

Report of the 32nd Meeting of the JCRB

Held on March 26-27, 2014

BIPM, Sevres

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Participants

BIPM-CIPM

Mr. Andy Henson (Chairman on behalf of Dr Martin Milton) BIPM
 Dr. Robert Kaarls..... CIPM
 Dr. Claudine Thomas KCDB Coordinator
 Mr. Chingis Kuanbayev (Executive Secretary) BIPM

Delegations

Dr. Wynand Louw AFRIMETS representative to the JCRB
 Dr. Mohamed Berrada..... AFRIMETS
 Prof. Noha Khaled..... AFRIMETS
 Mr. Dennis Moturi AFRIMETS
 Dr. Peter Fisk..... APMP representative to the JCRB
 Dr. Jongseon Park APMP
 Dr. Toshiyuki Takatsuji..... APMP
 Dr. Pavel Neyezhmakov COOMET representative to the JCRB
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 Mr. Sergey Komissarov COOMET
 Ms. Natalia Sedova COOMET
 Mr. Nikolay Novikov COOMET
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 Dr. Maguelonne ChambonEURAMET
 Dr. Wolfgang SchmidEURAMET
 Dr. Claudia SantoSIM representative to the JCRB
 Dr. Alan SteeleSIM
 Dr. Claire SaundrySIM
 Dr. James OlthoffSIM

1. Welcome by the Chairman and approval of the agenda

Mr. Andy Henson, Director of the BIPM International Liaison and Communication Department, welcomed the delegates. Dr. Milton had requested Mr. Henson to chair the 32nd meeting of the JCRB on his behalf, as he was not able to attend due to health reasons. The JCRB delegates asked Mr. Henson to convey their best wishes to Dr. Martin Milton and their hope for his speedy recovery and return to the BIPM.

The members of the JCRB delegations were then asked to introduce themselves.

The agenda of the 32nd JCRB meeting was approved without amendments.

2. Approval of the minutes of the 31st meeting of the JCRB and review of actions

The minutes of the 31st meeting of the JCRB were approved without amendments.

A. Henson presented a new web-tool where collections of all JCRB meeting's outcomes (Resolutions, Recommendations and Actions) are listed. He then went on to the actions agreed at the 31st JCRB meeting inviting reports from the appropriate attendees:

- Action 31/1 (regarding KC and SC registration and progress form) outcomes were reported by Mr. Chingis Kuanbayev, Executive Secretary of the JCRB. He gave brief information on the new design of the key and supplementary comparison registration and progress form which now has drop down menus in PDF format. Information regarding the new form was disseminated on 9th January 2014 by email to RMO representatives to the JCRB, CC Executive Secretaries, RMO TC WG chairs and CC WG chairs on comparisons.

The form is available on the CIPM MRA documents page of the BIPM (http://www.bipm.org/utis/common/documents/icrb/registration_and_progress_for_m.pdf). This form may be used both to register a new comparison and to report on progress of a registered comparison. The pilot laboratory should download/save to computer before completing, and then return the completed form as an email attachment to the appropriate CC WG chairs and to the KCDB Coordinator as it is stated in the form. Chingis Kuanbayev noted that the improvement of the accuracy and consistency of the information in the KCDB relies on updates being sent to the KCDB Coordinator.

The JCRB delegates stressed that the Technical Protocol is an important part of the comparison as it specifies in detail the procedure to be followed. In addition, it is usually approved by the appropriate CC WG. At the end of the discussion the JCRB delegates agreed to the following action in order to clarify the progress status "Protocol complete" proposed in the form:

Action 32/1: BIPM to amend the "Key and supplementary comparison registration and progress" form, so that the status "Protocol complete" reads "Protocol complete/approved"

- Action 31/2 and Action 31/3 (regarding two EURAMET documents: “Towards a sustainable CIPM MRA” and “Role of DIs within the CIPM MRA”) will be reported by the EURAMET delegation under agenda items 7.4 and 8;
- Action 31/4 (regarding information from the “pop-up questionnaire” established in the KCDB web site) outcome was reported by Dr. Claudine Thomas, KCDB Coordinator. She presented information regarding visits to both Appendix B and Appendix C for the period from January 24 to March 20, 2014. For the Appendix B (Key and supplementary comparisons) there were 642 unique answers, for the Appendix C (Calibration and Measurement capabilities) there were 1233 unique answers (these numbers do not include the contribution from the BIPM). Clearly the section on CMCs (Appendix C) is more frequently visited than the section on comparisons (Appendix B). The two sections of the KCDB website are mainly visited by NIMs. The interest of DIs in the KCDB is low. The percentages of visits from Accreditation Bodies, Calibration and Testing Laboratories, and Industrial Companies are not negligible, in particular, ~15% of the visits to the Appendix C come from Calibration and Testing Laboratories. Visitors come from all regions of the world. She also mentioned that the “pop-in questionnaire” system may allow to launch other surveys related to the KCDB.

