorological parameters within the National Meteorological and Hydrological Services (NMHSs) as part of the WMO Integrated Global Observing System (WIGOS) Implementation Plan.

In this regard, a questionnaire has been developed by Mr Wan Mohd Nazri Wan Daud (Malaysia), Theme Leader in Instrument Calibration and Regional Instrument Centres (RICs) and Dr John Gorman (Australia), Volunteer Expert in Instrument Calibration and RICs of WG-INFR. Responses will be analyzed to assess the status of measurement traceability within the Region as a whole and used to guide the implementation of WIGOS within the Region with respect to the Capacity Development.

Name of Member Country: _____

Person filling out this form:

Title: Mr ☐ Ms ☐ Dr ☐ (Please tick appropriate)

Name: _____

Organization: _____

E-mail: _____

Date: _____

(Signature of Permanent Representative)

**QUESTIONNAIRE ON TRACEABILITY OF CALIBRATION IN
REGION ASSOCIATION V (SOUTH-WEST PACIFIC)**

Q1.0 Does your NMHS calibrate surface observation instruments or travelling standards in a laboratory?

Yes ☐

No ☐

(If your answer is "Yes", please answer question Q1.1. Otherwise, skip to question Q3.0)

Q1.1 When does your NMHS calibrate instruments?

☐ Before the instrument is installed

☐ After the instrument is repaired following a breakdown

☐ At regular intervals (specify period according to a variable):

Q2.0 The calibrations are performed by:

The NMHS staff ☐

A subcontractor ☐

Q3.0 Specify for which measurement parameters your laboratory is traceable to international standards, such as System International (SI)?

Q3.1 Pressure: Yes ☐ No ☐

Q3.2 Temperature: Yes ☐ No ☐

Q3.3 Humidity: Yes ☐ No ☐

Q3.4 Wind: Yes ☐ No ☐

Q3.5 Rainfall: Yes ☐ No ☐

Q3.4 Time: Yes ☐ No ☐

Q3.4 None of these : Yes ☐ No ☐

Q4.0 Does the NMHS have reference standards used in the calibration of instruments measuring:

Q4.1 Pressure: Yes ☐ No ☐

Q4.2 Temperature: Yes ☐ No ☐

Q4.3 Humidity: Yes ☐ No ☐

Q4.4 Wind: Yes ☐ No ☐

Q4.5 Rainfall: Yes ☐ No ☐

Q4.6 Sea Level: Yes ☐ No ☐

Q5.0 Where do you get your reference instruments calibrated?

At a WMO RIC ☐

At a National Metrology Institute ☐

At a commercial company ☐

Q6.0 Do you wish to calibrate your standards at the WMO RIC?

Yes ☐

No ☐

Q6.1 If yes, which standards do you wish to have calibrated?

Q6.1.1 Pressure:

Yes ☐

No ☐

Q6.1.2 Temperature:

Yes ☐

No ☐

Q6.1.3 Humidity:

Yes ☐

No ☐

Q6.1.4 Wind:

Yes ☐

No ☐

Q6.1.5 Rainfall

Yes ☐

No ☐

Q7.0 Does your NMHS experience problems having their standards calibrated at their RICs?

Yes ☐

No ☐

Q7.1 If yes, please describe those problems:

Q8.0 Does your NMHS have an instrument calibration laboratory?

Yes ☐

No ☐

(If your answer is "Yes", follow the questions Q8.1 until Q8.4)

Q8.1 Is the laboratory recognized in the organizational structure of the NMHS:

Yes ☐

No ☐

Q8.2 Is the laboratory accredited with ISO 17025?

Yes ☐

No ☐

Q8.3 Is the laboratory certified with any other international standard such as ISO-9001? (specify which quality standard):

Yes ☐

No ☐

Q8.4 If your laboratory is not certified, do you intend it to become certified in the future?

Yes ☐

No ☐

Q9.0 Does your NMHS have a program for the field inspection or field verification of instruments with travelling standards?

Yes ☐

No ☐

Q10.0 How often do you calibrate or verify the field instruments in your network?

☐ When the instruments are installed

☐ After the instrument is repaired following a breakdown

☐ At regular intervals (specify period according to a variable):

Please send the completed questionnaire to Mr Wan Mohd Nazri Wan Daud at the following address not later than 31 August 2013:

Mr. Wan Mohd Nazri Wan Daud
Director, Instrument and Maintenance Division
Malaysian Meteorological Department
Malaysia
Telefax: +603 7955 0964
E-Mail: wnazri@met.gov.my

ANNEX to Questionnaire

The definitions (ISO, 1993) are given in The Guide to Instruments and Methods of Observation, WMO-No. 8, Chapter 1, Part 1, and may be summarized as follows:

Traceability:

Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties.

Metrological Traceability:

A property of a measurement result whereby the result can be related to a reference through a documented unbroken chain of calibrations, each contributing to the measurement uncertainty.

Calibration:

Operation that, under specified conditions, in a first step, establishes a relation between the quantity values with measurement uncertainties provided by measurement standards and corresponding indications with associated measurement uncertainties and, in a second step, uses this information to establish a relation for obtaining a measurement result from an indication.

Reference Standard:

A standard, generally having the highest metrological quality available at a given location or in a given organization, from which the measurements taken there are derived.

Standard:

Calibration of instruments or measurement systems is customarily carried out by comparing them against one or more measurement standard. These standards are classified according to their meteorological quality.
