

**Report of the 33<sup>rd</sup> Meeting of the JCRB**

Held on March 18-19, 2015

BIPM, Sevres

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## Participants

### BIPM-CIPM

|                           |                                      |
|---------------------------|--------------------------------------|
| Dr. Martin Milton.....    | (Chairman) BIPM                      |
| Mr. Andy Henson.....      | (Director, BIPM ILC Department) BIPM |
| Dr. Claudine Thomas ..... | KCDB Coordinator                     |
| Dr. Susanne Picard.....   | KCDB Coordinator designate           |
| Dr. Douglas Olson .....   | (Executive Secretary) BIPM           |

### Delegations

|                                |                                     |
|--------------------------------|-------------------------------------|
| Dr. Wynand Louw .....          | AFRIMETS representative to the JCRB |
| Prof. Noha Khaled.....         | AFRIMETS                            |
| Mr. Dennis Moturi .....        | AFRIMETS                            |
| Dr. Peter Fisk.....            | APMP representative to the JCRB     |
| Dr. Jongseon Park .....        | APMP                                |
| Dr. Peter Manson .....         | APMP                                |
| Dr. Pavel Neyezhnikov .....    | COOMET representative to the JCRB   |
| Mr. Chingis Kuanbayev .....    | COOMET                              |
| Prof. Nikolay Zhagora .....    | COOMET                              |
| Mr. Sergey Komissarov.....     | COOMET                              |
| Mr. Vassily Mikhalchenko.....  | COOMET                              |
| Dr. Beat Jeckelmann .....      | EURAMET representative to the JCRB  |
| Dr. Jan Petersen.....          | EURAMET                             |
| Dr. Maria Luisa Rastello ..... | EURAMET                             |
| Dr. Wolfgang Schmid .....      | EURAMET                             |
| Dr. Claudia Santo .....        | SIM representative to the JCRB      |
| Dr. Alan Steele .....          | SIM                                 |
| Dr. James Olthoff.....         | SIM                                 |

Dr. Claire Saundry .....SIM

H.E. Mr. Nabil A. Jolla ..... (observer) GULFMET

Mr Mohammed Ahmed Al Mulla ..... (observer) GULFMET

Eng. Omar S Kanakrieh ..... (observer) GULFMET

## 1. Welcome by the Chairman and approval of the agenda

Dr. Martin Milton, Director of the BIPM and Chairman of the JCRB, welcomed the delegates to the 33<sup>rd</sup> meeting of the JCRB.

The members of the JCRB delegations were then asked to introduce themselves. M. Milton informed the delegates that the new CIPM Secretary, Dr. James McLaren, sent his regrets at being unable to attend due to his appointment to the position only very recently (9 March 2015).

The agenda of the 33<sup>rd</sup> JCRB meeting was approved without amendments.

## 2. Approval of the minutes of the 32nd meeting of the JCRB and review of pending actions

The minutes of the 32<sup>st</sup> meeting of the JCRB were approved without amendments.

M. Milton reported on the status of actions agreed at the 32<sup>st</sup> JCRB meeting:

- Action 32/3 (regarding launching a pop-up window in the KCDB home page to inquire about why users are accessing the KCDB and ease of access) will be reported under agenda item 12.
- Action 32/4 (regarding Associates of the CGPM encouraged to become Member States of the BIPM) will be reported under agenda item 10.
- Action 32/6 (regarding RMOs contributing to the CIPM MRA review) will be reported under agenda item 8.
- Action 32/8 (regarding EURAMET collaborating with the BIPM to produce a new document on “Designated Institutes participating in the CIPM MRA”) will be reported under agenda item 9.3.
- During the review of Action 32/9 (regarding use of DCMAS network for linking to RMO training webpages) the RMOs were queried on the status of their training webpages and were reminded to provide linkages to their webpages to the JCRB Executive Secretary. Action 32/9 is restated as open.

**Action 32/9:** *RMOs to provide the JCRB Executive Secretary with new and updated links to webpages listing training on their websites (where they have not already done so) for linkage to the DCMAS Network website (previous action still open for some RMOs).*

- Actions 32/12 and 32/14 (regarding updates to documents CIPM MRA-G-03 and CIPM MRA-D-02) will be discussed under agenda items 9.2 and 9.1.