[The KCDB report on Action 31/4 is available on the restricted-access JCRB working documents webpage. listed as [JCRB-32/06.1](#)]

This report generated considerable interest and the JCRB, having recognized the success of this first questionnaire, proposed the following action in order to get more information prior to the CIPM MRA review in 2015:

Action 32/3: BIPM to consider launching two (or one combined) questionnaire(s) related to the KCDB using the “pop-in” software addressing:

- “Why users are accessing the KCDB?” and
- “How easy (or not) it was to find the information?”

- Action 31/5 (regarding status of CMCs on the JCRB website) will be reported by Executive Secretary of the JCRB under agenda item 9.

A. Henson also informed the JCRB that the CIPM had approved the changes to Document CIPM MRA-D-04 (adding the new Section “12. Greying-out of published CMCs”) and also to the form for the nomination of designated institutes (now a two part document, containing information on the expectations and obligations of being a DI, and the “Nomination of Designated Institute” form by itself, which ensures that sufficient information is available when a nomination occurs). He also noted that according to the policy set by the 25th JCRB meeting in 2010, the list of greyed-out CMCs that will reach the five-year limit of their greyed-out status within the six months following the JCRB meeting should be reported; this will be addressed under agenda item 9.

3. Report by the Chairman on progress since the 31st JCRB meeting

A. Henson presented a report on the developments at the BIPM since the 31th meeting of the JCRB. The important points of the report included:

- New members of the BIPM and Associates of the CGPM and new signatories to the CIPM MRA;
- Forthcoming 25th meeting of the CGPM: the 25th meeting of the General Conference on Weights and Measures will be held on 18-20 November 2014 in the *Palais des Congrès de Versailles*, Versailles, France. Detailed information on venue, Draft agenda, Working documents and other logistics are listed on the webpage dedicated to the 25th meeting of the CGPM: <http://www.bipm.org/en/cgpm-2014/>
- CIPM decision on CIPM MRA review: Decision CIPM/102-44, adopted in October 2013, has been superseded following discussions at the 103rd meeting of the CIPM in March 2014, with the conclusion that the CIPM MRA review should be the topic of a meeting of NMI Directors in 2015. The intention would be to focus on what works well, and what needs to be changed. The issue would be looked at from the perspective of the “owners” (NMI/DI Directors), with contributions from representatives drawn up from the “operators” (JCRB and NMI experts, CCs, RMOs and the BIPM), and “users” (invited speakers from the key stakeholders such as ILAC, etc.). The current decision of the CIPM on the CIPM MRA review, Decision CIPM/103-12, is available on the CIPM webpage of the BIPM website at: <http://www.bipm.org/utils/en/pdf/CIPM2014-I-Decisions-EN.pdf>.

The Draft Resolution E related to the CIPM MRA review, for consideration at the 25th CGPM in November 2014, was also revised at the 103rd meeting of the CIPM in March 2014. It is now available at: <http://www.bipm.org/utils/common/pdf/25th-CGPM-Convocation.pdf#page=31>. This topic will be discussed under agenda item 7.

- Strategy development. The CIPM Consultative Committees (CCs) have each developed strategies related to their areas of activity, which has enabled significant rationalization, particularly related to planning of comparisons. The individual strategy documents are available on each CC webpage, and collectively at: <http://www.bipm.org/en/committees/cipm/strategic-planning.html>

The CC strategy work underpins the BIPM strategy, and consequently the development of the new BIPM Work Program (for 2016 – 2019), which is currently being drawn up. This document will be opened to Member States for consultation in the coming months. This will allow feedback, and a near final version will then be available ahead of the 25th meeting of the CGPM.

