

**Report of the 38<sup>th</sup> Meeting of the JCRB**

Held on September 13 and 14, 2017

METAS, Bern, Switzerland

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## Participants

### **BIPM-CIPM**

Dr. Martin Milton..... (Chairman) BIPM

Mr. Andy Henson.....(Director, BIPM ILC Department) BIPM

Mr. Nikita Zviagin..... (Executive Secretary) BIPM

Dr. Willie May ..... CIPM

### **METAS**

Dr. P. Richard ..... METAS Director

### **Delegations**

Dr. Wynand Louw ..... AFRIMETS representative to the JCRB

Prof. Noha Khaled.....AFRIMETS

Mr. Dennis Moturi .....AFRIMETS

Ms. Zakithi Msimang ..... AFRIMETS

Dr. Toshiyuki Takatsuji ..... APMP representative to the JCRB

Dr. Peter Manson ..... APMP

Dr. Isao Kishimoto..... APMP

Dr. Chu-Shik Kang .....APMP

Dr. Pavel Neyezhnikov ..... COOMET representative to the JCRB

Dr. Valery Hurevich..... COOMET

Mr. Sergei Komissarov.....COOMET

Dr. Beat Jeckelmann .....EURAMET representative to the JCRB

Dr. Wolfgang Schmid .....EURAMET

Dr. Robert Edelmaier .....EURAMET

Dr. Enver Sadikoğlu.....EURAMET

Mr. Saleh Al-Rumaihi ..... GULFMET representative to the JCRB

Mr. Nabil Molla ..... GULFMET

Eng. Omar S Kanakrieh ..... GULFMET

Dr. Majed Alharthi ..... GULFMET

Ms. Amina Zainal ..... GULFMET

Ms. Faizah Almathkor ..... GULFMET

Mr. Faisal Alsulaimam ..... GULFMET

Dr. Claudia Santo .....SIM representative to the JCRB

Dr Héctor Laiz .....SIM

Dr. Alan Steele .....SIM

Ms. Georgette Macdonald .....SIM

Dr. James Olthoff .....SIM

Dr. Claire Saundry .....SIM

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

M. Milton, Director of the BIPM and Chairman of the JCRB, welcomed the delegates to the 38<sup>th</sup> meeting of the JCRB. Special thanks were extended to METAS for their hospitality in hosting the meeting and the efforts of their staff to make it successful. P. Richard, director of METAS, welcomed the delegates to Bern, Switzerland. He noted the great involvement of specialists from METAS in the work of the JCRB and expressed his hopes for future active cooperation. P. Richard wished the JCRB successful discussions and then left the Meeting.

The members of the JCRB delegations introduced themselves.

The agenda of the 38<sup>th</sup> JCRB meeting was presented and approved without amendment.

## 2. Approval of the minutes of the 37th meeting of the JCRB and review of pending actions

The minutes of the 38<sup>th</sup> meeting of the JCRB were approved with small editorial changes, suggested by W. Louw:

- All the participants of the Meeting should be referenced in text using one format (first letter of the name and the surname).
- Few typos in names should be corrected.

M. Milton reported on the status of actions agreed to at the 37<sup>th</sup> JCRB meeting:

- Action 37/01: A link to GULFMET guidance documents on QS and CMC review was provided by GULFMET in August 2017.
- Action 37/02: A new draft version of CIPM MRA-D-01 “Rules and procedures for the JCRB” was distributed prior to the meeting. The document will be discussed in agenda item 10.
- Action 37/03: The supporting document on “broad-scope CMCs” was distributed before the meeting and will be discussed in agenda item 5.
- Action 37/04: Status of KCDB 2.0 will be discussed in agenda item 7.
- Resolution 37/1: The suite of JCRB documents is updated and published on the BIPM website.
- Resolution 37/4: The decision whether to hold a JCRB meeting in September 2018 will be discussed in agenda item 13.

