

### **Bureau International des Poids et Mesures**

### **DI** issues

# Andy Henson Director of International Liaison and Communications Department, BIPM



7<sup>th</sup> EURAMET General Assembly, Reykjavik, May 2013

# Was created and approved at 17<sup>th</sup> JCRB (October 2006 – Sevres) Modified at 18<sup>th</sup> JCRB



### Request for Designation Information

Dear NMI Director,

In an attempt to have more complete information on the participation of your State or Economy in the CIPM MRA, we kindly ask that you provide us with the following information on designated institutes in your State/Economy:

Name of State/Economy:	
My State/Economy has <b>not designated</b> any institute for participation in the CIPM MRA.	
My State/Economy has designated the following institute for participation in the CIPM M	RA.
Designated Institute (DI) Name:	
Designated Institute (DI) Acronym:	
Metrology area of designation:	
(e.g., chemistry, photometry, force, flow, volume, radioactivity,	etc.)
Period of designation:	
(e.g., start date – end	date)
Contact Person at DI:	
Contact Person e-mail:	
Contact Person telephone:	
Your name:	
Signature:	
Date:	

Please return to: BIPM

Pavillon de Breteuil F-92312 Sèvres Cedex, France e-mail: cfellag@bipm.org



### est for Designation Information

ear NMI Direct

In an attempt to be more complete information on the participation of your State or Economy in the CIPA Mix., we kindly ask that you provide us with the following information on designation resitutes in your State/Economy:

e of State/Economy: China

☐ My State/Economy has not designated any institute for participation in the CIPM MRA.

My State/Economy has designated the following institute for participation in the CIPM MRA.

Designated Institute (DI) Name: Hangzhou Applied Acoustics Research Institute

Designated Institute (DI) Acronym: HAARI

Metrology area of designation: Underwater Acoustics

(e.g., chemistry, photometry, force, flow, volume, radioactivity, etc.)

Period of designation: 2013.01.01-2015.12.31

(e.g., start date - end date)

Contact Person at DI: CHEN Yi

Contact Person e-mail: y.chen@163.com

Contact Person telephone: 0571-63332466 13868151963

Your name:

Cianatura

Date:

Please return to: BIPM

Pavillon de Breteuil F-92312 Sèvres Cedex, France

e-mail: fjoly@bipm.org

### Raised at 25<sup>th</sup> JCRB September 2010 - Egypt

On the problem of number of Designated Institutes and CMCs.

The present document is a description of some potential problems detected in the implementation of the CIPM MRA. It is based mainly in comments received from different CCs and WGs and is intended to be a starter for a discussion in the JCRB meeting.

At the time of writing (August 26), 78 NMIs and 134 designated institutes participate in the CIPM MRA.

The high number of DIs, is creating some difficulties in the RMOs which need to have a proper followup of their capabilities and their quality systems. While among many of the more "traditional" NMIs there is a frequent exchange of information, expertise, joint projects and publications, etc, some of the DIs simply have CMCs and are not well known to the wider community.

Also, it is much cheaper now for a DI to self-declare their QS rather than look for accreditation. As a result, there is a growing number of organizations that have CMCs and which may have only participated in one comparison, sometimes not even a key comparison, and have no on site review. Even if such a DI does have an on-site review, this is only repeated once every five years.

In some cases, the responsibilities of a number of DIs has been questioned, especially whether they take on the full role of an NMI in disseminating traceability to other laboratories in its respective country or if they act as a "testing lab" only. There are concerns that some are simply laboratories that are only doing calibrations or measurements for final users. It should, however, be noted that in some small countries, that is the only service that is required.

At present, the only condition for an institute to be recognized as a DI, is the designation by the appropriate authority of the country (which can be the signatory NMI), with no other conditions.

On the other hand there have been some feedbacks from the CCs, especially from CCQM, about the continuous increase of the number of CMCs, and which is causing a big burden on the review committees. It was questioned if there is any way to measure whether all the CMCs submitted for review are real services or are passive capabilities submitted only for the prestige given by having a high number of CMCs.

As a consequence of these two issues, two questions were raised:

- a) Should there be more requirements to fulfill by an institute before it can be accepted by the BIPM as DI?
- b) Should there be more requirements for the acceptance of CMCs for submission?
- i.e.: Number of times that a particular served was performed in the last year, or any other period (this may include for example number of CRMs sold or number of participant in PT schemes organized by the NMI).
  - i.e.; Number of secondary laboratories using services or a particular service.