After discussion of this point, the JCRB, taking into account that CCs activities and strategic views may constitute important lessons and/or experiences in the operation of the mechanisms of the CIPM MRA, adopted the following action:

Action 32/2: *BIPM to collate the comments related to problems with, or desired changes to, the CIPM MRA review from the CCs strategy documents and CCQM questionnaire, which will be later complemented by the feedback from Action 32/6 in order to provide useful and collated input to the JCRB and the NMI Directors Workshop on the CIPM MRA review.*

A. Henson also informed about the DCMAS Network website, where metrology training courses aimed at assisting developing countries can be listed. He mentioned that the

website is openly available and as at today training courses organized by KRISS, Korea, are listed there. He then asked whether RMOs would agree to provide appropriate links to their training courses, in order to ensure a wide dissemination of this information. At the end of the discussion, the JCRB agreed on the following action:

Action 32/9: *Noting that the RMOs indicated that they either already have a dedicated webpage (EURAMET) for training or are in the process of creating such page (AFRIMETS, APMP, COOMET, SIM), the BIPM will propose to the DCMAS Network to include the appropriate links on their website. Furthermore BIPM will enquire whether it is possible for them to make "training" more visible on the website. RMOs to provide the JCRB Executive Secretary with appropriate links as soon as they become available.*

[The Chairman's report is available on the restricted-access JCRB working documents webpage. listed as [JCRB-32/03.0](#)]

3.1. Update on the status of the BIPM QMS

A. Henson presented the status of the BIPM QMS. He informed the JCRB that the BIPM QMS will be presented at the meeting of the EURAMET TC-Quality in April 2014, which is in accordance with the CIPM decision at its 100th meeting that the BIPM present its QMS to RMO Quality TCs/WGs on a rotating basis.

[The BIPM QMS report is available on the restricted-access JCRB working documents webpage. listed as [JCRB-32/03.1](#)]

4. Report from the CIPM

R. Kaarls gave a presentation that included the following points:

- Changes in membership of the CIPM;
- Outcomes from Session I of the 103rd meeting of the CIPM in March 2014;
- Issues reported from the meeting of the Presidents and Executive Secretaries of Consultative Committees;
- Development of a strategy for the BIPM, strategy documents prepared by CCs;
- Preparation of draft Resolutions for the 25th meeting of the CGPM in November 2014.

[The Report from the CIPM available on the restricted-access JCRB working documents webpage. listed as [JCRB-32/04.](#)]

5. Highlights of the RMO reports to the JCRB

5.1. SIM

C. Santo presented the highlights of the SIM report.

5.2. EURAMET

B. Jeckelmann presented the highlights of the EURAMET report.

5.3. COOMET

P. Neyezhnikov presented the highlights of the COOMET report.

5.4. APMP

P. Fisk presented the highlights of the APMP report.

5.5. AFRIMETS

W. Louw presented the highlights of the AFRIMETS report. After the end of the presentation, the EURAMET delegation asked whether AFRIMETS has taken the responsibility for the QS review of NIS, Egypt, or whether this still remains under the responsibility of the EURAMET TC on QS. W. Louw, in response to the question, confirmed that the AFRIMETS TC on QS reviewed the QS of NIS, including the QS covering its laboratories that either have CMCs in the KCDB or CMCs that are currently submitted for intra-regional review. It gave its approval on the facts that the NIS QS meets the rules of AFRIMETS and is fit-for-purpose for the CIPM MRA. AFRIMETS has now taken full responsibility for NIS within the CIPM MRA.

[The individual RMO presentations are available on the restricted-access JCRB working documents webpage. Listed as [JCRB-32/05.1](#); [JCRB-32/05.2](#); [JCRB-32/05.3](#); [JCRB-32/05.4](#) and [JCRB-32/05.5](#) respectively.]

6. KCDB report

C. Thomas presented a summary of the semi-annual KCDB report to the JCRB. The information included the following points:

- As at 1st of March 2014, the KCDB included a total of 24 521 CMCs. Over the period covered by this Report 33 newly approved sets of CMCs were published, corresponding to an additional 250 CMCs.
- 150 CMCs were temporarily removed from the KCDB against 280 as at 1st September 2013.
- As at 01 March 2014, there remained only 1 CMC greyed-out from the KCDB more than five years ago (Mexico, in RI, Neutron measurements). Request was received on 10 January 2014 to keep it in the grey zone over 2014, the time needed to fix-up the Quality System which covers this CMC.
- Only 20 Associates over the 37 Associates who have already signed the CIPM MRA have CMCs currently published in the KCDB.
- 66 % of the total 1255 comparisons (key and supplementary) have their reports published in the KCDB; about 2160 graphs of equivalence are currently available, including more than 50 new graphs of equivalence published over the last six months.