## 3. Report from BIPM on progress since the 37<sup>th</sup> JCRB meeting

A. Henson reported on developments at the BIPM since the 37<sup>th</sup> meeting of the JCRB. The Important points of the report included:

- No changes in Member States and Associates since the 37<sup>th</sup> JCRB meeting;

- The number of designated institutes has decreased from 156 to 155, since IRMM and JRC merged together under the name of JRC;
- No changes in the list of Associates encouraged to become Member states since the 37<sup>th</sup> JCRB Meeting;
- The theme for the 2017 World Metrology Day was “Measurements for transport”. Thanks to INM from Colombia for preparing the poster;
- In 2018 World Metrology Day launches the information campaign on redefinition of SI. The partner NMI will be selected by EURAMET who organised a competition. Five posters were proposed by METAS, PTB, INRIM, VSL and BMM;
- World Metrology Day 2019 will be prepared by APMP;
- All the RMOs now have links to the Guidelines on Quality System and CMC reviews available at BIPM website.
- New directors of the BIPM Ionizing Radiation and the BIPM Time Departments have been appointed. They are Dr Steven Judge and Dr Patrizia Tavella respectively.
- Work continues on revisions to ISO/IEC 17025. The FDIS is out for vote, which will close 09 October 2017. Three key objectives were identified in the position paper adopted by the CIPM in March 2015, and have been achieved. Additionally, there are three points where it was important to argue for consistency with existing CIPM policy and guidance, which has also been done.
- BIPM will start looking for the new JCRB Executive secretary in February 2018 for start in late 2018 to cover 2019/2020.

*[The BIPM report is available on the restricted-access JCRB working documents webpage, listed as [JCRB-38/03.00](#)]*

A. Henson also reported on progress of the BIPM Capacity Building and Knowledge transfer (CBKT) Programme. He talked about the Programme goals and activities, including engagement with the Global QI and reported about all initiatives: completed, ongoing and future. He remarked on the growing interest of the RMOs in the Programme and presented some ideas for discussion.

During the discussion W. Louw suggested the idea that was supported by all the RMOs of possibility to repeat CBKT courses internally inside each RMO. The idea of making course materials more open access was also discussed.

*[The CBKT course update report is available on the restricted-access JCRB working documents webpage, listed as [JCRB-38/03.01](#)]*

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

W. May delivered a report from the CIPM. He talked about the outcomes of the 3rd Meeting of the Presidents of the Consultative Committees that was focused on the following topics:

- review of the CIPM MRA,
- revision of document CIPM/D-01 following decisions made at the 2nd Meeting of CC Presidents (2016),
- matters relating to the CCs,
- planning for the 26th CGPM (2018),
- the Customs Convention on temporary importation of scientific equipment,
- Proposal for Establishment of Vice President for CCs
- Proposed objectives for the Consultative Committees.

W.May also presented some Decisions from the 105th Meeting of CIPM Oct 2016 that concern General Rules for CC Membership.

[The CIPM report is available on the restricted-access JCRB working documents webpage, listed as [JCRB-38/04.00](#)]

## 5. Possibilities of broad-scope CMCs: Action item 37/03

C. Santo led a discussion on possibilities for broad-scope CMCs. She presented a document, developed by the JCRB Task Group (comprising C. Santo, B. Jeckelmann, P. Manson, Z. Msimang, and T. Takatsuji). It proposed that instead of talking about “broad scope CMCs” that the focus should be “how to implement Recommendation 3b of the Working Group on the implementation and operation of the CIPM MRA?”. The document also included two proposals for this.

The meeting divided into five working groups to discuss the proposals and decide which of them could address the aim of Recommendation 3b. After discussion in groups the chair of each group gave a summary and joint discussion was organised. A new working group was organised in order to collate the ideas and prepare the resolution to the end of the Meeting.