# 25<sup>th</sup> JCRB September 2010 - Egypt

**Action 25/6:** The Executive Secretary will distribute the file with the information of the participation of the DIs in the CMCs and the RMOs will report back in the March 2011 meeting.

**Resolution 25/2**: To create a task group to discuss criteria to be fulfilled as designated institutes. The group will be chaired by M. Chambon, and W. Louw, Y. Hino, and P. Neyezhmakov. SIM will send the name of the representative to the chairperson.

### 26<sup>th</sup> JCRB March 2011 - Sevres

DOCUMENT JCRB-26.08 Author: M. Chambon DOCUMENT JCRB-26.08 Author: M. Chambon

#### Resolution 25/2

Short note on the first discussions

JCRB meeting, 21 - 22 March 2011

Resolution 25/2: "A task group is created to discuss the need of criteria to be fulfilled by institutes to act as designated institutes, and to report back to the JCRB at the March 2011 meeting". (Coordinator: Maguelonne Chambon/EURAMET; Members: Wynand Louw/AFRIMETS, Yoshio Hino/APMP, Payel Neyezhmakoy/COOMET, Bill Anderson/SIM).

To start the discussion, we proposed a short questionnaire, first to evaluate the situation on DIs in each <u>RMOs</u>, then to see what could be the improvement in the future regarding NMIs and <u>DIS</u>. The questionnaire is given in annex I.

We also analysed the data on CMCs for DIs, provided by BIPM (CMCs published in the KCDB and declared by DIs – March 2011)

#### Preliminary

The BIPM provided beginning of March 2011, data on DIs related to CMCs entries. The panorama is as follows (not taking into account WMO and IRMM, international organisations)...

RMOs	AFRIMETS	APMP	COOMET	EURAMET	SIM
Nb of Dis	5	15	15	68	18 (29)
Nb of DIs					
without CMC	5	4	1	17	9 (19)
% (in Nb)	-	26 %	6 %	25 %	50 % (65 %)*
Comments	*11 DIs concerned from CARICOM with 10 DIs not providing CMCs				

#### Part one: present situation

The five DIs, in AFRIMETS are all associated with lonising Radiation. Only one is from an Associate member of the CGPM. The other four are from countries that are only members of AFRIMETS. None of the five have been declared DIs in the fame of the CIPM-MRA. It is not expected that any of these would declare CMCs in the near future. In the text when we will speak about DIs and opinion of the RMOs, AFRIMETS have indicated that they have no strong view at the present time, other than to participate in a meaningful debate on how to handle DIs in future.

For SIM, there is a strong bias considering that CARICOM is a "general organisation" and not a country or an economy and one of the main "contributors" of non-declared CMCs. We will not take into account the CARICOM data in the analysis.

It seems that for each RMO (excepted COOMET looking to the figures), not all the DIs declared CMCs in the frame of the CIPM-MRA. The ratio can be quite high looking in particular at EURAMET and SIM. They seem also not to participate in inter-laboratory comparisons (ILC).

The positive point is that even though not all DIs declare CMCs or participate in ILCs, evaluation of the DI-quality systems is done by all RMOs—and will be done by AFRIMETS (irrespective if the result is positive or not). Consequently, this implies that RMOs have a clear view about the responsibility of each DIs, on which quantities or domains they are working on, and globally on the general metrology system in an economy or a..couptry.

Considering specific criteria for acceptance of DIs, only EURAMET declared to have such a procedure.

#### Part two: discussion

The second part of the questionnaire was to collect opinion of RMOs on possible future role of RMOs in the frame of the CIPM-MRA.

EURAMET, SIM and APMP seemed to agree that it might be of value for BIPM to get a better knowledge on how DIs are fulfilling their roles...and to get some information on their present activities (calibration, for example).

APMP and COOMET agree that acceptance of a DI is not relevant to the RMO, but should be only the responsibility of the country / economy. AFRIMETS also shares this opinion, as the only criteria to accept, a DI as an Associate member is that the member country NMI confirms the designation.

