

**Report of the 41st Meeting of the JCRB**

Held on 10 - 11 September 2019

Dubai, United Arab Emirates

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## Participants

### **BIPM / CIPM**

Dr M. Milton  
Dr S. Bergstrand  
Mr A. Henson  
Dr J. Olthoff

### **AFRIMETS**

Dr W. Louw  
Prof. M. Amer  
Dr N. Khaled  
Ms Z. Msimang

### **APMP**

Dr T. Takatsuji  
Dr C.-S. Kang  
Dr T. Morioka  
Dr K. Yamazawa

### **COOMET**

Prof. P. Neyezhnikov  
Dr S. Golubev  
Ms N. Mikanadze  
Mr N. Zviagin

### **EURAMET**

Mr H. A. Frøystein  
Dr K. Stoll-Malke  
Dr W. Schmid

### **GULFMET**

Ms A. Albastaki  
Dr I. Alfaleh  
Mrs A. Al Hosani  
Mr O. Kanakrieh

### **SIM**

Dr G. Macdonald  
Dr C. Saundry  
Dr E. A. Cristancho-Pinilla  
Lic. F. Kornblit

The meeting started with an opening ceremony. An address was given by Ms Amina Zainal on behalf of H.E. Abdullah Al Maeni, the Director General of the ESMA, and one by H.E Saud Al-Khusaibi, Secretary General of the GCC Standardization Organization. Dr Milton was presented with a memento from each organization.

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

The JCRB Chairperson, Dr Milton opened the meeting and the delegates around the table introduced themselves. In addition to the announced excuses from the official representative to the Joint Committee of the RMOs: S. Echeverria (SIM), V. Hurevich (COOMET) and S. Al Rumaihi (GULFMET); the absence of registered Mr Fethi Fadhli from AFRIMETS was noted.

Dr Milton read the agenda. He proposed to move the ILAC discussion presentation given jointly by Dr Olthoff and Mr Henson to the second day and this was accepted. To allow the activities planned by the organizers to fit into the general time frame, possible adjustments of the second day's meeting timings were suggested and agreed.

## 2. Confirmation of RMO voting representatives

The voting representatives at the 41st JCRB meeting were confirmed to be

JCRB Chairperson:	Dr M. Milton
AFRIMETS:	Dr W. Louw
APMP:	Dr T. Takatsuji
COOMET:	Prof. P. Neyezhmakov
EURAMET:	Mr H. A. Frøystein
GULFMET	Ms A. Albastaki
SIM:	Dr G. Macdonald

## 3. Approval of the minutes of the 40th meeting of the JCRB and review of pending actions

Dr Milton asked whether there were any comments on the latest version of the Minutes from the 40th JCRB meeting as circulated and published on the protected JCRB Members' area. There were none and the minutes were approved without further discussion.

Dr Milton read through the Outcomes from the 40th JCRB meeting in terms of actions and recommendations. Some extra comments were made with respect to the reinstatement of the JRC, where contacts within the European Commission have indicated that CIPM MRA activities in the JRC are likely to be resumed.

*[The report of the 40th JCRB meeting is available on the unrestricted BIPM website <https://www.bipm.org/en/committees/jc/jcrb/publications-cc.html>]*

## 4. Report from BIPM on progress since the 40th JCRB meeting

*Mr A Henson (Department Director International Liaison and Communication, BIPM)*

Mr Henson presented the BIPM progress since the 40th meeting. In the period since the 40th JCRB meeting Ecuador and Morocco acceded to the Metre Convention, and there are now 61 State Parties to the Metre Convention and 41 Associates of the CGPM.

The design of the World Metrology Day (WMD) 2020 poster will be organized by AFRIMETS, the theme still pending final decision. Additionally, the BIPM is liaising with UNESCO with the aim of having WMD adopted by UNESCO as an annual World Day, raising awareness outside the metrological sphere. Such an application is subject to UNESCO procedures, and is far from certain. If UNESCO are prepared to advance the topic, support will be needed at national level.

The 9<sup>th</sup> edition of the SI brochure was published on the BIPM website 20 May 2019.

Mr Zviagin announced that in connection with WMD 2020, there is a metrology conference in Moscow and invited all to participate in the event. He also informed that the 9<sup>th</sup> edition of the SI Brochure is being translated to Russian, and will soon be available on the COOMET website.

Dr Msimang asked if extended funding could be organized for the Varenna school, noting that only 3 of 60 applicants could be accepted. Dr Milton said that there were several other sponsors who had supported more than 20 participants. Mr Henson replied that the opportunity has been noticed and is being discussed further with sponsors.