## 3. Report by the Chairman on progress since the 32<sup>nd</sup> JCRB meeting

M. Milton presented a report on the developments at the BIPM since the 32<sup>th</sup> meeting of the JCRB. The important points of the report included:

- New and excluded Member States of the BIPM, new and excluded Associates of the CGPM, and new signatories to the CIPM MRA;
- Potential new Member States of the BIPM and Associates of the CGPM;

- Report of the outcomes of the 25<sup>th</sup> CGPM held on 18 to 20 November 2014 in the *Palais des Congrès de Versailles*, Versailles, France. Two of the five resolutions of the meeting were highlighted, specifically: Resolutions 1 on the future redefinition of the International System of Units, the SI; and Resolution 5 on the importance of the CIPM Mutual Recognition Arrangement;
- The BIPM Capacity Building and Knowledge Transfer Programme (CBKT), initiated as part of Resolution 4 on the dotation of the BIPM for years 2016 to 2019, was described in terms of program goals and proposed activities. This programme seeks to facilitate participation in the activities of the BIPM by those countries without well-developed metrological infrastructure, through focused training opportunities and the BIPM, engagement with the global QI capacity building community, and comparisons of particular interest to Member States that are developing countries. Delivery of CBKT is dependent on donated funding, and it is offered as a ‘menu’ of activities with donors (NMIs or others) able to choose which specific activities they wish to support;
- The BIPM Workshop on Measurement Uncertainty will be held 15 to 16 June 2015 and JCRB delegates who were also NMI directors were reminded that their input was due soon;
- Lists of the BIPM secondees and guest workers, and upcoming meetings and events.

*[The Chairman’s report is available on the restricted-access JCRB working documents webpage. listed as [JCRB-33/03.0](#)]*

### **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 was presented at the meeting of the EURAMET TC-Quality in April 2014, which is in accordance with the CIPM decision at its 100<sup>th</sup> meeting that the BIPM present its QMS to RMO Quality TCs/WGs on a rotating basis. He reported the EURAMET decision from the meeting that it “has sufficient confidence in the QMS of BIPM and its ability to fulfill the requirements of the CIPM MRA”. A. Henson explained that the BIPM QMS is not required to fulfill the requirements of the CIPM MRA (of which the BIPM is not a signatory), but that the statement by EURAMET indicated its confidence in the QMS nonetheless.

Following the presentation EURAMET inquired as to whether the BIPM had considered giving yearly updates to the RMO which the BIPM had most recently presented its QMS, given the importance of traceability to the BIPM for many NMIs and that such updates would be required for the QMS of NMIs between the 5-year presentation. A. Henson stated that the BIPM reviews quality at monthly management meetings and makes yearly presentations to the JCRB, and reports formally to the CIPM who send a representative to the BIPM annual review of the QMS. The CIPM remain responsible for oversight of the BIPM QMS. After discussion the JCRB agreed to the following action:

**Action 33/1:** *The BIPM to review with the CIPM the process of the BIPM providing annual updates on its QMS between its formal presentations of the BIPM QMS (made at 5 year intervals to the RMOs on a rotating basis).*

*[The BIPM QMS report is available on the restricted-access JCRB working documents webpage. listed as [JCRB-33/03.1](#)]*

#### **4. Report from the CIPM**

- There was no report from the CIPM as Dr Jim McLaren was recently voted in as CIPM Secretary and was unable to attend the 33<sup>rd</sup> JCRB meeting. Points usually covered by the CIPM Secretary had been included in the Chairman’s Report under Agenda item 3.

#### **5. Highlights of the RMO reports to the JCRB**

##### **5.1. AFRIMETS**

N. Khaled presented the highlights of the AFRIMETS report. N. Khaled reported that at the 2014 AFRIMETS General Assembly the TC-Q met and approved quality documents on “Guidelines for Accepting a QS” and “Guidelines for Review of CMCs”. AFRIMETS was asked if their QS documents could be made available for other RMOs, to which they agreed. The JCRB agreed to the following action:

**Action 33/2:** *AFRIMETS to update their QS review documents (which are linked from the BIPM website).*

##### **5.2. APMP**

P. Fisk presented the highlights of the APMP report.

##### **5.3. COOMET**

P. Neyezhmakov presented the highlights of the COOMET report.

##### **5.4. EURAMET**

B. Jeckelmann presented the highlights of the EURAMET report.

##### **5.5. SIM**

C. Santo presented highlights of the SIM report and J. Olthoff presented the SIM quality report.

*[The individual RMO presentations are available on the restricted-access JCRB working documents webpage. Listed as [JCRB-33/05.1](#); [JCRB-33/05.2](#); [JCRB-33/05.3](#); [JCRB-33/05.4](#) and [JCRB-33/05.5](#) respectively.]*