Finally, the following Resolution was developed by the working group and agreed by the JCRB:

**Resolution 38/1** (*Risk-based CMC Review and Representative CMCs*): *RMOs and CCs are encouraged to further implement a risk-based approach to review of CMCs and to develop statements for the levels of CMCs for which an intra-RMO review may be sufficient for the purposes of international acceptance.*

*Taking note of the needs of NMIs and DIs at all levels, as a means towards implementation of recommendation 3b of the CIPM MRA review, the JCRB encourages Consultative Committees and the BIPM to continue to explore means to allow NMIs and DIs to publish CMCs in the KCDB for only their smallest uncertainty capabilities that are then used to support related services covered by their approved Quality System. Proposals are requested as to how to show the link between these capabilities and the “representative” CMCs. RMOs are encouraged to propose*

*additions to the Quality System review process to effect a fit-for-purpose review of these capabilities.*

Also, it was mentioned that the following important issues would need to be clarified if this approach is to be adopted, and these will be considered at the next JCRB Meeting:

- what modifications to the QS (RMOs) would be required;
- how to document the link between the “representative CMC” and the supported capabilities (services);
- the “boundary conditions” for the use of the CIPM MRA logo for supported services.

It was also suggested that in order to encourage communication between the JCRB and the CCs some representatives from the JCRB should take part in the Meetings of the CC Presidents.

The following action was agreed:

**Action 38/2** (*Improving communication: JCRB and CC Presidents*): *The JCRB requests the CIPM to invite representation from the JCRB to take part in meetings of the CC Presidents in order to encourage communication between the JCRB and the CCs.*

*[The document on Possibilities of broad-scope CMCs can be found on the restricted-access JCRB working documents webpage as [JCRB-38/05.00](#)]*

## **6. RACI analysis of the CIPM MRA review working group recommendations: Action item 36/03**

A. Steele gave a report on progress with the RACI analysis. He presented some ideas summarised in the form of an email that had been distributed prior to the meeting. The key points were:

- to "close off" analysis of the MRA Recommendation document and to use what has been learned and decided in the next phase of the exercise to launch the development of a JCRB Strategy and Action Plan and, in particular, to select and identify specific action items under each strategic theme that the JCRB will commit to working on in the future.
- to restructure the meeting agenda in such a way as to separate out the "reporting and informing" items from the "working on actions". The working sessions could be used for thematic breakout discussions, such as the two that have already been conducted for the RACI analysis.
- to extend the next JCRB Meeting (March 2018) to cover three full days (rather than usual day-and-a-half session). One full day could be reserved for usual RMO and QMS information presentations and discussion. Two full days - to conduct an in-depth strategic planning workshop. The objective of such a workshop would be to close off all aspects of MRA / RACI discussion, to identify the recommendations that deserve and require attention, to create the framework and outline for a

Strategy and Action Plan, and to do the initial brainstorming on a manageable first set of specific actions.

After the discussion the following action was agreed:

**Action 38/1 (Strategy and action plan):** *Following the lessons learned during the work using the RACI analysis tool, the JCRB proposes to progress towards the development of a strategy and action plan. The JCRB requests a working group consisting of Alan Steele (Chair), Toshiyuki Takatsuji, Andy Henson, Beat Jeckelmann, Wynand Louw, Mohammed Al Mulla, Pavel Neyezhnikov and Willie May to engage with the CIPM and subsequently develop some questions and draft text to initiate discussion at a one-day working session to develop both the strategy, and consequent actions at the extended JCRB Meeting in March 2018.*

*[The background documents related to agenda item 6 can be found on the restricted-access JCRB working documents webpage as [JCRB-38/06.1](#), [JCRB-38/06.2](#), [JCRB-38/06.3](#)]*

## 7. Status of the scope for KCDB 2.0: Action item 37/04

N. Zviagin gave the presentation prepared by S. Picard, the KCDB Coordinator, on the status of the scope for KCDB 2.0. At first he talked about the main objectives of the system and described the current stage of development. The competitive tender exercise will be completed in September 2017. Also he presented the list of main challenges for developers. The next steps and approximate time of their realisation also were discussed.