Considering the issue of the increasing number of DIs, it appears essential for RMOs to provide sufficient information to DIs on the CIPM-MRA and its challenges, what the CIPM-MRA implies, thus for the RMOs to have a role of "education". On the other side, clear information on the DIs within the National Metrology System is essential, to demonstrate their capabilities to participate in the "life" of the CIPM-MRA.

Considering possible added criteria for DIs, APMP, AFRIMETS and COOMET agreed that it is not necessary, and that DI is under the responsibility of the economy or country the DI is from. AFRIMETS do think that the RMO could provide guidance to members on the designation.

SIM and EURAMET think that if the DI does not really ensure metrology work like traceability to the SI and participation to ILCs, they can burden the system and weaken the main objective of the CIPM-MRA.

For EURAMET, as for the other RMOs, it is clear that an economy or a country can designate any DI it consider important for its economy/country. Whatever, regarding EURAMET activities, the question of DIs is not relevant only for CIPM-MRA but also regarding challenges of the European metrology research programme (EMRP), reason why EURAMET thinks to have more "acceptance criteria" for DIs.

#### Conclusion

All RMOs agree that country/economy are responsible for the designation of the Dis. Some RMOs think seriously of specific acceptance criteria regarding their own activities. QMS is a way to ensure a focus and a better knowledge of NMI and DI activities. ILCs and proposed CMCs is a way to show the real activity of a DI.

Added acceptance criteria seem to be important in the frame of CIPM-MRA for SIM and EURAMET. APMP, AFRIMETS and COOMET do not see the necessity to have more criteria at the present time for DIs, to participate in the CIPM-MRA.

## 26<sup>th</sup> JCRB March 2011 - Sevres

**Action 26/3:** BIPM to send request to the designating authority upon notification of a new Designated Institute for information on scope of designation, stating that the information of the new DI will not be published on the BIPM website unless such information is received. The BIPM will advise any new participants in the CIPM MRA regarding expectations concerning their active participation in the activities of the CIPM MRA. Such information will also be made available on the BIPM website.

# 27<sup>th</sup> JCRB September 2011 - Vienna

**Action 27/3:** The BIPM International Liaison Officer and the Executive Secretary of the JCRB will work to obtain information on the fields of designation of all DIs listed in Appendix A and report on the progress of such work at the next JCRB.

**Action 27/4:** The BIPM will prepare a draft document on expectations from DIs for active engagement in the CIPM MRA (declaration of CMCs, participation in RMO activities) using the input provided by EURAMET at the meeting, in time for the next JCRB meeting.

### Number of EURAMET members/associates' DIs listed in Appendix A of the CIPM MRA

Country	Number of DIs	Country	Number	of DIs
Albania	0	Italy	1	
Austria	2	Latvia	0	
Belgium	1	Lithuania	3	
Bosnia-Herzegovina	0	Luxembourg	Not a me	mber
Bulgaria	0	Malta	0	
Croatia	6	Montenegro	0	
Cyprus	Not a member	Netherlands	0	
Czech Republic	4	Norway	3	
Denmark	6	Poland	2	≈ 12 countries DI's scope were not clear
Estonia	1	Portugal	1	scope were not clear
Finland	5	Romania	1	
France	6	Serbia	0	
FYR Macedonia	0	Slovakia	0	
Germany	3	Slovenia	9	
Greece	2	Spain	6	
Hungary	0	Sweden	1	
Iceland	Not a member	Switzerland	3	
Ireland	0	Turkey	2	
		United Kingdom	4	



Prof. Dr. Joachim Hermann Ullrich, President Physikalisch-Technische Bundesanstalt (P Bundesallee 100

D-38116 Braunschweig GERMANY

Dear Prof. Dr. Ullrich.

We would like to refer you to CIPM document 2005-07, concerning NMIs and other designated institutes (DIs), which is publicly available in the CIPM MRA Documents section of the BIPM website and details the roles and responsibilities of the designating authorities and the DIs with regard to the CIPM MRA. Of specific importance, Item 2.6 of this document states that "the scope and capability of the designated institute should be clearly stated" when notification of the designation is made to the BIPM. In the interest of better enforcing this requirement, thus ensuring the quality of data presented in the KCDB on the national metrology systems of CIPM MRA signatories, as well as avoiding any overlap in the responsibilities of institutions within a country, the JCRB decided at its 27th meeting in September 2011 that the BIPM would make an effort to collect information on the specific designation scopes of all DIs listed in Appendix A of the KCDB.