At the end of presentation, the JCRB delegates indicated their interest to receive information at future JCRB meetings about which Associates of the CGPM meet the criteria of Resolution 4 of the 24th meeting of the CGPM. After the discussion, the JCRB agreed on the following action:

Action 32/4: *BIPM to provide a list at each JCRB meeting of Associates of the CGPM who have been encouraged to become a Member State of the BIPM (in accordance with Resolution 4 of the 24th meeting of the CGPM).*

[The KCDB report available on the restricted-access JCRB working documents webpage. listed as [JCRB-32/06.0](#).]

7. Discussion on the CIPM MRA review

A. Henson opened the discussion, gave brief information about the CIPM decision on the CIPM MRA review and informed delegates that a NMI Directors meeting/Workshop on the CIPM MRA review will be organized in 2015. He then asked the EURAMET delegation for an overview of the EURAMET paper "Towards a sustainable CIPM MRA". B. Jeckelmann replied by reminding the delegates that this paper was discussed at the 31st JCRB meeting and contains the proposed three steps in order to move forward in the implementation of the CIPM MRA, namely define the needs; simplify the system; improve the efficiency.

Overall, the RMOs expressed their positive views on the EURAMET paper and noted the EURAMET's ongoing efforts to aid streamlining operations within the CIPM MRA.

After the overview of the document, M. Chambon presented the EURAMET activities towards the CIPM MRA review. She informed the delegates that EURAMET established a working group which is focused on the following items: EURAMET input on revision of documents under the formal authority of the CIPM; revision of documents under the formal authority of the JCRB; revision of documents under the formal authority of the RMOs; and actions by the CCs. The finalized version of the paper will be discussed at the EURAMET GA in June 2014 and could be made openly available afterwards.

In the subsequent discussion, the RMOs expressed the view that the benefits and successes of the CIPM MRA should be highlighted at the forthcoming CGPM. This can be presented from the perspective of the NMIs/DIs ("owners" of the CIPM MRA) and probably by the key stockholders ("users") who benefit from the participation in the CIPM MRA.

After discussion, the JCRB agreed on the following resolution and action aimed at enhancing the positive impact of the CIPM MRA:

Recommendation 32/1: *Each RMO to provide an official representative to the NMI Directors Workshop on CIPM MRA review.*

Action 32/5: *CIPM MRA: Each RMO to prepare bullet points identifying, from their perspective, the benefits and the successes of the CIPM MRA. The intention is to eventually combine these into a single presentation to be made at the CGPM as an introduction to the Draft Resolution to be presented at the 25th meeting of the CGPM on the CIPM MRA. It is envisaged that the common points will be compiled and supplemented by RMO specific perspectives (one slide per RMO). BIPM will add introductory statistics, and the presentation will conclude with progress already made towards a sustainable CIPM MRA and as an introduction to the Draft Resolution.*

RMOs to coordinate and send the common and RMO specific bullet points to the BIPM (JCRB Executive Secretary) by the end of May, 2014 so that the presentation can be discussed at the June meeting of the CIPM bureau.

The RMOs have experience with the operation of the CIPM MRA mechanisms and are able to also identify what works well and what needs to be improved (within their sphere

of responsibility). After discussion, the JCRB agreed on the following action aimed to help the work toward the review of the CIPM MRA:

Action 32/6: *Each RMO to individually contribute to the CIPM MRA review by highlighting the successes and challenges for them and their stakeholders, and suggest practical ideas for improvements in the operation of the activities falling within the responsibility of the JCRB. To facilitate collation of the information the RMOs will attempt to follow a common format. To enable development of the format each RMO should send its ideas for line items to A. Steele by beginning of June 2014. A. Steele will propose a draft common format to the RMOs for comments by the end of June 2014. The final completed discussion document to be submitted by each RMO to the BIPM by the end of 2014 for discussion at the 2015 JCRB meeting.*

8. Role of DIs within the CIPM MRA

The EURAMET delegates presented updates of the paper “Role of DIs within the CIPM MRA” originally tabled by EURAMET, which had been circulated for wider review to the other RMOs. The first version of the paper was discussed at the 31st JCRB meeting. Some RMOs presented their views referring to the context within their RMOs. Overall, the RMOs supported the approach of the EURAMET paper “Role of DIs within the CIPM MRA”. Noting that SIM has already provided comments, the remaining RMOs were asked to submit their comments as soon as possible (if they have any). The RMOs also asked the EURAMET delegates and the JCRB Executive Secretary to investigate the possibilities of wider use of the document such as including it as a CIPM MRA guidance for DIs. A. Henson said that the CIPM has some documents such as Document CIPM 2005-07 “NMI and other Designated Institutes” and other *ad-hoc* information documents, and confirmed that a general guidance document on DI’s participation in the CIPM MRA would be helpful. At the end of the discussion, the JCRB adopted the following actions:

Action 32/7: *EURAMET to update their paper "Role of DIs within the CIPM MRA" taking due account of comments received internally and from other RMOs, for use internally within EURAMET. BIPM to check that the revised EURAMET paper is consistent with CIPM MRA rules and practices.*

Action 32/8: *EURAMET to collaborate with the BIPM to produce a generalized version of the paper "Role of DIs within the CIPM MRA" for wider use by the other RMOs and for possible adoption by the JCRB.*

9. Status of CMC submission and review / Issues from Consultative Committees

C. Kuanbayev made a presentation on the status of CMC submissions and the JCRB website. The status of the CMC sets that have been stalled since 2010 was presented. Two sets of CMCs (APMP.RI.7.2011 and SIM.TF.8.2013) that were not approved and are still in status “waiting for approval” were identified. He then explained that if a CMC set is not approved (reviewers voted against) it remains in status “waiting for approval” forever. He thus asked APMP and SIM to undertake actions on the two CMC sets that are currently concerned. After discussion APMP and SIM official representatives to the JCRB

confirmed that APMP.RI.7.2011 and SIM.TF.8.2013 can be abandoned and asked the JCRB Executive secretary to take the appropriate action, namely to turn them into status "Abandoned" in the JCRB CMC review website.

C. Kuanbayev proposed to investigate the possibility of applying an additional status ("Not approved") for CMC sets under approval but which received at least one vote against from the RMO reviewers.

C. Kuanbayev presented the results of an analysis related to the occurrence of losses of rights (either to indicate intention to review, or to submit a review report, or to vote for approval) over three different periods of time:

- from 2001 to December 2013 (before the JCRB Workshop on CMC review);
- from January to July 2013 (after the JCRB Workshop on CMC review, but before launching the new deadlines); and
- from August 2013 to March 2014 (after launching the new deadlines).

The results of the analysis clearly indicate that the time taken for review has been significantly reduced. The average time taken for review was approximately 6 months over the first period while it now takes 2.5 months on average. However C. Kuanbayev stressed the point that after launching of the shorter deadlines there was a clear increase of the occurrence of losses of rights. After discussion he asked the RMO representatives on the JCRB to keep tracking the status of the CMC sets using the "RMO actions pending" page of the JCRB website in order to avoid losing their rights to participate.

CMCs that will reach the five-year limit for greyed-out status within the six months following the JCRB meeting:

This concerns 4 CMCs from two countries:

- 3 CMCs in pressure (France) will reach the five-year limit on 24 April 2014, and
- 1 CMC in length (Bulgaria) will reach the five-year limit on 29 June 2014.

The JCRB Executive Secretary will take the appropriate action with the RMO involved (EURAMET) at the dates mentioned above, as described at Section 12 in Document CIPM MRA-D-04.

10. Procedures to be submitted to the CIPM for approval

A. Henson made a presentation on changes that are proposed to be brought to three guidance documents: one document was for discussion and the two others for approval.

CIPM MRA-G-03 (discussion of concept): This document was developed after discussions held at several meetings of the JCRB. It was approved as Document CIPM/2006-03 in 2006, and then reformatted as Document CIPM MRA-G-03 in 2008.

This guidance document contains procedures (panel review) for the review of the Quality Systems operated by IGO institutes, and for the review of their CMCs. In practice this had been done only twice, for the CMC sets IAEA.RI.1.2001 and IAEA.RI.2.2006, the other CMC sets having been submitted through the RMO where the IGO laboratories are geographically located (including IAEA). A. Henson asked the JCRB delegates whether this current practice should be embodied as an alternative option in the guideline, which

would allow the IGO to choose either option. After discussion the JCRB agreed on the following action:

Action 32/12: *JCRB Executive Secretary to update the document CIPM MRA-G-03 for consideration at the next JCRB meeting by adding an additional option whereby the IGO may elect to work through one or more regions (on behalf of all other regions) for review of the QS and intra-regional review of the IGO's CMC declarations.*