#### **6. GULFMET presentation and discussion on progress**

N.A. Molla, GSO Secretary General made a speech thanking the JCRB for inviting the GULFMET delegation to the meeting and providing them the opportunity to present their progress toward becoming an internationally recognized RMO. M.A. Al Mulla, GULFMET

President, then made a presentation titled “Gulf Association for Metrology, GULFMET. Toward International Recognition”. This presentation provided an introduction to GULFMET, and emphasized their activities in the categories of:

- strategy, vision and mission. GULFMET’s vision is to establish a self-sufficient and sustainable internationally recognized RMO. The mission, strategy, and goals toward reaching that vision were reported;
- roadmap to international recognition. A roadmap was presented for the period 2010 to 2015 which was based on guidance the JCRB provided from the 32<sup>nd</sup> meeting (GULFMET should focus on demonstrating technical competence as an RMO) and CIPM MRA-P-01 (Procedure for approval of the entry of a new RMO to the JCRB);
- capacity building, which included establishing infrastructure and building technical capacity. The organizational structure and technical committees were described, along with documentation that has been written. Technical capacity building detailed GULFMET TC meetings in mass (TC Mass) and quality (TC Q); inter-laboratory comparisons in mass (GULFMET.M.M-S01, piloted by UME Turkey) and pressure (participation by GULFMET in EURAMET 1252; and completed training within GULFMET for TC members along with scheduled training for 2015;
- international cooperation. This included MoUs between GSO/GULFMET and UME, KRISS, and CENAM; and
- international engagement. This described GULFMET participation in EURAMET TCs, EURAMET and APMP General Assemblies, and attendance as observers at the CCM and CCEM meetings in 2015.

Following the presentation JCRB delegates were given the opportunity to ask questions of GULFMET concerning their report and their oral presentation. GULFMET was asked about the status of the interlaboratory comparisons, and it was clarified that both are in the measurement phase and there are no results or reports. They were queried about their quality review and whether they had used external assessors in the review. There have been two reviews to date, one for Dubai Calibration Laboratory (UAE) and the second for the Calibration Laboratory of Kuwait. These both used internal assessors. The Qatar Armed Forces Calibration Center has been accredited by UKAS in June 2011.

Following the discussion, the JCRB Chair thanked the GULFMET delegation for their presentation and attendance at the meeting.

*[The GULFMET progress report and presentation are available on the restricted-access JCRB working documents webpage listed as [JCRB-33/06.0](#) and [JCRB-33/06.2](#)]*

## **7. KCDB report**

C. Thomas presented a summary of the semi-annual KCDB report to the JCRB. C. Thomas notes that due to the JCRB not meeting in the fall of 2014 the written report is in two parts: JCRB-33/07.1 which covers the six-month period from 01 March 2014 to 01 September 2014, and JCRB-33/07.2 which covers the six-month period from 01 September 2014 to 01 March 2015. The report included the following points:

- As at 1st of March 2015, the KCDB included a total of 23 969 CMCs. Over the period covered by the latter report 23 newly approved sets of CMCs were published, corresponding to a decrease of about 900 CMCs. The main reason for the reduction is the extensive use of “uncertainty tables” in APMP’s CMCs in electricity and magnetism.
- Although on average the number of CMCs has appeared to stabilize since 2012, in fact there remains a constant increase of about 900 CMCs per year due to new submissions with two one-time reductions in 2013 and 2014 (mentioned above) due the extensive use of “uncertainty tables”.
- 154 CMCs were temporarily removed from the KCDB, compared with 129 as at 1 September 2014 and 150 as of 1 March 2014.
- As of 18 March 2015 there remained only 1 CMC greyed-out from the KCDB for more than five years ago (Bulgaria in dimensional metrology) which reached the five-year limit on 29 June 2014. The expected Final Report of a EURAMET key comparison in the field, if it is completed by 29 June 2015, will resolve the status of this CMC. It is noted that the written KCDB report also lists a CMC from Mexico in RI as exceeding the five-year greyed-out status, however this CMC was permanently deleted from the KCDB on 13 March 2015.
- 22 of the 41 Associates who have signed the CIPM MRA have CMCs currently published in the KCDB.
- As of 01 March 2015, 68 % of the total 1319 comparisons (key and supplementary) are completed and have their reports published in the KCDB; about 2350 graphs of equivalence are currently available, including more than 80 new graphs of equivalence published over the last six months.