Currently, we are missing designation information on the following institutes designated under your authority to participate in the CIPM MRA:

- Bundesanstalt für Materialforschung und -prüfung (BAM)
- Bundesamt für Verbraucherschutz und Lebensmittelsicherheit (BVL)
- Umweltbundesamt (UBA)

Therefore, we kindly request that you reply to this letter by filling out the attached form with information on the specific areas in metrology for which the listed DIs are responsible. In doing so, you may wish to refer to the categories (metrology area, branch, service, sub-service) utilized in the KCDB for classifying published CMCs, being as detailed as necessary so that the responsibilities of the DIs are clearly distinguishable from those of the NMI and other DIs.

We look for forward to your reply at your earliest convenience. Please contact us if you have any questions or concerns on this matter.

Sincerely,

Executive Secretary of the JCRB

BUREAU INTERNATIONAL DES POIDS ET MESURES ORGANISATION INTERGOUVERNEMENTALE DE LA CONVENTION DU MÈTRE

5 PAVILLON DE BRETEUIL F - 92312 SÉVRES CEDEX TEL. : + 33 1 45 07 70 70 - FAX : + 33 1 45 34 20 21 http://www.bipm.org

January 24, 2012

Please specify the designation areas of the following institutes. You may refer to the categories utilized in the KCDB to classify CMCs (http://kcdb.bipm.org/AppendixC/default.asp).

Country: GERMANY

CIPM Signatory/Designating Authority: Physikalisch-Technische Bundesanstalt (PTB)

#### Designated Institutes:

- Bundesanstalt für Materialforschung und -prüfung (BAM) Designation Area:
- Bundesamt f
  ür Verbraucherschutz und Lebensmittelsicherheit (BVL) Designation Area:
- Umweltbundesamt (UBA) **Designation Area:**

Name and Signature

Please return by post or e-mail to:

Mr. Omer Altan BIPM Pavillon de Breteuil F-92312 Sévres France

e-mail: oaltan@bipm.org

### Number of EURAMET members/associates' DIs listed in Appendix A of the CIPM MRA

			<u>.                                      </u>			
Country	Number of DIs	Country	Number of DIs			
Albania	0	Italy	1 - clear			
Austria	2 - clear	Latvia	0			
Belgium	1 - clear	Lithuania	3 - clear			
Bosnia-Herzegovina	0	Luxembourg	Not a member	Status, May 2013		
Bulgaria	0	Malta	0	3 countries DI's		
Croatia	6 (3 clear, 3 not)	Montenegro	0	scope still not clear		
Cyprus	Not a member	Netherlands	0	Total: 72 Dis		
Czech Republic	4 Croatia >>			Member State		
Denmark	6 Contact: For Croatia: no reply, it is pos					
Estonia	HMI Ulica grada Vukovara 78 HR-10000 Zagreb			kely scope for <i>HMI/FSB</i> - not for <i>HMI/FSB-LIMS</i> and		
Finland	Tel.: +385 1 616 82 87 Fax: +385 1 611 87 14 Web: http://www.dzm.hr/	PM				
France	Signatory:  • Croatian Metrology Institute (HMI), Zagreb					
FYR Macedonia	Designated institute(s):  • For electricity and magnetism: FER - Primary Electromagnetic Laboratory (HMI/FER-PEL), Zagreb  • FSB - Laboratory for Testing of Mechanical Properties (HMI/FSB-LIMS), Zagreb  • FSB - Laboratory for Process Measurements (HMI/FSB-LPM), Zagreb  • FSB - Laboratory for Precise Measurements of Length (HMI/FSB-LPMD), Zagreb					
Germany						
Greece	For ionizing radiation - dosimetry: Secon     HMI/Mass and Density (HMI/Mass and De	ndary Standard Dosimetry Laboratory	of the Ruder Boskovic Institu	te (HMI/IRB-SSDL), Zagreb		
Hungary	0	Sweden	For France res	solution in progress		
Iceland	Not a member	Switzerland	3 - clear			
Ireland	0	Turkey	2 - For German	ny it's complicated		
		United Kingdom	4 - clear			

In certain circumstances where the NMI and DIs distribute work in one scope it is complicated to list them all by measurement range.....So far haven't we found a solution