The work on KCDB 2.0 is scheduled such that an alpha-version of KCDB 2.0 should be available before 26th meeting of the CGPM (November 2018).

*[The presentation on KCDB 2.0 can be found on the restricted-access JCRB working documents webpage as [JCRB-38/07.00](#)]*

## 8. KCDB report

N. Zviagin presented a summary of the semi-annual KCDB report to the JCRB. The report included the following points:

- As of 25 August 2017, the KCDB has a total of 24 974 CMCs, with 18 693 in Physics (including ionizing radiation) and 6 281 in Chemistry. Over the last six months 34 countries published CMCs. The total number of CMCs increased by 319 over the last 12 months, corresponding to a relative increase of 1 %.
- Bosnia Herzegovina provided their first CMCs in Electricity and Magnetism and Ukraine published their first CMC in high purity (Chemistry).
- 206 CMCs are in greyed-out status (temporarily removed from the KCDB). There were 8 reinstatements from 3 countries (USA, Finland, Belgium) since the last JCRB Meeting. There are presently no greyed-out CMCs in the 1-year reinstatement period. CMCs that will reach the 5-year greyed-out limit in the next 6 months are France (1 CMC in M) on 25 November 2017, Argentina (1 CMC in L) on 29 November 2017 and Belgium (6 CMCs in TF) on 5 February 2018. CMC that will

reach the 5-year greyed-out limit in the next 12 months are Mexico (1 CMC in QM) on 5 April 2018, Belgium (25 CMCs in EM) on 14 August 2018, France (3 CMCs in EM) on 14 August 2018.

- As of 1 September 2017, there were 1500 total comparisons in the KCDB (985 KCs, 515 SCs). Of the 35 comparisons registered in the KCDB since the last JCRB meeting, 7 comparisons were registered for GULFMET. GULFMET has hence now 14 comparisons registered in the KCDB. Reports were published for 48 comparisons since the 37<sup>th</sup> JCRB.
- The number of comparisons seems to have reached a steady yearly start rate of around 80. The total ratio of Supplementary Comparisons, 1 out of 5 in 2006, has progressively increased to 1 out of 3.

*[The KCDB report is available on the restricted-access JCRB working documents webpage listed as [JCRB-38/08.0](#) and on the unrestricted BIPM website at <http://www.bipm.org/jsp/en/ViewKCDBReport.jsp>. The KCDB report presentation is available on the restricted-access JCRB working documents webpage listed as [JCRB-38/08.1](#)].*

## **9. Status of CMC submissions and review / issues from Consultative Committees**

N. Zviagin made a presentation on the status of CMC submissions and review, and the operation of the JCRB CMC review. Since the 37<sup>th</sup> JCRB, 17 CMC sets have been published, 26 CMC sets have been submitted and no sets were not approved or abandoned. As of 6 September 2017, 29 sets were in the status of “review in progress”. 1 CMC set had its last update more than 2 years ago, and 7 sets had their last update more than a year ago. RMOs whose CMCs sets were last updated in the first half of 2015 or earlier were asked to take appropriate action to bring the review process to conclusion. It was reported that 2 of the published CMC sets took longer than 900 days for the inter-RMO review; 1 of them took more than 4 years (1650 days). In most cases the longest portion of the review was the posting of the revised file by the submitting NMI/RMO.

In the period since the March of 2017, Inter-RMO review performance (the number of reviews performed according to meeting process deadlines) was 97% for APMP, 94 % for AFRIMETS, 93% for EURAMET, 89% for SIM, 80% for GULFMET and 77% for COOMET. No response to the review request was the main reason for loss of review rights (5 of 7 loss of rights for COOMET was due to the lack of response).