Following the presentation, C. Kuanbayev inquired whether the KCDB could identify as part of its KCDB report Key and Supplementary Comparisons which were started many years previously but had not yet been published or reached conclusion. This information could be delivered to the RMO representatives and to their TC-Chairs to encourage action taken on the comparisons to bring them to a conclusion. After discussion the JCRB decided on the following action:

**Action 33/3:** *The BIPM KCDB office, as part of the KCDB report to the JCRB, to identify Key and Supplementary Comparisons which were started 5 or more years ago and have not reached a conclusion.*

As the 33<sup>rd</sup> JCRB meeting was the last meeting for C. Thomas due to her retirement in 2015, the JCRB delegates expressed their profound thanks for her dedicated service to the KCDB and the JCRB, and wished her well for her retirement.

*[The KCDB reports are available on the restricted-access JCRB working documents webpage listed as [JCRB-33/07.1](#) and [JCRB-33/07.2](#)]*

## 8. Discussion on the CIPM MRA review

In preparation for this agenda item, each RMO had been asked to prepare a short presentation which would address the following points related to the implementation and operation of the CIPM MRA:

- Its continued suitability for purpose (does it address the needs?);
- Opportunities to simplify the overall system; and
- Opportunities to improve the efficiency of the processes, procedures and tools.

RMOs individually made their presentations and a lively discussion followed. Some of the salient points raised in the presentations and discussions were the following. There was consensus on the need to streamline the CMC review process, however different mechanisms for accomplishing this were proposed. AFRIMETS stated that for their RMO CMCs are not a big burden, whilst KCs are. AFRIMETS stated that the correctness of CMCs and QMS rests first with the NMI, and secondly with the RMO, and that inter-RMO review could be reduced. APMP said that because the sustainability of the CIPM MRA depends on the NMIs and RMOs to support the workload, increasing the number of KCs is not sustainable; increasing the intervals between KCs will not deliver the technical confidence that is the basis of the CIPM MRA. P. Fisk suggested on-site peer review should play a larger role in delivering technical confidence. COOMET stated the need to have agreed upon methods for evaluation of KCs within a metrology area to provide consistent support for CMCs, and to reduce the workload for the KC pilot in data analysis and writing the reports. EURAMET stated various improvements such as reduced number of participants in KCs, reduced number of KCs by defining a set of “core competences”, an improved KCDB platform (data entry, search), and more use of uncertainty matrices or formulas to improve readability. EURAMET’s proposed eliminating the inter-RMO review and replacing it with an appeal mechanism open to all RMOs and CIPM MRA signatories as a means of reducing the CMC review workload. SIM stated the concept of scaling the level of rigor of the CMC process review according to the technical level of the CMC claim, the need to establish criteria for how QMS can cover measurement services and support CMCs not included in KCs, and the need to improve training on the principal steps for achieving CMC publication.

The JCRB discussed an agenda for the CIPM MRA review workshop, drafted previously by the CIPM bureau. Comments included: the need to set objectives clearly at the beginning by the NMI directors’ panel; alternative means of bringing the users’ perspective; and consideration that the directors’ panel might be better placed after the CC and RMO panels.

The JCRB discussed how to provide the RMO input to the review workshop, and agreed to the following action:

**Action 33/4:** *In preparation for the October 2015 CIPM MRA review workshop, the RMOs will prepare a common presentation on behalf of the JCRB panel. This presentation will summarize shared views on the challenges for the sustainability of the CIPM MRA, and a range of responses proposed by different RMOs with their practical ideas for*

improvement. AFRIMETS will coordinate preparation of the presentation by collating input from the RMOs.

[The individual RMO presentations on the CIPM MRA review are available on the restricted-access JCRB working documents webpage. Listed as [JCRB-33/08.1.1](#); [JCRB-33/08.1.2](#); [JCRB-33/08.1.3](#); [JCRB-33/08.1.4](#); and [JCRB-33/08.1.5](#) respectively.]