*[The corresponding BIPM presentation is available on the restricted-access JCRB working documents webpage as [JCRB-41/04](#)]*

## **5. Report from the CIPM**

*Dr J Olthoff (Vice-President, CIPM)*

Dr Olthoff presented the report from the CIPM and the new officers. Dr Louw, as president of the CIPM, further emphasized the CIPM recognition of the importance of the JCRB as a forum for international recognition and cooperation.

*[The corresponding CIPM presentation is available on the restricted-access JCRB working documents webpage as [JCRB-41/05](#)]*

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

### **6.1. AFRIMETS**

*Dr W Louw (Head of the Secretariat, AFRIMETS)*

Dr Louw pointed out the highlights of the AFRIMETS report and Dr Amer was presented as the new Chair of AFRIMETS, his term commencing at the AFRIMETS GA in July 2019. Key challenges faced by the African region are the growth rate of population and economy. He also pointed out that South Sudan has become part of EAMET and is developing metrological capabilities, that ECOAS is in a build-up stage. He also reported that Nigeria has expressed willingness to join the BIPM. It has been explained to them that the “accession ladder” is not a mandatory route to become a Member state.

He also said that the African continental free trade area (AfCTA) has been brought into force and that AFRIMETS is a recognized partner in the making.

The AFRIMETS General Assembly (GA) 2020 is planned to be in Cameroon in the third or fourth week of July 2020, with Morocco as a back-up alternative.

## 6.2. APMP

*Dr T Takatsuji (Chairperson, APMP)*

Dr Takatsuji reported from APMP, which now consists of 44 institutes from 26 full member economies and 13 institutes in 12 associate member economies. He pointed out that APMP has approved funding for six technically related initiatives in Fluid flow, Ionizing radiation, Thermometry, Time and frequency, Length and Quality system managements. Additionally, five focus group activities of more interdisciplinary character are being administrated centrally.

APMP has also signed a Memorandum of understanding with the laboratory accreditation cooperation APAC on 20 June 2019.

The APMP GA will be held in Sydney, Australia 28 Nov to 6 December 2019.

## 6.3. COOMET

*Prof. P Neyezhnikov (Vice-President, COOMET)*

Prof Neyezhnikov presented the COOMET report. He noticed that Moldova has transferred to and will submit its CMCs through EURAMET, but remains an associate member of COOMET. The biannual COOMET award for Best young metrologist was also presented.

The 24<sup>th</sup> COOMET Presidential council will be held 26 to 28 November 2019.

## 6.4. EURAMET

*Mr H A Frøystein (Chairperson, EURAMET)*

The EURAMET report was delivered by Mr Frøystein. EURAMET has 38 NMIs and 78 DIs, now including Moldova as a full member. Dr Schmid's position as Member Service Manager will be assumed by Julien Vuillemin-Toledo. Five new TC Chairs have been elected in Electromagnetism, Flow, Length, Mass and Chemistry, and a workshop for the new TC Chairs was held in Braunschweig, Germany 28 to 29 August.

Mr Frøystein pointed out the cooperation between EURAMET and COOMET, and also on the theme of "European cooperation in legal metrology" with WELMEC.

EURAMET is also making several calibration and technical guides available online.

A new program to follow up the EMPIR research program is in development, aiming for approval in 2020 and starting in 2021. EURAMET has also approved six metrological networks, so called 'European Metrology Networks' - EMNs, in a similar initiative to the APMP focus activities.

The next EURAMET GA to take place in Vienna, Austria 25 to 28 May 2020.

## 6.5. GULFMET

*Mr O Kanakrieh (Secretary, GULFMET)*

Mr Kanakrieh gave the GULFMET presentation. He noticed that the rules of GCC prohibit full GULFMET membership to external partners. The memberships and associated numbers of GULFMET has remained unchanged, Bahrain has been encouraged to participate in the activities of the BIPM. GULFMET showed a recently signed agreement document with APMP and thanked APMP for continuous support. GULFMET has performed a set of interlaboratory comparisons and their NMIs are submitting their CMCs through APMP.

Next GULFMET weeks to take place in November with the bigger event in April.

## 6.6. SIM

*Dr G Macdonald (SIM Quality Systems Task Force Chair)*

Dr Macdonald reported from SIM, which now has 25 signatories to the legal entity, with six more applications in process. SIM has launched a new website. The main strategic objective for SIM, to build a stronger SIM, is being realized through workshops in developing NMIs.