Percentage of CMC sets submitted without the required confirmation of the QMS evidence decreased but the situation still continues to occur. In the six months since the 37<sup>th</sup> JCRB meeting, there were 8 CMC sets submitted without quality confirmation (QM, EM, L, T). It was noted that although QM uses fast track procedure and always checks QS confirmation before it, the confirmations should be submitted with the submissions, in order to have them together on the CMC-portal.

As of 31<sup>st</sup> August 2017, 83 KCs and 73 SCs are in the category of unfinished and started 5 years or more ago. In the last six months, 16 KCs and 1 SC were removed from the category due to being approved. The complete list of comparisons remaining in this category is available in KCDB report.

*[The CMC status report is available on the restricted-access JCRB working documents webpage listed as [JCRB-38/09.00](#)].*

## **10. CIPM MRA-D-01 “Rules and procedures for the JCRB” update: action 37/02**

N.Zviagin gave a short presentation in which he presented the changes made to the document CIPM MRA-D-01 “Rules and procedures for the JCRB”. Main changes were made to the section 9 of the document: “Debates”, according to the action 37/02 of the previous JCRB Meeting. This action was to amend the document to properly reflect of the terms of reference and the *modus operandi* with regard to consensus decision making. Also some minor changes were made to the section 11: “Minutes”, again to reflect practice. All the changes were approved by the JCRB without any corrections.

*[The updated version of the document CIPM MRA-D-01 is available on the restricted-access JCRB working documents webpage listed as [JCRB-38/10.00](#)].*

*The presentation on update of the document CIPM MRA-D-01 is available on the restricted-access JCRB working documents webpage listed as [JCRB-38/10.01](#)].*

## **11. Highlights to the RMO reports to the JCRB**

### **11.1. AFRIMETS**

W. Louw presented the highlights of the AFRIMETS report.

### **11.2. APMP**

T. Takatsuji presented the highlights of the APMP report.

### **11.3. COOMET**

P. Neyezhnikov presented the highlights of the COOMET report, including Quality System.

### **11.4. EURAMET**

B. Jeckelmann presented the highlights of the EURAMET report.

### **11.5. GULFMET**

GULFMET RMO report was presented in agenda item 12.

### **11.6. SIM**

C. Santo presented highlights of the SIM report.

*[The individual RMO reports and presentations are available on the restricted-access JCRB working documents webpage, listed as [JCRB-38/11.01.0](#), [JCRB-38/11.02.0](#), [JCRB-38/11.02.1](#), [JCRB-38/11.03.0](#), [JCRB-38/11.03.1](#), [JCRB-38/11.04.0](#), [JCRB-38/11.04.1](#), [JCRB-38/11.06.0](#) respectively.]*

## 12. GULFMET's membership status at the JCRB

GULFMET had contacted the JCRB Chair prior to the Meeting with the request to consider the possibility of changing the membership status of GULFMET from provisional member to full member. Agenda item 12 was dedicated to this issue.

N. Molla, head of the GULFMET delegation, gave a small introduction talk and thanked the JCRB for the possibility of considering GULFMET's request.

O. Kanakrieh gave a GULFMET Progress Report. He presented information on:

- GULFMET Members and Associate Members and also BIPM membership status of GULFMET countries
- structure diagram of the RMO
- current TC Chairs
- GULFMET participation in Comparisons
- GULFMET Intra-Regional review process and GULFMET activity in Inter-Regional review
- GULFMET Participation in BIPM CC WG
- GULFMET activities on QMS Review (the Report on GULFMET Activities on QMS Review prepared by E. Sadikoğlu, Chair of EURAMET Technical Committee for Quality has been distributed prior to the Meeting).

After the discussion of the report by the JCRB Members a closed session was organized between the JCRB Representatives of all full member RMOs. When consensus was reached between them, the GULFMET delegation was invited to rejoin the meeting and the results of the discussion were declared.