## 9. Procedures to be submitted to the CIPM for approval

D. Olson made a presentation on changes that are proposed to three guidance documents that require approval by the JCRB.

**CIPM MRA-D-02 (request for approval)** “Use of the CIPM MRA logo and certificates statement”, had been revised and presented at the 32<sup>nd</sup> JCRB. The text clarified that when the CIPM MRA logo is used on certificates or reports that include a statement of conformity, the logo attests only to the measurement component of the certificate/report. After the 32<sup>nd</sup> JCRB, the BIPM received a request inquiring about the use of the logo on certified reference materials. Text has been added that applies the same concept of logo use on calibration certificates to logo use on certificates of CRMs.

**CIPM MRA-G-03 (request for approval)** “Guidelines for the review of Quality Systems operated by IGO institutes and/or designated institutes, and the review of their calibration and measurement capabilities (CMCs)”. The JCRB Executive Secretary updated the document according to the action 32/12 of the 32<sup>nd</sup> JCRB. This revision added text to state an “elected option” for QS review and CMC intra-regional review, which is most often used by IGOs or Dis. For the “elected option”, the IGO/DI elects to work through one or more RMOs for the QS review and CMC intra-regional review.

**Designated Institutes (new document, request for approval)**. “Designated Institutes participating in the CIPM MRA: Expectations and nomination form”. This document was written in response to action 32/8 of the 32<sup>nd</sup> JCRB, where it was discussed that there was a need for general guidance document on DIs within the context of the CIPM MRA that would replace current ad-hoc informational documents. This document describes the role and expectations for Designated Institutes participating in the CIPM MRA; the nomination form for designation, to be completed by the designating authority, is appended. EURAMET had reviewed the document during drafting stage and expressed its agreement with the present version.

At the end of the discussion, the JCRB adopted the following actions:

**Action 33/5:** *The JCRB approved the revision to CIPM MRA-D-02, “Use of the CIPM MRA logo and certificates statement”, and the BIPM will inform the CIPM of the revision.*

**Action 33/6:** *The JCRB approved the revision to CIPM MRA-G-03, “Guidelines for the review of Quality Systems operated by IGO institutes and/or designated institutes, and the review of their calibration and measurement capabilities (CMCs)”, and the BIPM will inform the CIPM of the revision.*

**Action 33/7:** *The JCRB approved the new document “Designated Institutes participating in the CIPM MRA: Expectations and nomination form” and the BIPM will send the document to the CIPM for information.*

## 10. Associates of the CGPM encouraged to become Member States of the BIPM

A. Henson presented the list of Associates of the CGPM that have been encouraged to become Member States of the BIPM. There are currently 19 Associates fulfilling the requirements to be on the “ladder” of the 5-year period of increasing subscription. Belarus, Lithuania, and Slovenia are presently in discussions regarding the possibility of becoming Member States of the BIPM.

## 11. WMD poster

A. Henson presented WMD 2015, a joint initiative between BIPM and OIML celebrating the 20th of May anniversary of the signing of the Metre Convention, and thanked NMISA for its efforts in producing the poster. The theme of the 2015 WMD is “Measurements and Light” and is built around the 2015 International Year of Light and Light-Based Technologies. The 2015 website is live at [www.worldmetrologyday.org](http://www.worldmetrologyday.org). RMOs were reminded that NMIs may place their own logos on the posters, and may post details of any events they organise on both the World Metrology Day website and the IYL open lab day listing <http://www.light2015.org/Home/Event-Programme/2015/Other/GOLD-Global-Open-Lab-Days.html>. The RMOs were reminded of their responsibility for working with the NMIs within their region for the development of future posters. After the presentation, the JCRB agreed to the following actions:

**Action 33/8:** *COOMET volunteered to identify an NMI within its region to work with the BIPM in developing a poster for World Metrology Day for 2016.*

**Action 33/9:** *SIM volunteered to identify an NMI within its region to work with the BIPM in developing a poster for World Metrology Day for 2017.*

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

D. Olson made a presentation on the status of CMC submissions and the JCRB website. Since the 32<sup>nd</sup> JCRB, 49 CMC sets have been published. The CMC sets in status “review still in progress” were presented, with those whose last action was in 2014 and earlier highlighted. The earliest of these date back to December of 2010. The RMO representatives were asked to inform their TC chairs of the CMCs sets that are in the status of “review still in progress”.