The SIM week is to take place in Santa Cruz, Bolivia 23 to 27 September.

*[The corresponding RMO Reports and presentations are available on the restricted-access JCRB working documents webpage as [JCRB-41/06.1.1](#), [JCRB-41/06.1.2](#), [JCRB-41/06.2.1](#), [JCRB-41/06.2.2](#), [JCRB-41/06.3.1](#), [JCRB-41/06.4.1](#), [JCRB-41/06.5.1](#), [JCRB-41/06.6.1](#)]*

## 7. Briefing from the TC-Q Chairs' meeting

*Dr G Macdonald (SIM)*

Dr Macdonald summarized the discussions at the TCQ chairs meeting held the day before. There had been a lot of interest in the topic of the RMO review processes related to the quality systems of the NMIs, reflecting the importance of the discussion for the JCRB. This had resulted in almost all of the JCRB participants being present at the meeting. The TCQ meeting had focused on exchanges that allowed the RMOs to understand in detail the processes they each applied when reviewing NMI quality systems, sharing lessons learned etc. As such, one conclusion was that whilst the meeting should remain open, from a practical perspective the format of the meeting is probably better served in the future by a small quorum of the TCQ chair specialists.

Dr Macdonald reflected that the opportunity to learn from each other was welcome and offered the potential for improvements in the processes employed by the various RMO TCQS meetings. Dr Stoll-Malke noted that the current processes are well-established and incorporated in the RMO systems. He stated that if there was to be change, then slow

movement would be the best way, and pointed out that resources are limited and currently directed towards the transition process of ISO/IEC 17025.

Dr Yamazawa also recalled that it had long been recognized that the implementation could be focused differently in the RMOs while still meeting the obligations. He also wished to focus on the transition of ISO/IEC 17025. He suggested a summary table providing an overview of the approach by each RMO would be very useful.

Dr Macdonald said that the real focus of the discussions was around the need to improve the way the RMOs reported to the JCRB, that is when meeting the obligations of Section 4 of CIPM MRA-G-02. She stated that there were really two messages that the group wished to pass to the JCRB. The first was the proposal to undertake a review of this reporting process. The second related to the fact that the discussions had clearly highlighted the need to update the guidance related to reporting to the JCRB, as well as other aspects of CIPM MRA-G-02. Mr Henson recalled that the entire suite of JCRB guidance documents are undergoing review, with initial drafting by BIPM, RMOs each having already appointed a contact for the review. If the TCQ chairs are able to suggest improvements to Section 4 (or indeed any other Section), it was suggested that these could be proposed for consideration, and potentially 'wrapped into' the review.

Mr Zviagin asked how far the JCRB documents update was progressing. Mr Henson replied that he expected initial drafts of the three first documents to be circulated to the RMO contact group by the end of the year, and the remaining documents ahead of the March 2020 JCRB. He welcomed the possibility to incorporate improvements, ideally suggestions could be received in time to include them in the first drafts, but if not, any agreed changes could easily be incorporated at a later stage. Care would be needed to distinguish between changes related to 'cleaning up' the documents, and those proposing material changes in the guidance.

Dr Macdonald referred to the presentations given at the TCQ chairs meeting the previous day. She suggested that they should be sent to Dr Bergstrand to be posted on the JCRB Members' area as part of the documentation of the 41<sup>st</sup> JCRB meeting.

Dr Yamazawa also wished to look at the transition procedure with respect to ISO/IEC 17025. Mr Kanakrieh wanted better knowledge of how the procedures are being implemented in the different RMOs. Dr Khaled would also like to better understand the challenges in the different RMOs and expressed willingness to look at the guidelines and to support Dr Macdonald in the undertaking. Ms Mikanadze considered a high priority to maintain the trust developed between the RMOs, and to consider the frequency of the meetings. She thought that new documentation could be put later in the future. Lic. Kornblit suggested that different RMO Q-reps visit other RMO reviews as a learning experience.

Dr Milton identified a common interest in the RMO reporting and asked whether Dr Macdonald wished the JCRB to make an action in that direction. Dr Macdonald proposed that a small group be established to suggest improvements to the RMO reporting addressed in Section 4 of CIPM MRA-G-02, and should do so ahead of the next JCRB. Communication could be established by electronic means. She offered to lead the work,

and Dr Khaled, Dr Stoll-Malke, Ms Mikanadze, Dr Yamazawa and Ms Al Hosani all agreed to contribute.