#### Der Präsident

Country: Germany

CIPM Signatory/Designating Authority: Physikalisch-Technische Bundesanstalt (PTB)

- As the national metrology institute PTB is exclusively responsible for all metrology work, with the exception of one field.
- . PTB has designated three other institutes in the field of metrology in chemistry. Within this field, PTB retains exclusive responsibility for CCQM subject categories 6 and 7 and is involved in most of the other areas, as well,

#### Designated Institutes:

 Bundesanstalt f
 ür Materialforschung und –pr
 üfung (BAM) Designation Area: Metrology in Chemistry

BAM is designated for work in the field of metrology in analytical chemistry, in particular certain aspects of all CCQM categories except 6 and 7. A contract between PTB and BAM (dated April 29, 2005) ensures that no duplication between work of PTB and BAM occurs in CCQM categories 2, 5, 10, 11, and 15 where both PTB and BAM are active. Similarly, BAM and UBA distribute work in CCQM category 4.

Bundesamt für Verbraucherschutz und Lebensmittelsicherheit (BVL) Designation Area: Metrology in Chemistry

BVL is designated for work in the field of metrology in analytical chemistry, in particular certain aspects of CCQM category 11. A contract between PTB and BVL (dated March 22, 2005) ensures that no duplication between work of PTB and BVL occurs.

 Umweltbundesamt (UBA) Designation Area: Metrology in Chemistry

UBA is designated for work in the field of metrology in analytical chemistry, in particular certain aspects of CCQM category 4. A contract between PTB and UBA (dated June 6, 2007) ensures that no duplication between work of PTB and UBA occurs. Similarly, UBA and BAM distribute work in CCQM category 4.

(Prof. Dr. J. Ullrich)

## 28th JCRB April 2012 - Sevres

**Resolution 28/1:** The JCRB resolves that laboratories should only be designated under the CIPM MRA when they have responsibility for national measurement standards and the dissemination of the units (i.e. providing traceability), as demonstrated by provision of appropriate and relevant services to customers.

**Resolution 28/1:** The JCRB resolves that the QMS that must be in place prior to the acceptance of CMCs must be according to ISO/IEC 17025 (and ISO 34 for CRMs) in line with requirements for calibration laboratories.

**Action 28/3:** Resolutions 28/1 and 28/2 adopted by the JCRB will be incorporated into the BIPM procedure on the registration of new designated institutes and the letters that are sent to newly designated institutes as part of that procedure.

# Agreed at 28th JCRB April 2012 - Sevres

Procedure for the Registration of Designated Institutes Participating in the CIPM MRA

Author: Omer Altan

Date: 10/04/2012 Version: 02 Authorized:

Michael Kühne

QUALITY SYSTEM

### ANNEX I – TEMPLATE LETTER FOR OBTAINING DESIGNATION INFORMATION FROM NEWLY DESIGNATED INSTITUTE

JCRB-P-05

Dear <NMI Director>

Thank you for informing us of the designation of <institute name> as a Designated Institute (DI) within your national metrology system.

We would like to refer you to CIPM document 2005-07, concerning NMIs and other DIs, which is publicly available in the CIPM MRA Documents section of the BIPM website and details the roles and responsibilities of the designating authorities and the DIs with regard to the CIPM MRA. Of specific importance, Item 2.6 of this document states that "the scope and capability of the designated institute should be clearly stated" when notification of the designation is made to the BIPM. In the interest of better enforcing this requirement, thus ensuring the quality of data presented in the KCDB on the national metrology systems of CIPM MRA signatories as well as avoiding any overlap in the responsibilities of institutions within a country, the JCRB decided at its 26th meeting in March 2011 that the BIPM would henceforth require the designating authorities to provide information on the scope of the designation of DIs before publishing any information in the KCDB. Therefore, we kindly request that you complete the enclosed form and send it back to us at your earliest convenience.

We look forward to the full participation of <institute name> in the activities of the CIPM Mutual Recognition Arrangement in the time ahead.