D. Olson presented an update to the analysis that C. Kuanbayev had initiated prior to the 32<sup>nd</sup> JCRB (March 2014) that looked at the impact of changes in the review deadlines instituted following the 2013 JCRB workshop. That analysis looked at two aspects of the deadline changes: 1) did the time for post-to-publish change after the change in deadlines, and 2) did the loss of reviewing rights by the RMOs change after the change in deadline.

Analysis of the data in the period from the 32<sup>nd</sup> JCRB through February 2015 showed that the average time, post-to-publish has increased back towards historical levels (at about

130 days), reversing a trend of shorter review times that occurred leading up to February of 2014. This increase could be due to the relatively small sample size during the periods of analysis, which could be influenced by outliers (CMC sets with long review times). In the year since the 32<sup>nd</sup> JCRB, the situation of loss of reviewing rights has improved, although there are still many instances of losses of rights. Results were shown by RMO and metrology area within the RMO where loss of rights occurred.

D. Olson presented the results, provided by C. Thomas, of the pop-up questionnaire that the KCDB had instituted in response to action 32/3 of the 32<sup>nd</sup> JCRB. Due to pop-up blockers in web browsers, the number of responses was small. The rate of responses has been about 20 per month since the questionnaire was launched in December 2014. For the question "What is the purpose of your visit today", the two responses with the highest percentage were "I need to access published CMCs of other laboratories" and "I wish to access a KCDB report". For the question "How easy was it to find the information", there was a significantly higher percentage for the responses of "very easy" or "quite easy" than responses of "not easy".

Following the presentation and discussion, the JCRB agreed to the following actions:

**Action 33/10:** *RMOs will monitor the JCRB CMC website and contact appropriate TC chairs regarding CMC sets that have been in the status of "review still in progress" for two years or more.*

**Action 33/11:** *RMOs will monitor the JCRB CMC website and contact appropriate TC chairs, regarding loss-of-right to vote on a CMC set due to either: not indicating they will review; not submitting a review for which they had indicated yes; or submitting a late review for which they had indicated yes.*

### **13. Criteria for acceptance of CMCs – reflections from the JCRB executive secretary based on operating the inter-regional review process**

D. Olson gave a presentation on information that could be obtained about the inter-regional review process, through analyzing various aspects of posted CMC set files and the content of inter-regional review documents. This work was initiated by C. Kuanbayev and jointly prepared by D. Olson and C. Kuanbayev. A data set of 101 CMC sets that were submitted in the time period from 1 March 2013 to 23 January 2015 was used in the analysis. Of these, 64 CMC sets were submitted using "classic review" and 37 CMC sets were submitted using "fast track".

The analysis first looked at whether more Consultative Committees had adopted the use of "fast track", "web forum", or "workload distribution" for the inter-regional review process compared to CMC sets prior to 1 March 2013. The use of fast track had increased, but the use of web forum and workload distribution had not changed.

The analysis next looked at whether the submitting RMO had included the Quality System (QS) report and the Technical Committee (TC) report with the CMC set documents for the 64 CMC sets that were submitted using the classic review. 32 of the 64 CMC sets were missing either the QS report, the TC report, or both. These results were broken down by submitting RMO and metrology area.

In the time period studied, 44 CMC sets of the 64 CMC sets were published. In a final area of the analysis, the reviewer reports of these published CMC sets were investigated for what they said about the quality of the submitted CMC. The reviewer comments were identified as nonconformities in three categories: quality of data (correct data formatting, excel table structure, etc.), technical data (e.g., appropriate uncertainty), and supporting evidence (e.g., published KC to support the CMC). No attempt was made to rate the severity of the non-conformity (i.e., whether it occurred in multiple CMCs within a set), only whether it had or had not been identified in the review. Of the 44 CMC sets which reached publication, only 8 had no non-conformities. As a CMC set under this analysis scheme could have 0, 1, 2, or 3 category non-conformities, it was found that the average time to re-post a CMC set correlated with the number of category non-conformities, with the time to re-post increasing as the number of category non-conformities increased.

#### **14. Summary of JCRB position on GULFMET progress**

This session was conducted without the GULFMET observers present (they were invited to receive feedback under Agenda item 17). Each RMO was asked to state its position on GULFMET progress and its position on whether GULFMET was ready to become an RMO within the meaning of the CIPM MRA. GULFMET progress was discussed with regard to the requirements stated in guidance document CIPM MRA-P-01, and what steps they needed to take next toward satisfying those requirements. The JCRB position on GULFMET progress is reported in item 17.