M. Milton, on behalf of the JCRB, appreciated GULFMET efforts and encouraged them to continue with their development. He summarized the view of the JCRB member RMOs that GULFMET should remain with the provisional member status with the aim to become a full member in the near future. The JCRB RMO Representatives then gave some specific advice and comments:

- B. Jeckelmann noted that the GULFMET system for QMS review is set, but not has not yet functioned often in practice (for example, only one institute has been reviewed).
- W. Louw suggested that GULFMET representatives attend CC Meetings and show their capabilities in the CC WGs.
- C. Santo stated that technical capabilities should be widely realised in the NMIs of the region.
- T. Takatsuji said that the other RMOs would continue to provide support.

O. Kanakrieh asked if there is a possibility for GULFMET NMIs to submit CMCs for interregional review before GULFMET becomes a full member. A. Steele explained that

NMIs from GULFMET can submit CMCs through other RMOs. Representatives of other RMOs confirmed that.

O. Kanakrieh thanked the JCRB for their advice and support.

*[The background documents related to agenda item 12 can be found on the restricted-access JCRB working documents webpage as [JCRB-38/12.0](#), [JCRB-38/12.1](#), [JCRB-38/12.2](#)]*

### 13. Next meetings and meeting closure

The JCRB agreed to the following resolutions regarding the next two JCRB meetings:

**Resolution 38/2:** *The 39<sup>th</sup> meeting of the JCRB will take place on March 14, 15 and 16, 2018 at Sevres, France. The meeting will start in the morning of March 14, 2018 and will last three days with the end of last day at 16.00.*

**Resolution 38/3:** *The 40<sup>th</sup> meeting of the JCRB will take place on March 2019. The exact days for the Meeting will be determined later.*

M. Milton read the resolutions, recommendations, and actions. He called the 38<sup>th</sup> meeting of the JCRB to a closure.

### 14. Resolutions, Recommendations, and Actions

**Action 38/1** (Strategy and action plan): Following the lessons learned during the work using the RACI analysis tool, the JCRB proposes to progress towards the development of a strategy and action plan. The JCRB requests a working group consisting of Alan Steele (Chair), Toshiyuki Takatsuji, Andy Henson, Beat Jeckelmann, Wynand Louw, Mohammed Al Mulla, Pavel Neyezhnikov and Willie May to engage with the CIPM and subsequently develop some questions and draft text to initiate discussion at a one-day working session to develop both the strategy, and consequent actions at the extended JCRB Meeting in March 2018.

**Action 38/2** (Improving communication: JCRB and CC Presidents): The JCRB requests the CIPM to invite representation from the JCRB to take part in meetings of the CC Presidents in order to encourage communication between the JCRB and the CCs.

**Resolution 38/1** (Risk-based CMC Review and Representative CMCs): RMOs and CCs are encouraged to further implement a risk-based approach to review of CMCs and to develop statements for the levels of CMCs for which an intra-RMO review may be sufficient for the purposes of international acceptance.

Taking note of the needs of NMIs and DIs at all levels, as a means towards implementation of recommendation 3b of the CIPM MRA review, the JCRB encourages Consultative Committees and the BIPM to continue to explore means to allow NMIs and DIs to publish CMCs in the KCDB for only their smallest uncertainty capabilities that are

then used to support related services covered by their approved Quality System. Proposals are requested as to how to show the link between these capabilities and the “representative” CMCs. RMOs are encouraged to propose additions to the Quality System review process to effect a fit-for-purpose review of these capabilities.

**Resolution 38/2:** The 39<sup>th</sup> meeting of the JCRB will take place on March 14, 15 and 16, 2018 at Sevres, France. The meeting will start in the morning of March 14, 2018 and will last three days with the end of last day at 16.00.

**Resolution 38/3:** The 40<sup>th</sup> meeting of the JCRB will take place on March 2019. The exact days for the Meeting will be determined later.