



Asia Pacific Metrology Programme

**CIPM MRA Review Update
June 2016**

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**APMP Mid-Year Meetings 2016
Bangkok – Thailand**

Timetable

- **October 2015:** **BIPM Director's Workshop**
- **March 2016:** **MRA Review WG Meeting**
- **30 June 2016:** **Draft Report for Discussion by WG**
- **31 August 2016:** **Final Report to NMI Directors**
- **October 2016:** **Discussion at Directors' Meeting**



October 2015 Workshop Outcome Summary

- “ MRA should continue to maintain its high levels of quality and integrity.
- “ MRA is an arrangement between NMIs;
it is a tool to support them in:
 - “ establishing the degree of equivalence of national measurement standards maintained by NMIs and DIs;
 - “ providing for the mutual recognition of calibration and measurement certificates issued by NMIs and DIs; thereby providing governments and other parties with secure technical foundations for wider agreements related to international trade, commerce and regulatory affairs.”



October 2015 Workshop Outcome Summary

- “ MRA should continue to be inclusive and be built on the appropriately demonstrated and documented assessment of capabilities.
- “ The effort required to operate the MRA should not rise above the present levels and should be reduced where possible.
- “ The KC/CMC processes should be tailored according to the risk and complexity of the issues being handled.
- “ There is a need to upgrade the KCDB and the JCRB databases using new modern IT tools.



Recommendations From the March 2016 WG Meeting

Recommendation 1

On managing the level of participation in KCs more effectively

- Long-term time table for KCs (including the repeat cycle) must be clearly defined.
- Where traveling standards are used, participation in CIPM KCs should typically be limited to no more than three institutes per RMO.
- NMIs should be encouraged to share the roles involved in coordinating KCs.



Recommendations From the March 2016 WG Meeting

Recommendation 2

On providing better visibility of the services supported by the CMCs in the KCDB

- BIPM should work with the JCRB and the CCs to develop the scope for KCDB 2.0.
- BIPM should implement KCDB 2.0 with (for example) an improved web interface and an improved search facility.
- The CCs should work towards better consistency in the expression of CMCs (e.g. units, uncertainty ranges).



Recommendations From the March 2016 WG Meeting

Recommendation 3 On constraining the proliferation of CMCs

- The results of KCs and SCs should be interpreted as widely as reasonably applicable to indicate coverage of CMCs.
- The use of CMCs to cover as many services as is technically justified should be encouraged.
- The NMI Qs should document the relationship between services and CMCs.
- The CCs and NMIs are encouraged to use uncertainty equations and matrices to reduce the number of CMCs where possible.



Recommendations From the March 2016 WG Meeting

Recommendation 3 On constraining the proliferation of CMCs

- CMCs shall reflect the services available to customers under normal conditions, in accord with the MRA, and shall not be artificially subdivided.
- NMIs should be advised to use the percentage of coverage of their services by CMCs as a metric of success rather than the number of CMCs (The number of CMCs alone should not be considered a metric of the success of an NMI).



Recommendations From the March 2016 WG Meeting

Recommendation 4 On improving the efficiency of the CMC review processes

- The CCs should develop a “risk-based” approach to CMC review procedures.
- The CCs and the JCRB should harmonize the use of evidence to support CMCs that does not arise from KC and SC participation.
- More training should be provided, together with improved guidance material.
- BIPM should investigate the feasibility of a web-based tool for the complete CMC submission and review.



Recommendations From the March 2016 WG Meeting

Recommendation 5

On encouraging and enabling states with developing metrology systems to become signatories and fully participate in the MRA

- The JCRB should work with the CCs to develop a small number of consistent methodologies for carrying out comparisons.
- The BIPM, JCRB and the RMOs should encourage and assist developing metrology institutes to both participate in and pilot inter-laboratory comparisons.
- The RMOs should encourage developed NMIs to act as mentors by sharing experience.
- The RMOs and the BIPM should provide promotional material.



Recommendations From the March 2016 WG Meeting

Recommendation 6

On the governance of the MRA by the JCRB and the CIPM

- JCRB should exercise its authority more fully as defined in its terms of reference in the implementation of the MRA.
- CIPM should review the document *Rules of procedure for the JCRB* (CIPM MRA D-01).
- A designated member of CIPM should attend all JCRB meetings.



Recommendations From the March 2016 WG Meeting

Recommendation 7

**On the effective and timely implementation of improvements
from this review through the JCRB and the CIPM**

- CIPM should, as far as possible, use the JCRB to implement the agreed improvements in the operation/implementation of the MRA.
- The JCRB/RMO Chairs and members of CIPM should improve communication to ensure CIPM/CC/JCRB interfaces are clear.



Recommendations From the March 2016 WG Meeting

Recommendation 8

On the scopes and processes used for developing CMCs in chemistry

- CCQM and CCRI should review and revise the templates, if needed, for Chemistry, Biology and Ionising Radiation CMCs to ensure they are appropriate.



Recommendations From the March 2016 WG Meeting

Recommendation 9 On the development of a new strategy for KCs and CMCs in Ionising Radiation

- The CCRI should finalise and implement strategies to rationalise the suite of KCs and optimise the number of CMCs.





Thank You

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