#### **15. Other business**

##### **15.1. Publishing reports of non-signatories in supplementary comparisons**

SIM raised the issue of revisiting the guidelines on publishing reports of supplementary comparisons that have participants that are non-signatories to the CIPM MRA, as stated in guidance document CIPM MRA-D-05. The issue arose in regard to SIM.M.FF-S8, a supplementary comparison in Draft A stage with only two of the six participants as signatories to the CIPM MRA. The present guidance is that results of non-signatories will not appear in reports published in the KCDB, however current practice is to publish any report that is forwarded to the KCDB by the RMO. As background to the discussion, D. Olson presented a list of all the supplementary comparisons registered in the KCDB which had non-signatory participants. There are 26 (out of 422 total SCs) in this category; 6 have been completed and 5 of the 6 have reports published in Metrologia (linked from the KCDB). These 5 reports all contain the results of the non-signatories. The 20 SCs still in progress will face the same issue when they are completed.

C. Santo stated if the decision is to enforce the guidelines for SIM.M.FF-S8, there will be no value for the participants to publish, as the comparison will show only the results of the two signatories. D. Olson presented a similar table showing RMO Key Comparisons with non-signatory participants; there are currently 9 total, with 3 completed, all whose

reports appear in Metrologia. The non-signatory results do not appear in the tables and graphs of the KCDB.

In the discussion that followed it was decided that this issue should be looked at in more depth at the 34<sup>th</sup> JCRB, with SIM tasked to summarize the concerns and proposed actions as they raised the issue. The JCRB agreed upon the following action:

**Action 33/12:** *The JCRB will return to the issue of publication of results of non-signatory participants in Supplementary Comparisons and RMO Key Comparisons at the 34th JCRB. SIM, who raised the issue, will prepare a paper on the concerns and proposed actions to be distributed to the JCRB Executive Secretary one month prior to the 34th JCRB, for posting on the JCRB working documents webpage.*

## 16. Next meetings

V. Mikhailchenko gave a presentation on KazInMetr and Kazakhstan, the proposed site of the 34<sup>th</sup> JCRB. The issue of whether to hold two JCRB meetings in 2016 will be revisited at the 34<sup>th</sup> JCRB. The JCRB agree to the following resolutions regarding the next two JCRB meetings.

**Resolution 33/1:** *The 34th meeting of the JCRB will take place on September 8 and 9, 2015 at KazInMetr, Kazakhstan.*

**Resolution 33/2:** *The 35th meeting of the JCRB is scheduled for March 16 and 17, 2016 at the BIPM in Sevres.*

## 17. Debrief of GULFMET delegation and meeting closure

M. Milton delivered a debriefing to the GULMET delegation on the position of the JCRB relative to GULFMET progress. The debriefing is as follows (in italics).

*The JCRB thanks GULMET for its presentation and recognizes that great progress has been made in the organisation of GULFMET in establishing the structures needed to operate as an RMO. The JCRB is also pleased to see that GULFMET is taking advantage of the opportunity to engage with NMIs from other regions.*

*In order for a candidate RMO to be given “provisional” status (within the meaning of the CIPM MRA), the JCRB Chair must write to the CIPM to make such a recommendation. This submission must include evidence that the candidate RMO meets criteria 1, 4, and 5 in section 3 of JCRB document CIPM MRA-P-01.*

*Whilst the JCRB has seen evidence that GULFMET meets criteria 1 and 4, it still needs stronger evidence about criterion 5. This criterion is interpreted as active engagement in relevant Working Groups of the CCs, and not just attendance at the CC Plenary itself.*

*Consequently, the JCRB propose that a GULFMET delegation attend the 34<sup>th</sup> JCRB meeting – to be held in Astana in September 2015, to present evidence (including a roadmap) for how GULFMET is addressing criterion 5.*

*Following a satisfactory presentation of this evidence, the JCRB will be inclined to ask the JCRB Chair to write to the CIPM to request that GULFMET is given provisional status as an RMO.*

The GULMET delegation thanked the JCRB chair for the debriefing and accepted the offer to attend the 34<sup>th</sup> JCRB meeting. The following action was agreed to be the JCRB after the discussion of Agenda item 14.