CIPM MRA-D-02 (request for approval): A. Henson informed the JCRB that the CIPM Secretary received a request from VNIIM on the use of the CIPM MRA logo on verification certificates. The CIPM Bureau considered the request in the context of ISO/IEC 17025, to which the CIPM MRA and its interpretation documents are intimately linked. ISO/IEC 17025 allows calibration certificates that include statements of compliance or verification against an identified metrological specification or clauses thereof. The CIPM Bureau noted that the guidance document "Use of the CIPM MRA logo and certificates statement" (CIPM MRA-D-02) should be reviewed, to ensure that it is clear that placing the logo and/or the statement does not offer any endorsement regarding the statement of compliance or the verification. After discussion, the JCRB adopted the following action:

Action 32/14: *The JCRB agrees on the proposed additional text to the guidance document CIPM MRA-D-02 (which a further suggested text amendment) in response to the request of the CIPM bureau regarding the use of the CIPM MRA logo on certificates/reports that include a statement of conformity. The text clarifies that the CIPM MRA logo attests only to the measurement component of such certificates/reports. The JCRB Chairman to inform the CIPM on the clarification.*

Nomination of a Designated Institute (request for approval): The BIPM sometimes receives nominations of designation for institutes by the national authority bodies, which are significantly backdated (months or in some cases even years). The date of designation is included to the list of Signatories of the CIPM MRA. In order to avoid misleading information and inconsistencies it was proposed to add a footnote to the document, "Nomination of a Designated Institute":

"Starting date of participation in the CIPM MRA will be considered as the date when the BIPM receives the signed designation form and it is this date that the BIPM will display in the KCDB".

The proposed change was endorsed by the JCRB and the following action was agreed:

Action 32/13: *The JCRB Chairman to inform the CIPM of the changes to the form "Nomination of a Designated Institute" whereby in future the starting date of participation in the CIPM MRA will be considered as the date on which the BIPM receives the designation form.*

At the end of the discussion, A. Henson stressed the point that some of the changes in the previous documents are significant and warrant the current process of JCRB recommendation followed by CIPM approval. However, there are also revisions of CIPM MRA documents that only consist in editorial changes (eg. changing "MRA" to "CIPM MRA"), in a change of a file format (eg. changing "KC and SC registration" from "Word" to "pull-down menu PDF"), or in updating cross references (to other CIPM MRA

documents). In these circumstances, the modification can be authorized by the JCRB without requiring the formal approval of the CIPM. This would remove the “approval item” from the CIPM agendas, since such changes do not require to be debated by the CIPM, and would speed up the publication of up-to-date documents.

Having discussed, the JCRB agreed to the following action:

Action 32/10: *The JCRB Chairman to inform the CIPM that the CIPM MRA documents requiring revisions related to minor editorial and format changes and updating of internal cross references approved by the JCRB will be brought to the CIPM for information.*

11. Discussion on GULFMET updates

Referring to the written report submitted by GULFMET, A. Henson opened the session and thanked GULFMET for the updates. Since GULFMET’s participation in the 29th JCRB meeting, GULFMET has made significant progress in order to enhance its technical capabilities and raise its competencies to operate as an RMO recognized by the CIPM.

The GULFMET report included the following points:

- Development of the GULFMET organizational structure and establishment of Technical Committees (TCs for Mass and Related Quantities, Electrical and Magnetism, Thermometry and Quality Management System);
- Development of guidance documents for Technical Committees, on CMC review and QS (QMS presentation, peer-review within the CIPM MRA, QMS annual report, etc.);
- Organization of training courses for its member NMIs and TC chairs in order to build a technical competence to participate in the inter-regional CMC review process. Experts of GULFMET participated in several meetings. Especially, technical experts of UME Tubitak, Turkey, participated in the GULFMET TC meetings. TC chairs in turn participated as guest experts in the EURAMET TC meetings. The President and the Secretary of GULFMET participated in the EURAMET GA;
- Signing the MoU between GULFMET and KRISS/Korea on October 21, 2013. The scope of the MoU includes technical assistance and consultation, conducting joint research projects, exchange of researchers, exchange of technical information, such as reference data, materials and publications, participation of seminars, workshops and training courses in each other’s laboratories, etc.

It was noted that there is currently only one Member State of the BIPM and one Associate of the CGPM within GULFMET. The other five members of GULFMET have all indicated their intention to participate in the activities of the Metre Convention in the near future.