Dr Olthoff clarified that this task is not to rewrite the documents, there was already a process underway to do that within the JCRB, but to suggest clarifications/improvements in the process of presenting to the JCRB. Any such improvements, if accepted, would then be incorporated into the revised documentation.

[Related [Action 41/1](#)]

## 8. Discussion on Hybrid Comparisons

Dr Takatsuji reintroduced the subject of Hybrid Comparisons (HC). The point was reintroduced to the agenda by COOMET. Since the 40th JCRB meeting, Dr Takatsuji had given a presentation to COOMET in Dresden. Dr Kang reiterated the four conditions shown at the 40th meeting, and largely reflected in JCRB [Recommendation 40/1](#). The four conditions being:

- The HC scheme cannot be used when Key or supplementary comparisons are available.
- Applicant NMI should make every effort to find the partner NMI of bilateral comparison before the HC scheme is considered.
- The result of a HC as the CMC evidence and capability of Applicant NMI are to be thoroughly reviewed by the on-site peer reviewers.
- With all these conditions fulfilled, CMCs should not be rejected at Inter-RMO review stage due to the reason that CMC evidence is a HC.

The COOMET representatives explained their concerns about the HC and after some discussions, Dr Milton asked whether he interpreted correctly that

- a) the COOMET standpoint was that COOMET would like to see final guidance document(s) from APMP
- b) COOMET agrees with the general principles of the HC

This was confirmed by Prof. Neyezhnikov and Mr Zviagin added that COOMET would like a JCRB approval of the HC as acceptable in the review of CMCs.

The question was then circulated around the table to collect the views of all RMOs. The SIM standpoint expressed by Dr Macdonald was to welcome the APMP initiative to detail an internal procedure for improved understanding of the procedure but did not identify any need for a new harmonized scheme within the JCRB. She also informed that its use had not raised any issues in SIM.

On AFRIMET's account, Dr Louw recalled the JCRB decision to issue Recommendation 40/1, and that the CCs are best placed as to handle this as an issue for CMCs. He expressed the desire to not revoke the decision expressed in Recommendation 40/1. He also pointed out the inconvenience associated with a prolongation of the matter, as for



example, the CCRI with a biannual meeting cycle had already processed the matter within the CCRI-WGMRA.

Mr Frøystein said that EURAMET also did not wish to revoke [Recommendation 40/1](#). The GULFMET standpoint from Mr Kanakrieh, was no objections to the scheme or the [Recommendation 40/1](#), and that GULFMET is ready to accept the scheme as an APMP or as a JCRB document in its current form.

In response to the other RMO views, COOMET repeated their wish for guidance from JCRB with respect to the HC scheme. Dr Macdonald articulated the concern that adding specific documents for any activity related to the CIPM MRA-D-04, Section 3 “6. Other available knowledge and experience” would quickly lead to a very steep slope of writing documents instead of professionally evaluating technical evidence. Dr Msimang added that this could now be left as a CC issue, as the CCs are capable of interpreting and implementing the documents according to their specific needs. Mr Zviagin still felt the documentation to be insufficient. Dr Olthoff read back the verbatim of [Recommendation 40/1](#). He found the [Recommendation 40/1](#) to be sufficient for the JCRB and did not wish to overrule any CC decisions made subsequent to the issue of the Recommendation.

Dr Milton encouraged APMP to prepare an internal document to send to the next JCRB meeting, possibly considering a JCRB resolution. Mr Zviagin requested APMP to include some examples to understand what the procedures were meant to do. Dr Takatsuji expressed the wish to not identify a new comparison at the level of Key and supplementary comparisons and recalled the original name “...peer-reviewed calibration as evidence”. Any issued documentation is therefore foreseen to be very brief. Dr Milton summed up the discussion by noting that [Recommendation 40/1](#) stands unaltered, that there is agreement to go ahead and requests APMP to present a document to the next JCRB meeting. He asked whether everyone could agree to the four points, and had this confirmed by the plenary.

Dr Milton articulated the request for an action related to the documentation of the Hybrid Comparison scheme. The initial wording “submit” was changed to “sent” to reflect that [Recommendation 40/1](#) stands unaltered and the document is intended as an internal APMP item.