**Action 33/13:** *In order to facilitate the JCRB Chair in writing to the CIPM to recommend the granting of provisional acceptance of GULFMET as an RMO (within the meaning of the CIPM MRA), the JCRB decided to invite a GULFMET delegation to attend the 34th JCRB meeting to present:*

- *evidence including a roadmap and timetable for how they plan to address criterion 5 of CIPM MRA-P-01, section 3;*
- *some wider context about their role as an RMO within the region;*
- *the scope of capabilities of NMIs within their RMO;*
- *and their plan for engagement with NMIs within other RMOs.*

M. Milton thanked the RMO delegations for their continued support to the CIPM MRA and their active participation in the meeting. Having no further issues for discussion, the meeting was closed.

## **18. Resolutions, Recommendations, and Actions**

**Action 32/9:** RMOs to provide the JCRB Executive Secretary with new and updated links to webpages listing training on their websites (where they have not already done so) for linkage to the DCMAS Network website (previous action still open for some RMOs).

**Action 33/1:** The BIPM to review with the CIPM the process of the BIPM providing annual updates on its QMS between its formal presentations of the BIPM QMS (made at 5 year intervals to the RMOs on a rotating basis).

**Action 33/2:** AFRIMETS to update their QS review documents (which are linked from the BIPM website).

**Action 33/3:** The BIPM KCDB office, as part of the KCDB report to the JCRB, to identify Key and Supplementary Comparisons which were started 5 or more years ago and have not reached a conclusion.

**Action 33/4:** In preparation for the October 2015 CIPM MRA review workshop, the RMOs will prepare a common presentation on behalf of the JCRB panel. This presentation will summarize shared views on the challenges for the sustainability of the CIPM MRA, and a range of responses proposed by different RMOs with their practical ideas for improvement. AFRIMETS will coordinate preparation of the presentation by collating input from the RMOs.

**Action 33/5:** The JCRB approved the revision to CIPM MRA-D-02, "Use of the CIPM MRA logo and certificates statement", and the BIPM will inform the CIPM of the revision.

**Action 33/6:** The JCRB approved the revision to CIPM MRA-G-03, “Guidelines for the review of Quality Systems operated by IGO institutes and/or designated institutes, and the review of their calibration and measurement capabilities (CMCs)”, and the BIPM will inform the CIPM of the revision.

**Action 33/7:** The JCRB approved the new document “Designated Institutes participating in the CIPM MRA: Expectations and nomination form” and the BIPM will send the document to the CIPM for information.

**Action 33/8:** COOMET volunteered to identify an NMI within its region to work with the BIPM in developing a poster for World Metrology Day for 2016.

**Action 33/9:** SIM volunteered to identify an NMI within its region to work with the BIPM in developing a poster for World Metrology Day for 2017.

**Action 33/10:** RMOs will monitor the JCRB CMC website and contact appropriate TC chairs regarding CMC sets that have been in the status of “review still in progress” for two years or more.

**Action 33/11:** RMOs will monitor the JCRB CMC website and contact appropriate TC chairs, regarding loss-of-right to vote on a CMC set due to either: not indicating they will review; not submitting a review for which they had indicated yes; or submitting a late review for which they had indicated yes.

**Action 33/12:** The JCRB will return to the issue of publication of results of non-signatory participants in Supplementary Comparisons and RMO Key Comparisons at the 34th JCRB. SIM, who raised the issue, will prepare a paper on the concerns and proposed actions to be distributed to the JCRB Executive Secretary one month prior to the 34th JCRB, for posting on the JCRB working documents webpage.

**Action 33/13:** In order to facilitate the JCRB Chair in writing to the CIPM to recommend the granting of provisional acceptance of GULFMET as an RMO (within the meaning of the CIPM MRA), the JCRB decided to invite a GULFMET delegation to attend the 34th JCRB meeting to present:

- evidence including a roadmap and timetable for how they plan to address criterion 5 of CIPM MRA-P-01, section 3;
- some wider context about their role as an RMO within the region;
- the scope of capabilities of NMIs within their RMO;
- and their plan for engagement with NMIs within other RMOs.

**Resolution 33/1:** The 34<sup>th</sup> meeting of the JCRB will take place on September 8 and 9, 2015 at KazInMetr, Kazakhstan.

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