Overall, the JCRB welcomed the signature of the MoU and the liaisons which are being built with other technically experienced NMIs, such as TUBITAK UME (Turkey) and KRISS (South Korea). The JCRB strongly encouraged GULFMET to continue expanding its participation in the activities of the Metre Convention, and to encourage participation by other countries in the region in GULFMET activities so as to expand the available pool of

expertise. Taking into account the successful establishment of the main structures, the JCRB was of the view that GULFMET has now reached the stage where it should focus on demonstrating technical competence as an RMO within the meaning of the CIPM MRA. This could include for example, participating in comparisons organized by other RMOs, organizing and piloting GULFMET comparisons (ideally with participation of competent NMIs from other RMOs) and preparing example CMCs with uncertainty budgets.

Action 32/11: BIPM to write to GULFMET thanking them for the 2013 progress report and welcoming the progress made. The letter should also include useful advice on key elements/activities that would increase the confidence of the metrology community as GULFMET strives to be as an RMO within the meaning of the CIPM MRA.

12. Any Other Business

12.1. World Metrology Day poster

A. Henson presented WMD 2014, a joint initiative between BIPM and OIML celebrating 20th of May anniversary of the signing of the Metre Convention. He gave a general overview of the history of WMD posters development. At the 30th JCRB meeting in 2013, RMOs were asked to work in turn with their regional legal metrology organizations or representatives to take responsibility for the development of the annual poster (though still under BIPM/OIML editorial control). APMP agreed to support this task for 2014. So, the 2014 WMD poster was produced in conjunction with KRISS (South Korea). The theme for 2014 is "Measurements and the global energy challenge". The 2014 website is live at www.worldmetrologyday.org

Action 32/15: AFRIMETS has volunteered to identify an NMI within its region to work with BIPM and BIML in developing the World Metrology Day poster for 2015.

12.2. Improving access to JCRB outcomes

A. Henson presented the new tool on the open JCRB CMC review website (<http://www.bipm.org/jsp/en/JCRBOutcomes.jsp>) where all outcomes of the JCRB meetings are listed. This tool was created in order to save the history of the resolutions, recommendations and actions that were adopted/taken by the JCRB, and to make them more easily searchable.

13. Next Meetings

A. Henson opened the discussion reminding the delegates that at the 31st JCRB meeting the question of the frequency of the JCRB meetings had already been approached. He then asked each RMO as to whether it was necessary for the JCRB to meet twice a year. In view of their answers, he proposed to cancel the 2014 autumn meeting of the JCRB because of the preparative and logistic workload related to forthcoming CGPM meeting in November 2014.

After discussion the JCRB delegates adopted the following resolutions:

Resolution 32/1: There will not be a meeting of the JCRB in late 2014 (because of the logistics and workload related to the 25th CGPM).

Resolution 32/2: *Two JCRB meetings will be scheduled each year. A decision will be made on a “case by case” basis as to whether the second meeting is necessary. Rotation of the meetings between BIPM and regions will be decided accordingly.*

Resolution 32/3: *The 33rd meeting of the JCRB will take place on March 18 and 19, 2015 at the BIPM.*

Resolution 32/4: *The 34th meeting of the JCRB is scheduled for September, 2015 at the KazInMetr, Kazakhstan.*

Noting that Chingis Kuanbayev, on secondment from KazInMetr, Kazakhstan, since September 2012, will complete his secondment at the end of January 2015, and that this 32nd meeting of the JCRB will be his last one, the JCRB expressed its thanks to him for his outstanding contribution as JCRB Executive Secretary, and asked that these thanks be recorded.

14. Meeting closure

A. Henson thanked the delegations for their continuous support to the CIPM MRA process and for their active participation in the meeting.

Having no further issues for discussion, the meeting was closed.

15. Resolutions, Recommendations & Actions

Action 32/1: BIPM to amend the “Key and supplementary comparison registration and progress” form, so that the status “Protocol complete” reads “Protocol complete/approved”.

Action 32/2: BIPM to collate the comments related to problems with, or desired changes to, the CIPM MRA review from the CCs strategy documents and CCQM questionnaire, which will be later complemented by the feedback from Action 32/6 in order to provide useful and collated input to the JCRB and the NMI Directors Workshop on the CIPM MRA review.

Action 32/3: BIPM to consider launching two (or one combined) questionnaire(s) related to the KCDB using the “pop-in” software addressing:

- “Why users are accessing the KCDB?” and
- “How easy (or not) it was to find the information?”