[Related [Action 41/2](#)

*The APMP presentation is available on the restricted-access JCRB working documents webpage as [JCRB-41/08.2](#)*

## 9. Update and discussion of activities in ILAC related to the NMIs

*Dr J Olthoff (CIPM) and Mr A Henson (BIPM)*

Mr Henson and Dr Olthoff made a combined presentation of the liaison work undertaken between BIPM and other metrological stakeholder organizations (primarily ILAC, OIML and ISO) to set the frame for the specific ILAC discussions listed in the agenda, and expressed the wish that this knowledge is spread to NMIs through the RMOs, as the cooperation affects NMIs individually.

Mr Henson gave a brief introduction to the ILAC structure, highlighting the interaction with the ILAC GA and the Accreditation Committee (ILAC AIC) and its Working Group 'Metrology'. Dr Olthoff recalled that there were a suite of bilateral or multilateral documents between BIPM and OIML, ILAC and ISO. He highlighted that in his view the primary document was the Quadpartite document, signed by all four organizations, as that provides a good overview of our own activities. He then drew attention to the "Joint ILAC-CIPM communication regarding the accreditation of calibration and measurement services of National Metrology Institutes". Mr Henson pointed out the importance of accredited NMIs being aware of this document. It aims to ensure the greatest efficiency for NMIs that are both accredited and participating in the CIPM MRA. He pointed out that the accreditation bodies were not always aware of it, and that it would be wise for the NMI to draw it to the attention of their accreditation body ahead of any assessment.

Dr Olthoff drew attention to two other documents. These were the: 2006 '[BIPM, OIML, ILAC: Common statement and declaration on the relevance of various international agreements on metrology to trade, legislation and standardization](#)' and the 2005 '[Joint statement by the CIPM and ILAC on improving world-wide traceability and acceptance of measurements carried out within the CIPM MRA and the ILAC arrangement](#)'.

Consideration is being given with the relevant IO(s) as to whether we should revise, archive or withdraw them. This will come up for discussion in the bilateral and multilateral liaison discussions in March 2020; no view has yet been taken. The options will be brought to the attention of the NMI Directors meeting, and feedback invited, which will be needed well ahead of the March 2020 meetings.

Dr Olthoff and Mr Henson referred to the ongoing revision of ILAC P10, notably that BIPM had successfully pressed for the adoption of the ISO definition of shall/should/can/may to distinguish between recommendations and mandatory requirements. They were pleased to report that ILAC had taken these concerns on board and that these definitions are included in the draft revised document. Secondly, BIPM intervention had led to ILAC replacing the proposed term 'conformity assessment bodies' (to describe bodies being accredited) with 'accredited bodies'. The basis of the BIPM intervention was Resolution 11 of the 22<sup>nd</sup> CGPM (2003) that notes that "calibration is not a conformity assessment activity".

Dr Olthoff pointed to the two take-aways from the presentation:

1. The request for detailed input on the future of the BIPM-ILAC and the BIPM-OIML-ILAC documents.
2. To remind NMIs to point their accrediting bodies to the joint ILAC-CIPM document when reviewing NMIs.

Dr Stoll-Malke also recommended NMIs to work through their national ISO mirror committees, noting that BIPM could suggest changes, but had no vote.

*[The corresponding BIPM/CIPM presentation is available on the restricted-access JCRB working documents webpage as [JCRB-41/09](#)]*

## 10. CIPM MRA documents update

*Dr S Bergstrand (JCRB Executive Secretary)*

Dr Bergstrand presented the status of the CIPM MRA document suite, noting that it had been mentioned already in Agenda item 7. He recalled the challenge of launching KCDB 2.0 and at the same time revising the JCRB documents. As an aside he highlighted that the KCDB 2.0 launch would be supported by a dedicated instruction document and video clip guidance. Regarding the JCRB CIPM MRA documents, as stated previously the focus could be put on the policy documents, which will be circulated before the end of the year, with the remaining documents circulated ahead of the next JCRB meeting in March 2019.

Mr Zviagin informed that the CIPM MRA document suite are being translated to Russian and requested that the documents are released as they are being finalized, in order to streamline the translation.

*[The corresponding BIPM presentation is available on the restricted-access JCRB working documents webpage as [JCRB-41/10](#)]*

## 11. KCDB report

*Dr S Bergstrand for Dr S Picard (KCDB Coordinator, BIPM)*

The KCDB report was presented by Dr Bergstrand. A new feature in the report is the monitoring of the continuous CMC updating process that has not visible in previous editions, some 6% of the KCDB entries have been replaced in each of the last three periods.

The presentation was accepted without further discussions.