Sincerely,

<JCRB Exectutive Secretary>

Procedure for the Registration of Designated Institutes

Participating in the CIPM MRA Author: Date:

10/04/2012

Version: 02

Omer Altan

Authorized: JCRB-P-05 Michael Kühne



### ANNEX II - TEMPLATE LETTER FOR NEWLY DESIGNATED INSTITUTE

Dear < Director of Designated Institute>

We are pleased to be notified of your institute's designation by < CIPM MRA signatory> as the holder of the national standards of measurement in the area(s) of <designation scope>.

As <CIPM MRA Signatory> is a signatory to the CIPM Mutual Recognition Arrangement (CIPM MRA), according to the provisions of said Arrangement, your institute will be listed in Appendix A of the Key Comparison Database (KCDB) as a participating Designated Institute (DI).

Resolution 28/1 of the JCRB states that "laboratories should only be designated under the CIPM MRA when they have responsibility for national measurement standards and the dissemination of the units (i.e. providing traceability), as demonstrated by provision of appropriate and relevant services to customers". It follows that the purpose of your designation is to facilitate international recognition of the national standards your institute holds and the traceability that it disseminates, including the calibration certificates that are issued within this capacity. Declarations of calibration and measurement capabilities published in Appendix C of the KCDB are the foundation of this recognition. We would like to encourage you to visit the BIPM website, where you will find extensive information on the CIPM MRA and its mechanisms, such as measurement comparisons and CMC declarations, the section entitled "CIPM MRA Documents" found at the link: http://www.bipm.org/en/cipm-mra/documents/

While the details of the processes are formally described in the documents accessible through the BIPM website, in order to declare CMCs, your institute must participate in relevant measurement comparisons organized by the Consultative Committees of the CIPM and/or RMOs in order to demonstrate the international equivalence of your standards as well as your technical capabilities within your areas of activity. Results from measurement comparisons largely underpin declarations of CMCs, which undergo a rigorous two-tier international review before they are published in the KCDB. Your institute's Quality

Procedure for the Registration of Designated Institutes Participating in the CIPM MRA

JCRB-P-05 Date: Authorized: Author: Omer Altan 10/04/2012 Michael Kühne Version: 02



Management Systemmust also be approved by your RMO as a prerequisite for publication of your CMCs. In accordance with resolution 28/2 of the JCRB, the QMS that must be implemented prior to the acceptance of CMCs, must comply with the requirements of ISO/IEC 17025 (and ISO Guide 34 for producers of certified reference material producers) for calibration laboratories. The calibration certificates that are issued within the scope of CMCs published in the KCDB are recognized by all participants in the CIPM MRA and may bear the CIPM MRA logo.

It must be emphasized that in order to participate fully in the CIPM MRA, your institute must engage with < RMO name >, which is the Regional Metrology Organization to which your country belongs, and participate in the meetings and activities of its technical committees in the areas of < designation area>. Such engagement is not only essential in order to take part in measurement comparisons and to declare your CMCs for publication in the KCDB, but is also helpful for accessing the knowledge and resources that will benefit your institute as a newly designated institute within your national metrology system.

As the first step of your engagement, we recommend that you contact the Secretariat of <RMO name> and provide them with information on your designation as an institute participating in the CIPM MRA, including a list of measurement standards held and the CMCs that your institute anticipates declaring within the scope of the CIPM MRA along with a provisional schedule for doing so.

As of <month> <year>, the CIPM MRA has been signed by <number of CIPM MRA signatories > institutes - from < number of BIPM member states > Metre Convention signatory states, < number of associates > Associates of the CGPM, and < number of international associations>international organizations - and covers a further < number of DIs> institutes designated by signatory bodies, among which we now welcome < designated institute>.

We look forward to <designated institute>'s participation in the activities of the CIPM MRA in the times ahead.

Sincerely.

<BIPM Director>

CC: RMO, CIPM Signatory

10-04-2012 10-04-2012



March 11, 2013

Professor Cui Xiaowen, Director

Hangzhou Applied Acoustics Research Institute (HAARI)

Mr. CHEN Yi, Associate director

Underwater Acoustics Calibration Laboratory

No.82, Guihuaxi Road, Fuyang, Hangzhou, Zhejiang Province, P.R.China Tel: 0086-571-63332466

Dear Professor Xiaowen,

We were pleased to be notified of your institute's designation by the National Institute of Metrology (NIM), Beijing, China as the holder of the national standards of measurement in the area of Underwater Acoustics.