Action 32/4: BIPM to provide a list at each JCRB meeting of Associates of the CGPM who have been encouraged to become a Member State of the BIPM (in accordance with Resolution 4 of the 24th meeting of the CGPM).

Action 32/5: CIPM MRA: Each RMO to prepare bullet points identifying, from their perspective, the benefits and the successes of the CIPM MRA. The intention is to eventually combine these into a single presentation to be made at the CGPM as an introduction to the Draft Resolution to be presented at the 25th meeting of the CGPM on the CIPM MRA. It is envisaged that the common points will be compiled and supplemented by RMO specific perspectives (one slide per RMO). BIPM will add

introductory statistics, and the presentation will conclude with progress already made towards a sustainable CIPM MRA and as an introduction to the Draft Resolution.

RMOs to coordinate and send the common and RMO specific bullet points to the BIPM (*JCRB Executive Secretary*) by the end of May, 2014 so that the presentation can be discussed at the June meeting of the CIPM bureau.

Action 32/6: Each RMO to individually contribute to the CIPM MRA review by highlighting the successes and challenges for them and their stakeholders, and suggest practical ideas for improvements in the operation of the activities falling within the responsibility of the JCRB. To facilitate collation of the information the RMOs will attempt to follow a common format. To enable development of the format each RMO should send its ideas for line items to A. Steele by beginning of June 2014. A. Steele will propose a draft common format to the RMOs for comments by the end of June 2014. The final completed discussion document to be submitted by each RMO to the BIPM by the end of 2014 for discussion at the 2015 JCRB meeting.

Action 32/7: EURAMET to update their paper “Role of DIs within the CIPM MRA” taking due account of comments received internally and from other RMOs for use internally within EURAMET. BIPM to check that the revised EURAMET paper is consistent with CIPM MRA rules and practices.

Action 32/8: EURAMET to collaborate with the BIPM to produce a generalized version of the paper “Role of DIs within the CIPM MRA” for wider use by the other RMOs and for possible adoption by the JCRB.

Action 32/9: Noting that the RMOs indicated that they either already have a dedicated webpage (EURAMET) for training or are in the process of creating such page (AFRIMETS, APMP, COOMET, SIM), the BIPM will propose to the DCMAS Network to include the appropriate links on their website. Furthermore BIPM will enquire whether it is possible for them to make “training” more visible on the website. RMOs to provide the JCRB Executive Secretary with appropriate links as soon as they become available.

Action 32/10: The JCRB Chairman to inform the CIPM that the CIPM MRA documents requiring revisions related to minor editorial and format changes and updating of internal cross references approved by the JCRB will be brought to the CIPM for information.

Action 32/11: BIPM to write to GULFMET thanking them for the 2013 progress report and welcoming the progress made. The letter should also include useful advice on key elements/activities that would increase the confidence of the metrology community as GULFMET strives to be as an RMO within the meaning of the CIPM MRA.

Action 32/12: JCRB Executive Secretary to update the document CIPM MRA-G-03 for consideration at the next JCRB meeting by adding an additional option whereby the IGO may elect to work through one or more regions (on behalf of all other regions) for review of the QS and intra-regional review of the IGO’s CMC declarations.

Action 32/13: The JCRB Chairman to inform the CIPM of the changes to the form “Nomination of a Designated Institute” whereby in future the starting date of participation in the CIPM MRA will be considered as the date on which the BIPM receives the designation form.

Action 32/14: The JCRB agrees on the proposed additional text to the guidance document CIPM MRA-D-02 (which a further suggested text amendment) in response to the request of the CIPM bureau regarding the use of the CIPM MRA logo on certificates/reports that include a statement of conformity. The text clarifies that the CIPM MRA logo attests only to the measurement component of such certificates/reports. The JCRB Chairman to inform the CIPM on the clarification.

Action 32/15: AFRIMETS has volunteered to identify an NMI within its region to work with BIPM and BIML in developing the World Metrology Day poster for 2015.

Recommendation 32/1: Each RMO to provide an official representative to the NMI Directors Workshop on CIPM MRA review.

Resolution 32/1: There will not be a meeting of the JCRB in late 2014 (because of the logistics and workload related to the 25th CGPM).

Resolution 32/2: Two JCRB meetings will be scheduled each year. A decision will be made on a “case by case” basis as to whether the second meeting is necessary. Rotation of the meetings between BIPM and regions will be decided accordingly.

Resolution 32/3: The 33rd meeting of the JCRB will take place on March 18 and 19, 2015 at the BIPM.

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