*[The corresponding BIPM report and presentation are available on the restricted-access JCRB working documents webpage as [JCRB-41/11.1](#) and [JCRB-41/11.2](#)]*

## 12. Status of the scope for KCDB 2.0

*Mr A Henson for Dr S Picard (KCDB Coordinator, BIPM)*

Mr Henson gave the presentation on the current status of KCDB 2.0. The presentation included two instruction videos to exemplify the format for the planned series of videos. It also presented the schedule of introductory events that is currently ongoing with voluntary pilots from the different CCs. Two webex sessions have already been carried through with CCT and CCRI.

Dr Msimang, who participated in the RI session, shared her opinion of the interface. Her view was that although some bugs were experienced during the session, the interface was an improvement in terms of user-friendliness, the process was easy to follow, and she felt confident that it would be easy to utilize the new platform.

Dr Bergstrand mentioned that the document that had been sent out for feedback to the RMO representatives and TC Chairs had received some minor suggestions from SIM and individual TC Chairs. He appreciated such further feedback, but would like to incorporate any amendments and distribute the final version as soon as possible.

Mr Henson indicated that the target was to go live with the viewable KCDB around the end of October, with the review platform being released in stages such that all would be live well before the end of the year. He did caution however that progressing in accordance with this timescale depended on the success of the first stages. He recalled that whilst significant sampling had been done on migrated data, RMOs are requested to ensure that NMIs and Dis understood that they should check their own CMCs in the new database against the CMCs in KCDB 1.0. He recalled that the files that would be needed to make the check would still be available via the JCRB platform.

*[The corresponding BIPM presentation is available on the restricted-access JCRB working documents webpage as [JCRB-41/12](#)]*

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

*Dr S Bergstrand (JCRB Executive Secretary)*

Dr Bergstrand presented the status of the CMCs and submissions since the previous JCRB (presentation to be made available on the Members' working area). He noted that adherence to deadlines had been exceptionally good and commented especially on the improvement from GULFMET with respect to the 40th JCRB.

*[The corresponding BIPM presentation is available on the restricted-access JCRB working documents webpage as [JCRB-41/13](#)]*

### **14. Any other business**

Dr Milton asked whether there were any more items that should be brought to the agenda and discussed, but there were none.

### **15. Next meetings and meeting closure**

#### **15.1. 42nd meeting of the JCRB**

The 42nd meeting was decided to be held at the BIPM, the 11 and 12 March 2020.

*[Related [Resolution 41/1](#)]*

#### **15.2. 43rd meeting of the JCRB**

Dr Milton mentioned that the circulation to host the 43rd JCRB rested with SIM, and Dr Cristancho-Prinilla invited the JCRB to hold its meeting in Bogota, Colombia. Following the normal procedures, the final dates are to be decided at the 42nd meeting.

*[Related [Resolution 41/2](#)]*

### 15.3. Reading of the Resolutions, Recommendations, and Actions

The outcomes of the meeting were shown on the screens and read. Minor adjustments as to clarify the extent of [Action 41/1](#) were suggested and agreed without further discussion.

### 15.4. Closing ceremony

The Chairperson of the JCRB, Dr Milton, closed the meeting and thanked participants for their contributions, reports and participation in the discussions. Dr Milton further thanked the local organizers in ESMA and GULFMET for their support in hosting the meeting and the surrounding activities.

## 16. Actions, Recommendations, and Resolutions

**Action 41/1** An ad hoc Task Group {Georgette Macdonald, Noha Khaled, Kazuaki Yamazawa, Nino Mikanadze, Kai Stoll-Malke, Asma Al Hosani} is established to formulate a proposal for consideration at the 42nd meeting of the JCRB regarding the reporting requirements and associated process related to the JCRB actions to establish confidence in each RMOs QS review process. The proposal may include recommendations related to the informal meeting of RMO QS review representatives and updates to CIPM MRA-G-02 "Guidelines for the monitoring and reporting of the operation of quality systems by RMOs". The latest date for submitting the proposal to the JCRB is 11 February 2020.

**Action 41/2** APMP to send its revised guidelines for the operation of Hybrid Comparisons to the next meeting of the JCRB.

**Resolution 41/1** The 42nd meeting of the JCRB will take place in Sèvres, France 10–11 March 2020.

**Resolution 41/2** The 43rd meeting of the JCRB to take place week 37, 2020 in Bogota, Colombia. The JCRB Executive Secretary will collaborate with the Instituto Nacional de Metrología de Colombia (INM) and SIM to host it following the 42nd JCRB meeting.

No Recommendations were issued.