

**REVIEW OF NMI CALIBRATION AND MEASUREMENT CAPABILITIES
AND
AFRIMETS REPRESENTATION ON THE JCRB**

1. In terms of AFRIMET's membership in the Joint Committee of Regional Metrology Organisations and the BIPM (JCRB) and the regional implementation of the International Mutual Recognition Arrangement (MRA) between National Metrology Institutes (NMIs), AFRIMETS has to review the Calibration and Measurement Capabilities (CMCs) of member NMIs (intra review), and other RMOs (inter review), if these are submitted for inclusion in Appendix C of the international MRA.
2. AFRIMETS TC-1 and its Working Groups, which have a one to one correspondence with the Consultative Committees of the CIPM, shall deal with all actions arising from AFRIMET's membership of the JCRB.
3. Once an application by a member NMI for the inclusion of its CMCs in Appendix C of the international MRA is received by the Chair of TC-1A, the TC-WG Chair or the AFRIMETS secretariat, the following sequence of actions shall be initiated:
 - a) The recipient shall forward the received application and CMCs to the chairperson of TC-1A, the chairpersons of the appropriate TC-1 Working Groups (WGs), the AFRIMETS Quality WG and copy to the Regional contact point for Scientific metrology at the AFRIMETS Secretariat.
 - b) The AFRIMETS Quality WG (TC-QS) shall confirm to TC-1A and the WG that the CMCs are supported by an AFRIMETS approved Quality system (see AFR-08-008).
 - c) On receipt of the documentation, TC-1A and the relevant Working Groups involved shall check whether the submitted CMCs are in the correct format required by the JCRB and, if necessary, request the required conversion to the correct format from the submitting NMI.
 - d) As a next step, the relevant WG Chair shall discuss with the Working Group members the composition of the regional technical peer review panel, and augmented, if considered necessary or advisable by the WG members, by suitable international metrology experts. Instead of augmenting the review panel with suitable international metrology experts, the submitting NMI may also be granted permission (by TC-1A and the TC-QS) to submit its CMCs in parallel for review by another RMO, provided the submitting NMI is a Member or Associate Member of such other RMO and has that RMO's prior agreement for this action. The results of such a review by another RMO shall be presented to TC-1A and the relevant WG as supporting evidence.

The purpose of the Technical peer review shall be to enable AFRIMETS to make a fair and objective judgement whether the submitted CMCs meet the requirements of the CIPM MRA as interpreted and explained in the JCRB rules of procedure in accordance with CIPM-MRA-D04. The JCRB rules of procedure require that the following points should be taken into account in evaluating CMC submissions:

- a) Results of key and supplementary comparisons;
- b) Documented results of past CC, RMO or other comparisons (including bilateral comparisons);
- c) Knowledge of technical activities by other NMIs;
- d) Active participation in RMO projects;
- e) Appropriate measurement procedures and equipment;
- f) Scientific and technical qualifications of staff;
- g) Other available knowledge and experience;
- h) Quality system existing or in preparation, brief description;
- i) Any peer assessment, third party accreditation or self declaration including the name of the accreditation body; membership of a multilateral agreement/arrangement; scope of accreditation and names of peer reviewers.

The regional Technical peer review panel shall apply these criteria when evaluating the submitted CMCs.

TC-1A, the WGs and the TC-QS shall also be responsible for the format and scope of a possible review visit by an appointed Technical peer review panel, should such a visit be regarded as necessary.

In case the submitted CMCs from an NMI are covered by third party accreditation and/or if the WG members are familiar with the applicant NMI through previous visits or interactions, the WG may waive the requirement for a review visit. In this case, the WG Chairs shall refer the submitted CMCs to their members and, if considered necessary, international experts for comment, together with a specified deadline for these comments of no longer than one month.

- a) Should visits by peer review panels be necessary, the details and duration of these visits shall be discussed between the TC-1 Chair and the member NMI concerned to allow the member NMI to estimate the cost of the review, if any, which it shall be required to cover;
- b) The reviewers' comments, if any, shall be discussed by the WG Chairs involved with the applicant NMI and the NMI shall be given an opportunity to revise the submitted CMCs accordingly;
- c) Once the applicable TC-1A WG is satisfied that the submitted CMCs meet the requirements of the CIPM MRA, the TC-1A WG chairperson shall inform the TC-1A and TC-QS Chairs in writing (e-mail is sufficient);
- d) Otherwise, the regional intra-review process and the discussions between the applicant NMI and TC-1A shall continue until the matter is resolved to the satisfaction of TC-1A;

- e) The relevant TC-WG Chair, in consultation with the AFRIMETS JCRB representative, shall forward the reviewed CMCs together with an appropriate covering letter outlining the procedure followed and the conclusions reached to the JCRB Secretary for distribution to JCRB members, or place it on the relevant JCRB review site –depending on the procedure outlined by the relevant CC.
4. AFRIMETS representation on the JCRB shall be by a delegation consisting of all or any of the following (but at least two), and a maximum of five as per JCRB rules:
- a) The official AFRIMETS appointed leader of the delegation to the JCRB;
 - b) The AFRIMETS Chair (if from the Scientific metrology community, otherwise the Vice-Chair Scientific metrology);
 - c) The Chair of TC-1A (if not one of the above);
 - d) The Chair of the TC-QS;
 - e) If not already five, representatives of member sub-RMOs can be invited, if necessary selected in consultation between a), b) and c) above, using the criterion of maximum representivity.

It is expected that the respective NMI funds the attendance of a member of its staff to the JCRB.