As NIM has the authority to designate institutes to participate in the CIPM MRA, according to the provisions of said Arrangement, your institute has been listed in Appendix A of the Key Comparison Database (KCDB) as a participating Designated Institute (DI) <a href="http://www5.bipm.org/en/cipm-mra/participation/signatories.html#CN">http://www5.bipm.org/en/cipm-mra/participation/signatories.html#CN</a>).

Resolution 28/1 of the JCRB states that "laboratories should only be designated under the CIPM MRA when they have responsibility for national measurement standards and the dissemination of the units (i.e. providing traceability), as demonstrated by provision of appropriate and relevant services to customers". It follows that the purpose of your designation is to facilitate international recognition of your national standards and the traceability that you disseminate, including the calibration certificates you issue. The foundation of this recognition is declarations of calibration and measurement capabilities published in Appendix C of the KCDB. We would like to encourage you to visit the BIPM website, where you will find extensive information on the CIPM MRA and its mechanisms, such as measurement comparisons and CMC declarations, in the section entitled "CIPM MRA Documents" found at the link: <a href="https://www.bipm.org/en/cipm-mra/documents/">https://www.bipm.org/en/cipm-mra/documents/</a>

While the details of the processes are formally described in the documents accessible through the BIPM website, in order to declare CMCs, your institute must participate in relevant measurement comparisons organized by the Consultative Committees of the CIPM and/or Regional Metrology Organizations (RMO) in order to demonstrate the international equivalence of your standards as well as your technical capabilities within your areas of activity. Results from measurement comparisons largely underpin declarations of CMCs, which undergo a rigorous two-tier international review before they are published in the KCDB.

Your institute's Quality Management System (QMS) must also be approved by your RMO as a prerequisite for publication of your CMCs. In accordance with resolution 28/2 of the JCRB, the QMS that must be implemented prior to the acceptance of CMCs, must comply with the requirements of ISO/IEC 17025 (and ISO 34 for producers of certified reference material producers) for calibration laboratories. The calibration certificates that are issued within the scope of CMCs published in the KCDB are recognized by all participants in the CIPM MRA and may bear the CIPM MRA logo.

It must be emphasized that in order to participate fully in the CIPM MRA, your institute must engage with APMP, which is the Regional Metrology Organization to which the China belongs, and participate in the meetings and activities of its technical committees in the areas of Acoustics, Ultrasound and Vibration (TCAUV). Such engagement is not only essential in order to take part in measurement comparisons and to declare your CMCs for publication in the KCDB, but is also helpful for accessing the knowledge and resources that will benefit your institute as a newly designated institute within your national metrology system.

As the first step of your engagement, we recommend that you contact the Secretariat of APMP and provide them with information on your designation as an institute participating in the CIPM MRA, including a list of measurement standards held and the CMCs that your institute anticipates declaring within the scope of the CIPM MRA along with a provisional schedule for doing so.

As of year 2013, the CIPM MRA has been signed by 91 institutes – from 51 Metre Convention signatory states, 36 Associates of the CGPM, and 4 international organizations – and covers a further 146 institutes designated by signatory bodies (including HAARI).

We now welcome the Hangzhou Applied Acoustics Research Institute and look forward to your institute's participation in the activities of the CIPM MRA in the times ahead.

Sincerely,

Chingis Kuanbayev
Executive Secretary of the JCRB

CC:

APMP Secretariat

Mr. Zhang Yukuan, Director General, NIM

## **Looking forward**

We have gone a long way to improve clarity on DIs

Still.....some of the information would perhaps be better if it were available "a priori"

Open to EURAMET suggestions for further improvements at next JCRB

JCRB actions from March 2013.

Action 30/3: The JCRB Executive Secretary will place the following items on the agenda of the 31<sup>st</sup> JCRB meeting:

- The performance and vitality of DIs;
- What is the purpose of the KCDB? What is its impact on NMIs and stakeholders? Who uses it and what are its successes?

Action 30/4: The RMOs to submit papers addressing the two agenda items listed in Action 30/3 for circulation one month prior to the 31<sup>st</sup> JCRB meeting.



### **Bureau International des Poids et Mesures**

# Thank you for your attention

# Andy Henson Director of International Liaison and Communications Department, BIPM

e-mail: ahenson @ bipm.org



7<sup>th</sup> EURAMET General Assembly, Reykjavik, May 2013